

Volumen 9.1, 2018

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EDITORIAL

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www.ugr.es/local/jett
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ISSN 1989-9572

Journal for Educators, Teachers and Trainers

This new magazine, published yearly, is created with a clear perspective: improving the MUNDUSFOR and DEPROFOR consortia, giving it an international renown and granting it a perspective of research, beyond the educational perspective of today. Our intention is also to develop an electronic magazine for the field of the educational professionals.

The objectives of *Journal for Educators, Teachers and Trainers* (M&DJETT) are therefore centered in different aspects of academic and research diffusion related to the teaching professionals. In one hand, M&DJETT pretends to become an educational research database. In the other hand, a second objective of the publication is to facilitate for young researchers the diffusion of their work, masters and doctorates students above all, and to serve as an advertisement vehicle for works which have not reached the article format yet. Besides, another function for M&DJETT will be the diffusion of publications through reviews.

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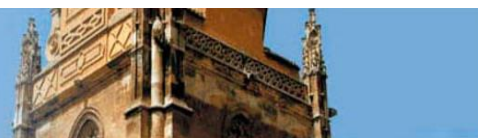
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EDITORIAL

Repensar la tecnología educativa, fomentar la motivación en el aprendizaje y apuntar a la calidad educativa

Rethinking educational technology, encouraging motivation in learning and aiming for educational quality

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Ramírez, I.F. (2019). Rethinking educational technology, encouraging motivation in learning and aiming for educational quality. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 6 – 11.

1. Importancia de la temática

Las reflexiones en torno de la educación resultan inagotables, no sólo por la importancia de las temáticas desde los diversos escenarios y sociedades, sino por la riqueza que portan las miradas desde lo histórico en el denominado segundo entorno¹ (Echeverría, 2016), donde la esencia del aula es “*el aprendiz*” en situaciones tradicionales del siglo pasado con experiencias educativas en comunidades de encuentro físico que se entretengan con los recursos de la tecnología de la posmodernidad en el tercer entorno² (Echeverría, 2016); con la nube en las aulas abiertas entre transpersonas. Estas miradas, además, se caracterizan porque son transdisciplinarias, porque los maestros desde las diversas ciencias y disciplinas dialogan sobre el fenómeno educativo, donde profesionales desde las ciencias sociales, ciencias de la educación y tecnología o ingenierías tienen algo que aportar hablando de tecnología educativa, de comprender la motivación y de persistir en la búsqueda de la calidad educativa.

Empezamos haciendo referencia en una primera parte a la lectura de la colección de artículos que se presentan en este número de la revista, donde es imposible evitar el repensar en la importancia que tienen las TIC en la educación, porque en cualquier espacio y tiempo imaginables, los desafíos que nos plantean apenas empiezan. Para los autores su uso, el tiempo, el modo de cómo se usa y cómo potenciarlos, es parte de sus reflexiones. Posteriormente se presenta un breve análisis en tres bloques de contenido que me han parecido muy importantes de destacar. Hace falta abordar, al mismo tiempo, un cambio en la organización de las escuelas y en las competencias digitales de los profesores (Carneiro, Toscano, Díaz, 2015).

2. Estructura del número

En el primer bloque de análisis se presenta un artículo denominado *Adolescentes y redes sociales: panorámica general sobre el uso, el tiempo y los riesgos* de Martínez Heredia y González García y constituye un estudio muy pertinente y actual, el mismo se refiere a los posibles riesgos de las redes sociales para los adolescentes, advierten rasgos de uso no irracional por la presencia de una correlación positiva entre el tiempo de uso y la dependencia a estas. Muestran alta preocupación por la dependencia en este grupo y la necesidad urgente de patrones educativo-preventivos para el uso seguro. Se destaca la importante tarea para los educadores de fomentar espacios de reflexión colectiva que rompan la dominación y el apasionamiento por los recursos de las redes sociales, así como el apasionamiento impuesto por las religiones de otros tiempos, donde las formas de colonización, domesticación y opresión impiden el desarrollo de la creatividad y del potencial humano.

Otro artículo interesante resulta ser *el impacto de la formación continua a distancia para profesores de física en el software de simulación por ordenador en el laboratorio* Khalid Mahdi, Mohamed Laafou, Jannati Rachid Idrissi. Esta investigación interdisciplinaria en ingeniería de instrucción realizada en Marruecos describe el estudio de las debilidades del proceso de aprendizaje de las ciencias físicas y cómo podría optimizarse con la capacidad de utilizar los beneficios de las TIC con la integración de los simuladores informáticos. Los autores hacen una propuesta de educación a distancia para el diseño y el uso educativo de simuladores en educadores marroquíes utilizando las TIC con la programación de cursos interactivos, reuniones sincrónicas y asincrónicas, pruebas y proyectos para hacer un simulador de computadora para la preparación y controles de lección mejorando con esa propuesta la calidad de la enseñanza de la física.

En las producciones de un segundo bloque se puede advertir el interés legítimo por el abordaje de las investigaciones desde los paradigmas cualitativos de la investigación educativa, desde

¹ El segundo entorno sería aquel que gira alrededor del ambiente social de la ciudad y del pueblo, es un entorno social y cultural. (Echeverría, 1999).

² El tercer entorno (e2) es un nuevo espacio social en construcción, artificial y posibilitado por una serie de tecnologías que modifican las relaciones sociales y culturales. (Echeverría, 1999).

donde la intersubjetividad privilegia el uso de los métodos de análisis de la información densa, crítica y reflexiva, una mirada Emic que tiene en cuenta las motivaciones y actitudes, pensamientos y sentimientos de educandos y educadores, estudiando desde el interior del aula la problemática educativa.

Otro estudio realizado por Samad Mirza Suzani, Islámica Azad University, Irán sobre *la implementación de la pedagogía Crítica en los Contextos de EFL: cerrar la Brecha entre la teoría y la práctica, ¿cómo cerrar la brecha?* Se analiza cómo este hecho produce una confrontación entre el pragmatismo de consumir “conocimientos” acríticamente, contra la profundidad y la reflexión; este es el ámbito entre el pensamiento superficial y liviano que caracteriza a este periodo contemporáneo y el llamado a procurar una educación crítica. El cambio hacia el pensamiento crítico debe definir una nueva forma de relación entre los profesores y los teóricos, que está empujando a los maestros hacia el mundo de las habilidades, el conocimiento y la autonomía. Teniendo en cuenta la creciente importancia de la pedagogía crítica, este trabajo resulta muy valioso porque proporciona una revisión de sus fundamentos y ofrece formas de aplicaciones prácticas de esta teoría en las aulas de inglés como lengua extranjera.

Forma parte de los estudios cualitativos una investigación denominada *¿Quiénes son y dónde están? investigación biográfico-narrativa en el contexto colombiano* de Barón Velandia, el autor reconoce el valor de los nichos de ubicación en los que se encuentran los principales escenarios de trabajo, sus máximos exponentes y los eventos en los que se ha congregado la investigación biográfico-narrativa en la formación docente en la universidad colombiana. Estudio generativo para futuros estudios, trabajos de investigación interinstitucional, conformación de redes de trabajo, creación de nuevos escenarios de visibilización de los resultados y procesos formativos se presenta en el artículo una propuesta flexible y abierta de una red para la interacción de los diversos escenarios y estudiosos colombianos y otros.

Harrison presenta otro interesante estudio sobre *la política educativa y los docentes en Puerto Rico: implicaciones para la identidad, la soberanía y la comunidad en el contexto de los desplazamientos*. La autora ofrece una reflexión crítica sobre la experiencia del sistema escolar colonial sin autonomía, impuesto por los EE. UU dado que Puerto Rico presenta un caso único para educadores de docentes y formuladores de políticas. La autora hace un análisis que amplió la noción de lenguaje y política educativa para incluir estándares, libros de texto y prácticas de enseñanza. La investigación trata sobre la identidad indígena en un contexto no solo de educación colonial sino de visiones conflictivas de la historia y pérdida de la tradición oral, donde el conocimiento está estandarizado y dictado por la imposición de la escuela. El artículo sugiere que los modelos comunitarios e indígenas y la autonomía educativa más originaria serán de mayor aporte práctico y sostenible.

Por su parte Botero, muestra *la importancia del fortalecimiento de la motivación por el aprendizaje del español como lengua de herencia mediante un programa de intervención basado en los Estándares Estatales de Educación (Common Core State Standards, o CCSS)*, el objetivo ha sido fortalecer la motivación por el aprendizaje de la lengua castellana a través de la implementación de una propuesta pedagógica curricular basada en los Estándares estatales básicos comunes para las artes del lenguaje. Desde un enfoque de investigación-acción y recojo de datos por grupos focales advierten que su propuesta pedagógica curricular de progresión de expectativas de aprendizaje produce un aumento significativo de la motivación como fuerza impulsora del aprendizaje del español como lengua de herencia en la población intervenida; finalmente se propone una reforma para la enseñanza del español como lengua de herencia en hispanoparlantes que habitan Estados Unidos.

Amengual Pizarro, presenta un estudio sobre *L2 Motivational Self System y su influencia en la motivación de los futuros maestros en España*, examina la influencia de las variables principales del modelo de Dörnyei (2005, 2009), la integración, la instrumentalidad preventiva y el esfuerzo previsto. Los resultados confirman que los futuros maestros de primaria de la Universitat de les Illes Balears, muestran una predisposición positiva hacia el aprendizaje del inglés como lengua extranjera con mayor motivación, tiempo y compromiso en mujeres e

imagen positiva en varones; resulta valioso encontrar que los maestros otorgan más importancia a la motivación que a los aspectos pragmáticos o utilitarios durante su aprendizaje. De hecho, la integración muestra la correlación más alta junto al esfuerzo previsto. Finalmente, la autora afirma que los universitarios que se especializan en lengua inglesa están más motivados intrínsecamente que los que buscan especializarse en otras asignaturas. Resulta importante destacar que los mayores esfuerzos deben orientarse hacia la creación entornos de aprendizaje enriquecidos para fomentar la promoción de las prácticas de enseñanza más eficaces.

Una web 2.0 para la enseñanza-aprendizaje de las ciencias en bachillerato mediante gamificación: Jedirojo Sciences de Fernández-Rubio y Fernández-Oliveras es otro artículo que cuestiona el método tradicional de enseñanza de las ciencias, donde el estudiante es un agente pasivo, receptor de información, en respuesta a ello, los autores ofrecen una propuesta didáctica creativa para la enseñanza de la biología desde una perspectiva lúdica mediante el desarrollo de una página web con la filosofía 2.0 para el aprendiz nativo del tercer entorno, aplicando para ello recursos cinematográficos y del videojuego (recurso lúdico importante del neuroaprendizaje). Los resultados del estudio piloto basado en la gamificación activa, retos y el compromiso del aprendiz, incrementando **la motivación** por las disciplinas científicas. Los autores demuestran cómo las prácticas docentes movilizan el interés por los contenidos expuestos en la web potenciando una experiencia de aprendizaje divertido y apetecible para el estudiante. De ello podemos decir que el rol del maestro consiste también en promover el pensamiento crítico, procesar los consumos cibernéticos, de modo que el aproveche sus ventajas y filtre sus dictaduras.

Abreus González presenta un estudio sobre el empleo de la plataforma MyEnglishLab para el desarrollo de la precisión gramatical en la expresión oral del inglés, aborda la problemática de las metodologías de enseñanza y reflexiona sobre el desarrollo de la precisión gramatical en la expresión oral mediante el empleo creativo de la plataforma online. Plantea superar las acciones educativas que continúan centrando su atención prioritariamente en la expresión oral y propone etapas y criterios de base para la elaboración y evaluación de un modelo didáctico con formas apropiadas para desarrollar los momentos del aprendizaje con un marco didáctico para la corrección gramatical en la habilidad del habla para alcanzar los objetivos establecidos y el logro de las funciones comunicativas con la revisión precisa de la gramática del inglés.

Finalmente, se advierte en el tercer grupo de autores con la preocupación irrenunciable por mejorar la calidad educativa, varias incertidumbres y cada vez menos certezas (Ramírez, Maldonado, 2018) repensando desde adentro cómo fomentar las buenas prácticas en la formación integral del ser humano, de manera que nos acerque a alcanzar el máximo potencial de enseñanzas y aprendizajes complejos.

El estudio de Percepciones de docentes acerca de las Experiencias de Desarrollo Profesional: Una Preocupación continua de Sánchez, Williams y Ferrara de la Universidad de Nevada, Estados Unidos se orienta a la exploración de las percepciones de maestros de un distrito escolar del occidente de los Estados Unidos acerca de las experiencias de desarrollo profesional en cuanto al proceso, contenido y contexto en la preparación de maestros para el liderazgo educativo. Los resultados de las indagaciones refieren que éstos tienen percepciones poco favorables de las experiencias de desarrollo profesional e indican que los administrativos no valoran esto, asimismo consideran que los temas resultan irrelevantes sin el suficiente tiempo para integrar dichas cuestiones en su práctica cotidiana. El estudio plantea muchos desafíos para trabajar en la mejora de la calidad para impulsar las vocaciones de liderazgo y serán las experiencias participativas desde las necesidades e intereses de desarrollo profesional del maestro, además de una mayor participación en la toma de decisiones, con procesos de contacto continuos y colaborativos los que determinen mayores aprendizajes profesionales.

La utilización de Pruebas Específicas para Acceder a la Formación Inicial del Profesorado de Pérez Granados, Universidad de Málaga, España muestra cómo en los últimos años, países como Finlandia lideran en la investigación y los estudios internacionales en la contratación y

formación de profesores, analiza la relación número de aspirantes y número de plazas disponibles, refieren que las universidades de este país establecen estándares muy altos para la selección. El estudio muestra además los resultados de la aplicación del procedimiento de selección finlandés para estudiantes de grado de enseñanza de la Facultad de Educación de la Universidad de Málaga. La autora refiere cómo este procedimiento ejemplar de entrada para la formación del profesorado contribuiría a identificar las claves del éxito para el proceso de admisión a la universidad en España y otros países europeos. Se analizan los conocimientos y/o disposiciones personales que deben ser tomados en cuenta para seleccionar a los futuros profesores, pues por el momento los resultados son desalentadores y se plantean muchos desafíos hacia la mejora de la calidad del sistema educativo en España.

El perfil educativo y el empleo de los jóvenes en los programas iniciales de formación profesional Inicial de Olmos Rueda, Mas Torelló es una investigación cualitativa que describe el perfil educativo y el empleo de los jóvenes en los programas iniciales del catalán profesional desde la perspectiva de tutores, empresarios y jóvenes inscritos en programas iniciales de formación profesional en municipios de Barcelona, con el fin de aprender más sobre su perfil y sus expectativas educativas y laborales. Los resultados muestran la presencia de gente joven con bajo perfil educativo y el empleo cualificado que influye en su entrada en estos programas y muestran cómo los influencia también en este grupo de jóvenes. En el marco de estos programas, los jóvenes comienzan a cambiar y encuentran un apoyo para el retorno a la educación formal y reconsiderar su elección de educación y empleo, así como sus perspectivas; y se convierten en una segunda oportunidad para su futuro.

Los niveles de autoeficacia de los directores en las escuelas primarias de Turquía de Karadagm, Cogaltay y Su, resulta muy valioso por el rol del directivo para el logro académico en la gestión educativa. La autoeficacia implica el despliegue de competencias para organizar y ejecutar recurso de acción necesaria para alcanzar determinados fines, llevado este concepto al campo socioeducativo la tarea de los directores cobra mayor importancia. Se aplicó una escala de evaluación de la autoeficacia a directores y subdirectores con resultados que reflejaron además de diferencias de género, puntuaciones más alta en la dimensión de administración de recursos y más baja en el recursos de la comunidad, tomando en cuenta el rol de la comunidad en la escuela, los desafíos en torno del socioliderazgo y participación-acción serán determinantes en el alcance del éxito educativo.

Cerrando este apartado se presenta: *Los estudios de traducción: un análisis desde la perspectiva de las partes interesadas de las Universidades de Vietnam* de Thi Ngoc Le, es un artículo que propone la creación de un programa de formación éticamente responsable de traducción donde se plantean recomendaciones formuladas para ayudar a universidades y/o colegios para la mejora de sus métodos de enseñanza (enfoque de la enseñanza centrada en el estudiante, gestión del tiempo, materiales actualizados, prácticas con el mundo real, atención a las demandas actualizadas del mercado), buscando su eficacia y responsabilidad a las expectativas de las partes interesadas con una percepción holística, comprensiva y más profunda de la disciplina de la traducción tomando en cuenta los puntos de vista y la información de las partes interesadas como fuentes valiosas de información.

3. Conclusión y finalidad del número publicado

En todos los casos, debemos destacar el vivo interés por parte de los autores por problematizar y analizar qué, cómo y para qué enseñamos y aprendemos, por lo que la lectura de cada uno de los artículos aportará en gran medida a la reflexión permanente que atraviesa la práctica de todo educador, se advierten algunos puntos en común estudiar más la tecnología educativa desde la ciudadanía digital responsable, fomentar y reiterar la importancia de la motivación en el aprendizaje y apuntar a la calidad educativa, desde lo particular, lo denso, lo comunitario y socioproductivo; los artículos presentados en este número resaltan de una y otra manera, los modos y los medios para estos fines.

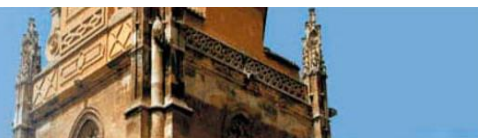
Es muy importante el mensaje que deja este número, porta un valor especial para repensar las TIC y sus usuarios, las tecnopersonas - estudiantes portando móviles con baja conciencia individual y con varias identidades desde los ciberproductores o ciberacumuladores de conocimiento y por ello, la escuela no puede mantenerse al margen de la discusión sobre la influencia de la tecnología digital en los procesos de enseñanza y aprendizaje. El uso de las TIC presenta el desafío de procurar el conocimiento, produciéndolo, en vez de consumirlo acríticamente.

Se advierte que es necesario transitar en ese tercer entorno de una manera más cierta y más crítica, donde docentes y estudiantes seamos conscientes de sus ventajas y desventajas y se cuestionen e interpelen la colonización del pensamiento, lo contrario sería pasar del oscurantismo de la edad media a la iluminación alienante de la edad contemporánea.

Avizoramos un panorama inusitado de incertidumbres, donde la certeza tal vez pueda ser la reflexión y la crítica, la escuela del segundo y tercer entornos no pueden desaparecer en el espectro de la cotidianeidad educativa, sino con y a través del fomento de una educación esencialmente transformadora y liberadora.

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El fortalecimiento de la motivación por el aprendizaje del español como lengua de herencia mediante un programa de intervención basado en los CCSS

The strengthening of motivation toward Spanish learning as a heritage language through an intervention program based on the CCSS

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 26 de octubre de 2017

Fecha de revisión: 12 de diciembre de 2017

Fecha de aceptación: 23 de marzo de 2018

Botero, S. (2018). El fortalecimiento de la motivación por el aprendizaje del español como lengua de herencia mediante un programa de intervención basado en los CCSS. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 12 – 26.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

El fortalecimiento de la motivación por el aprendizaje del español como lengua de herencia mediante un programa de intervención basado en los CCSS

The strengthening of motivation toward spanish learning as a heritage language through an intervention program based on the CCSS

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Resumen

Esta investigación ha tenido como objetivo fortalecer la motivación por el aprendizaje de la lengua castellana a través de la implementación de una propuesta pedagógica curricular basada en los *Estándares estatales básicos comunes para las artes del lenguaje* —CCSS. Para su consecución, se llevó a cabo un estudio con enfoque mixto, empleando los diseños cuasiexperimental y de investigación-acción. Mediante un muestreo no probabilístico, el grupo control estuvo conformado por 38 estudiantes y el grupo experimental por 38 estudiantes que cursaban sexto grado en *Sarasota School of Arts and Sciences*. La variable independiente del estudio fue una propuesta pedagógica curricular basada en los CCSS y la variable dependiente fue la motivación por el aprendizaje de la lengua castellana, medida por un escalamiento tipo Likert basado en el *Attitude/Motivation Test Battery* de Gardner (2004). Este instrumento de recolección de la información fue aplicado antes y después de la intervención. Además de esto, se ejecutó un grupo focal para explorar a profundidad el problema objeto. Los datos cuantitativos fueron analizados mediante la distribución *t* de Student y la prueba Kolmogorov-Smirnov, mientras que la información cualitativa fue contrastada con la teoría. Los hallazgos arrojaron a la luz que hubo un aumento significativo en la motivación de los estudiantes posterior a la intervención en el grupo experimental. Por lo tanto, se concluye que la implementación de una propuesta pedagógica curricular basada en los CCSS promovió la motivación por el aprendizaje del español como lengua de herencia en la población intervenida.

Abstract

This research aimed to strengthen the learners' motivation toward Spanish learning through the implementation of a curricular pedagogical proposal based on the *Common Core State Standards for Language Arts* —CCSS. In order to reach this aim, a study with a mixed approach using cuasiexperimental and action-research designs was conducted. By means of a non-probabilistic sampling, the control group was composed of 38 students and the experimental group was composed of 38 sixth grade-students from *Sarasota School of Arts and Sciences*. The independent variable was a curricular pedagogical proposal founded on CCSS and the dependent variable was the learners' motivation toward Spanish learning, measured via a Likert scale questionnaire based on the Gardner's (2004) *Attitude/Motivation Test Battery*. This data gathering instrument was applied before and after intervention. In addition to that, a focal group was executed with the view to explore the target problem. Quantitative data was analyzed through the Student's *t* distribution and the Kolmogorov-Smirnov test, while the qualitative data was contrasted with the theory. The findings brought to light that learners' motivation significantly increased after the intervention in the experimental group. Thus, it was concluded that a curricular pedagogical proposal based on CCSS promoted the learners' motivation toward Spanish learning as a heritage language.

Palabras clave: Motivación; Español como lengua de herencia; Estándares estatales básicos comunes; Propuesta pedagógica curricular

Keywords: Motivation; Spanish as a heritage language; Common core state standards; Curricular pedagogical proposal

1. Introducción

Actualmente, la comunidad de hispanounidenses en los Estados Unidos ha experimentado un exponencial crecimiento a lo largo de las tres últimas décadas de forma intergeneracional. En consonancia con el último censo estatal, esta población asciende a los 50.5 millones de habitantes, representando, el 16% de la población total de los Estados Unidos y convirtiéndose, por tanto, en la minoría étnica más numerosa de este país (Reddy, 2011). Consecuentemente, los hispanohablantes representan una quinta parte de todos los estudiantes de preescolar hasta el décimo segundo grado escolar de la nación americana (Yen, citado en Verdugo, 2012).

Dado este marco demográfico, se ha puesto de relieve una amplia gama de problemáticas sociales y retos que afrontan los hispanohablantes en los Estados Unidos. Entre estas problemáticas, se destaca que los individuos pertenecientes a este grupo étnico poseen el menor índice de escolaridad. La tasa de graduación en las escuelas secundarias es bastante reducida y un pequeño porcentaje de estudiantes logra matricularse en la universidad (United States Census Bureau, 2012). Asimismo, el desempeño en cuanto la comprensión lectora y pensamiento matemático en estos estudiantes se ubica en un 79% por debajo de lo esperado, situando a esta comunidad en una posición desventajada con respecto a otros grupos étnicos (National Assessment of Educational Progress, NAEP, 2015).

Esta situación cobra más relevancia cuando, en concordancia con las predicciones censales, la población de habla hispana aumentará un 30% a fines de la presente década (Bridgeland, Balfanz, Moore & Friant, 2010). En este contexto, se hace necesario la inclusión de estrategias en el espectro educativo que garantice el éxito académico de los hispanohablantes en el sistema escolar de los Estados Unidos, de cara a los avances de la ciencia y la tecnología, los procesos de globalización y las dinámicas de liderazgo mundial que afrontará el país en las próximas décadas. Uno de los ejes centrales de intervención para afrontar la brecha de alfabetización entre los hispanounidenses es la promoción del español como lengua de herencia, visionándolo como motor que impulsa las dinámicas de bilingüismo, la adquisición de competencias para la vida universitaria y el trabajo, enriquecimiento lingüístico y el mantenimiento de la lengua y culturas heredadas.

Para comprender con mayor detalle la situación, se destaca que en los Estados Unidos existe un conjunto diverso de razas y etnias, tales como los afroamericanos, los nativos americanos, los nativos de Alaska, los asiáticos, los nativos hawaianos o isleños del pacífico y los latinos. Estos últimos son originarios de naciones hispanoparlantes en el Caribe, México, América Central, América del Sur y España que residen en los Estados Unidos. Asimismo, se agrega que la población hispanohablante está clasificada en generaciones. El escenario tradicional para esta población son los inmigrantes de primera generación, usualmente monolingües. Los de segunda generación, bilingües con una preferencia hacia el inglés. Finalmente, los de tercera y cuarta generación, con habilidades de comunicación limitadas en español (Carreira, 2003).

En el contexto educativo de los Estados Unidos, se suele hacer alusión a los hispanoparlantes que tienen algún nivel de proficiencia en la lengua castellana como “hablantes de herencia”, “bilingües” e “hispanohablantes”. Además, la enseñanza del español a los hablantes de herencia es denominada *heritage language teaching* [español para hablantes nativos]. El nivel de proficiencia de estos cursos está determinado, en mayor o menor medida, por la generación de los participantes. Según Potowski (2005), se espera que un hispano de primera generación tenga un dominio de la lengua bastante elevado, puesto que es muy probable que haya recibido instrucción formal en su país de origen, mientras que uno de tercera o cuarta generación ha tenido, dada sus condiciones, escaso contacto con la lengua castellana.

Considerando lo anterior, las investigaciones de Montrul (2002, 2005) y Montrul et al. (2007), plantean que los hablantes de herencia son de alguna forma significativamente diferentes a los estudiantes de una segunda lengua. Montrul et al. (2008) encontró que, incluso, cuando los estudiantes de lenguaje de herencia y los de una segunda lengua tienen el mismo nivel de

proficiencia, los primeros son superiores oralmente, pero menos precisos a la hora de redactar. Así pues, aunque estos dos tipos de aprendices tienen algunas similitudes en sus sistemas subyacentes, hay también diferencias significativas entre ellos. Potowski, Jegerski & Morgan-Short (2009) sugieren diferencias entre los estudiantes hablantes de herencia y de una segunda lengua, teniendo en cuenta su desarrollo lingüístico como resultado de la instrucción en el aula de clases.

En el marco de lo anterior, Rajagopal (2011) propone un modelo de instrucción para la población en mención basado en tres pilares fundamentales. El primero constituye la creencia asociada a que los docentes de las aulas de clase tienen un gran impacto en el éxito académico de sus estudiantes. La calidad de la instrucción, por lo tanto, es el arma más valiosa en el arsenal de los docentes y el factor más significativo que influencia los niveles de logro académico —una influencia que, en muchas ocasiones, es más grande que la pobreza o los gastos asociados a la escolarización por estudiante (Rajagopal, 2011). El segundo principio es la convicción de que la raza o género de los docentes no tiene influencia en su habilidad para promover el éxito de los estudiantes etnoracialmente diversos. El tercer principio esencial de este modelo es la creencia de que todos los estudiantes deben ser responsables de su desempeño. El modelo propuesto por Rajagopal (2011) constata los hallazgos de estudios anteriores (Bui & Fagan, 2013; Hernández, Morales & Gail, 2013; Marzano, Pickering, & Pollock, 2001; Sanders & Horn, 1994; Wright, Horn, & Sanders, 1997).

Otro de los factores que condicionan la instrucción del español en hablantes de herencia es la motivación. Sullo (2009) plantea que proporcionar recompensas externas para el aprendizaje es una práctica bastante extendida. Independientemente de su propósito, las recompensas externas de forma no intencional comunican que el aprendizaje y la adquisición de competencia académica —en este caso, la proficiencia del español como lengua de herencia— no son inherentemente valiosas; el otorgar recompensas externas interfiere con el deseo natural de aprender y desarrollar competencias. Sullo (2009) propone *afirmar* y *celebrar* en vez de *premiar*. De este modo, se alienta a los estudiantes a identificar los sentimientos positivos que ellos experimentan cuando son exitosos académicamente. El deseo natural por aprender es fortalecido cuando los estudiantes comprenden lo bien que se sienten cuando alcanzan el éxito en actividades escolares.

Hilado con el factor de recompensas externas, uno de los factores más importantes del compendio motivacional de Sullo (2009) es el poder de la motivación interna, afirmando que los humanos nacen con poderosas necesidades básicas. A medida que se vive, se encuentran personas que se involucran en conductas que ayudan a satisfacer estas necesidades que orientan al individuo incesantemente. Los seres humanos ubican a las personas que satisfacen sus necesidades, los comportamientos, así como también los valores y creencias dentro de un mundo interno único, la fuente de toda motivación. Por tanto, cuando los estudiantes ven en la escuela y el aprendizaje una experiencia para la satisfacción de una necesidad, estos se esforzarán y aprenderán en el marco de su mundo interno, siendo estudiantes altamente motivados en el ámbito educativo.

Por otro lado, Potowski (2004), argumenta que proporcionar oportunidades a los estudiantes para hablar español no es suficiente; los estudiantes necesitan estar motivados para usar el lenguaje de forma apropiada y coherente. En consonancia con los hallazgos de Norton (2000), Potowski (2004) encontró que, para los estudiantes, el uso del lenguaje estuvo asociado a ser percibido como un estudiante bien educado o ser popular y divertido, recibir elogios en casa y en la escuela por su nivel de proficiencia, entre otros. Por tanto, el aprendizaje del lenguaje no es simplemente una competencia que es adquirida con trabajo duro y dedicación, sino una práctica social compleja que involucra las identidades del lenguaje de los aprendices, lo cual ha recibido poca atención en el campo de la adquisición de segundas lenguas (Potowski, 2004).

Por su parte, McKinley (2010) encontró que las brechas de desempeño académico tienen como origen cinco razones fundantes: 1) expectativas, actitudes y creencias negativas de los docentes; 2) oportunidades y tratamientos dispares para aprender; 3) pobres relaciones interpersonales; 4) identidad de los estudiantes negativa y carencia de motivación; y 5)

respuestas instruccionales inadecuadas hacia los antecedentes culturales y estilos de aprendizaje. Así las cosas, en esa investigación se ratifica la acentuada importancia de la motivación en los procesos de enseñanza y aprendizaje que, consecuente, tienen un sólido componente condicionante de naturaleza sociocultural.

Cabe resaltar que, como uno de los precursores del estudio de la motivación en el ámbito del aprendizaje de lenguas, Gardner & Lambert (1959) sentaron las bases en este ámbito con la teoría de la motivación integradora, desde el modelo socioeducativo en la adquisición de segundas lenguas. En esta teoría se hace una distinción entre las orientaciones instrumental e integradora y su interacción dinámica con las actitudes hacia la situación de aprendizaje, la comunidad lingüística y la lengua objeto (Gardner, 2001).

Lynch (2003), corrobora los hallazgos de Gardner (2001), resignificándolos a los procesos instruccionales de los hablantes de herencia. Lynch (2003) propone los principios de *utilidad* y de *relevancia social*, en los cuales plantea que, entre más utilidad práctica sea encontrada por los hablantes de una lengua de herencia en su contexto social inmediato o general, mayor serán las oportunidades para usarlo y, a su vez, de adquirirlo intencional e incidentalmente. Por otro lado, estableciendo el principio de *identidad social*, Lynch (2003), contempla que estos individuos, quienes psicológicamente relacionan uno o más aspectos de su identidad social a la lengua de herencia, ya sea por razones de utilidad o relevancia social, estarán más inclinados a usarla y adquirirla intencionalmente, ratificando, así, los postulados de Gardner (2001, 2007, 2008) en sus múltiples estudios sobre motivación para el aprendizaje/adquisición de lenguas. Consecuentemente, los docentes de lengua de herencia deben infundir en sus estudiantes un sentido de orgullo y prestigio relevante del español en los niveles locales, nacionales e internacionales.

Ratificando los hallazgos recabados por Bui & Fagan (2013), así como los de Hernández, Morales & Gail, (2013), McKinley (2010), propone un marco para la promoción de aulas con sensibilidad cultural, con una serie de categorías o ejes de acción, destacándose la configuración y permanencia de expectativas claras sobre la maestría del contenido. Así pues, en la presente investigación se abordan los CCSS con miras a establecer expectativas claras, universales y basadas en la evidencia, enmarcadas en un programa de intervención que conjuga los elementos precedentes. Cabe mencionar que los CCSS son una iniciativa educativa en los Estados Unidos, impulsada y presentada oficialmente en el 2010 por National Governors Association (NGA) y Council of Chief State School Officers (CCSSO). Estos estándares establecen un marco común, progresivo y coherente de expectativas de aprendizaje en diferentes disciplinas, direccionadas a preparar a estudiantes a lo largo de su estancia en la escuela para que obtengan éxito en su vida universitaria y profesional.

En este sentido, los CCSS plantean un consenso entre los estudiantes, padres, maestros y administradores de la escuela, en la gran mayoría de los estados de este país (Education Northwest, 2012). Particularmente, en los estándares de las artes del lenguaje se establecen una serie de componentes esenciales o hilos conductores que articulan sistemáticamente la progresión de los mismos: lectura, escritura, habla, escucha y uso del lenguaje (CCSSO, 2012). De ahí, que en este estudio se resignifiquen y se adapten los CCSS para la enseñanza del español como lengua de herencia, —ya que fueron diseñados originalmente para la enseñanza formal del inglés— trascendiendo en materia curricular, puesto que los marcos instruccionales que regulan la enseñanza del español no cubren todas las necesidades de los estudiantes con lenguas heredadas (Potowski, 2005).

Luego del recorrido por la literatura que enmarca a la motivación en hablantes de herencia y sus implicaciones pedagógicas, en el presente estudio, se persigue la consecución del siguiente objetivo: fortalecer la motivación por el aprendizaje de la lengua castellana en los estudiantes hispanohablantes de sexto grado en *Sarasota School of Arts and Sciences* a través de la implementación de una propuesta pedagógica curricular basada en los CCSS.

2. Método

2.1. Diseño metodológico

Dada su naturaleza, esta investigación se enmarcó en el enfoque mixto de la investigación científica, conjugando articuladamente los diseños cuasiexperimental y de investigación-acción participativo. Bajo este manto metodológico, se adaptó, validó y administró un escalamiento tipo Likert para medir la motivación de los estudiantes por el aprendizaje del español como lengua de herencia, caracterizándola a profundidad mediante un grupo focal. Posteriormente, se llevó a cabo la implementación de un programa de intervención para fomentar la motivación de los estudiantes, fundamentado en los CCSS. Ulteriormente, se realizó una segunda medición de la motivación de los estudiantes con el mismo instrumento. Finalmente, se hizo un contraste entre estas mediciones para establecer diferencias estadísticamente significativas entre los grupos control y experimental, y entre el pretest y el postest.

2.2. Población y muestra

La población objeto de estudio estuvo constituida por 76 estudiantes de ascendencia hispana que cursaban sexto grado, pertenecientes de las clases de español como lengua de herencia en Sarasota School of Arts and Sciences, ubicada en la zona costera del golfo de México del estado de la Florida en los Estados Unidos de América. Se realiza un muestreo no probabilístico, en consonancia con los presupuestos de Hernández, Fernández & Baptista (2010). Una porción (38 estudiantes de un aula específica) de la población total compone el grupo control del estudio y otra porción (38 estudiantes de otra aula intacta) componen el grupo experimental. De acuerdo con Hernández, et al. (2010), para los diseños cuasiexperimentales, los grupos de experimentación deben estar compuestos por un mínimo de 15 participantes, por lo que se cumple a cabalidad este criterio de validez.

2.3. Hipótesis

H₀. No hay una diferencia significativa en la motivación de los estudiantes hacia el aprendizaje del español como lengua de herencia, luego de la implementación de una propuesta pedagógica curricular basada en los CCSS.

H₁. Hay una diferencia significativa (positiva) en la motivación de los estudiantes hacia el aprendizaje del español como lengua de herencia, luego de la implementación de una propuesta pedagógica curricular basada en los CCSS.

H₂. Hay una diferencia significativa (negativa) en la motivación de los estudiantes hacia el aprendizaje del español como lengua de herencia, luego de la implementación de una propuesta pedagógica curricular basada en los CCSS.

2.4. Variables

Variable dependiente: motivación por el aprendizaje del español como lengua de herencia. Esta variable se conceptúa como un constructo teórico-hipotético que designa la activación, direccionalidad, intensidad y coordinación de conductas encaminadas al aprendizaje del español como lengua de herencia, distinguiéndose dos orientaciones propuestas por Gardner (2004) que la condicionan La *orientación instrumental* y la *orientación integradora*. La primera hace referencia al conjunto de motivos de índole práctica por los que un aprendiente estudia una lengua. Las conductas de los estudiantes se orientan hacia objetivos pragmáticos concretos de aprendizaje (v.g. superar una prueba, obtener un título universitario o empleo, ascensos, alcanzar determinado nivel socioeconómico, entre muchos otros). De otra parte, la *orientación integradora* se refiere a la disposición positiva hacia la comunidad hablante con el deseo de interactuar, o el anhelo de asemejarse e identificarse con el modo de vida y los valores de la cultura. Las conductas de los estudiantes se encaminan al deseo de comunicación o de integración con el grupo social de la cultura de la lengua meta. Existe empatía y un conjunto de sentimientos positivos hacia la lengua y cultura objeto de estudio.

Variable independiente: propuesta pedagógica curricular basada en los CCSS. En esta variable se toman los valiosos aportes de los CCSS, incluyendo la secuenciación la competencia comunicativa en hilos conductores, estándares e indicadores, planteamientos metodológicos y la transversalización de habilidades para la vida, la educación superior y el acceso al mundo laboral. Los pilares fundamentales de programa de intervención son la planeación curricular y el banco de estrategias interventivas para la enseñanza y el aprendizaje. La planeación curricular contempla la estructuración de los propósitos educativos, a la luz de los CCSS, el establecimiento consecuente de contenidos, habilidades y competencias, la concatenación de los mismos y los criterios de evaluación. Por su parte, el banco de estrategias interventivas para la enseñanza y el aprendizaje engloba un compendio de métodos, técnicas, estrategias metodológicas, recursos educativos, recursos para la evaluación formativa, entre otros.

Las contribuciones de Potowski (2010, 2011, 2012, 2013, 2016) en el campo de la enseñanza del español como lengua de herencia en los Estados Unidos nutren los pilares teóricos referentes a la instrucción y evaluación en la propuesta pedagógica curricular. Así mismo, se hace un aporte relevante con las teorías de adquisición en el mismo campo de estudio propuestas por Lynch (2003), haciendo hincapié en las implicaciones de la motivación instrumental e integrativa de Gardner (2001) y el modelo motivacional de Wlodkowski (1997). Además de esto, Carreira (2003), a fin de comprender las características de la población objeto de estudio, contribuyen con una amplia caracterización de la misma, haciendo énfasis en las dinámicas demográficas y migratorias en los Estados Unidos. Finalmente, los hallazgos de Sullo (2009), Saravia-Shore (2012), Rajagopal (2011), Bui & Fagan (2013) y McKinley (2010), referentes a modelos vanguardistas de intervención pedagógica en población hispanohablante y culturalmente diversa, enriquecen el diseño, implementación y difusión de la propuesta pedagógica curricular subyacente de la presente pesquisa con miras a su articulación con los CCSS.

2.5. Instrumentos de recolección y análisis de la información

Con el fin de medir la variable dependiente, se adaptaron los escalamientos del *Attitude/Motivation Test Battery* de Gardner (2004) para el *International AMTB Research Project*, constituyendo un cuestionario autoadministrado de 25 reactivos con cinco opciones de respuesta: *totalmente de acuerdo, de acuerdo, ni en acuerdo ni en desacuerdo, en desacuerdo y muy en desacuerdo*. El cuestionario tiene un puntaje final mínimo de 25 y máximo de 125. Cabe resaltar que la batería de Gardner (2004) ha sido aplicada y validada en un vasto número de investigaciones en el campo de la motivación hacia el aprendizaje de lenguas en estudiantes de grados sexto a undécimo (Dörnyei, 2001; Gardner, 2001, 2007, 2008).

En cuanto a la validación estadística, los coeficientes de Cronbach α para los ítems que conforman el cuestionario fueron superiores a un valor de ,90. Dörnyei (2007) plantea que un valor de Cronbach α entre ,60 y ,70 son suficientes en el campo de lingüística. Por lo tanto, la consistencia interna del instrumento es sustancial. Asimismo, esta escala posee validez convergente y discriminante, toda vez las formulaciones teóricas subyacentes a los constructos y los reactivos correlacionan significativamente en los casos en que se espera y, por otro lado, se prueba que los constructos que no deberían tener ninguna relación, no la tienen. Finalmente, se anota que la asunción de normalidad se cumple, puesto que, en la prueba de Kolmogorov-Smirnov los niveles de significancia estadística en la pre y post prueba en ambos grupos son inferiores a 0,5 (sig. >0,5); se determina que los datos recabados provienen de una distribución normal (0,099 y 0,200, en el grupo control; 0,200 y 0,200 en el grupo experimental). Además, se establece que la validez de los casos, tanto para el grupo control y experimental es de un 100%.

Con miras a enriquecer los hallazgos de carácter cuantitativo, se diseñó y ejecutó una sesión a profundidad, haciendo hincapié en cómo se construyen significados en los grupos de estudiantes objeto de estudio: conceptos, experiencias, emociones, creencias, categorías, sucesos y temas relacionados con la motivación por el aprendizaje del español en estudiantes hispanohablantes, sus implicaciones dentro de sus generaciones y su estancia en los Estados Unidos. De este modo, se aprovechó el perfil descriptivo y, sobre todo, el gran potencial

comparativo suscitado en cada una de las sesiones con los diferentes grupos, siendo de gran provecho a la hora de triangular la información (Barbour, 2007). El diseño, recogida de datos y análisis de los mismos para las sesiones a profundidad cuenta con los criterios de dependencia, credibilidad, transferencia y confirmación, a luz de los postulados de Teddlie & Tashakkori (2009); Guba & Lincoln (1989); Williams, Unrau & Grinnell (2005); Creswell (2009).

3. Resultados

Como se aprecia en la Tabla 1, la correlación de las muestras en el grupo control tiene un nivel de correlación significativamente alto. Partiendo de esto, el promedio de los puntajes obtenidos por los estudiantes en el cuestionario antes de la intervención fue de 66,08 de 125 puntos posibles, por lo que existe una activación, direccionalidad, intensidad y coordinación de conductas desfavorables para el aprendizaje del español como lengua de herencia. Posterior a la intervención en el grupo experimental, mediante la aplicación de la propuesta pedagógica curricular basada en los CCSS, en el grupo control —en donde se desarrollaron las clases atendiendo a las directrices de la escuela— el promedio de los puntajes obtenidos en el mismo cuestionario fue de 66,19.

Luego de obtener las estadísticas de las muestras emparejadas, las correlaciones de muestras emparejadas y la prueba significancia estadística, se procede a determinar la decisión estadística, a fin de establecer si hubo algún efecto en el grupo control frente a la no intervención pedagógica durante el periodo de tratamiento. Dado que el valor de significancia estadística es de 0,856, se concluye que no hubo un cambio significativo en las mediciones repetidas en el grupo control (véase Tabla 2). Dada la ausencia de intervención en este grupo, los flujos motivacionales de los participantes se mantienen invariables a lo largo del año lectivo.

Tabla 1

Estadísticos de las muestras emparejadas para el grupo control

Momentos	Media	N	Desviación estándar	Media de error estándar	Correlación de las muestras	
					Correlación	Sig.
Prueba antes de la intervención	66,08	38	12,727	2,065	,977	,000
Prueba después de la intervención	66,16	38	12,595	2,043		

Tabla 2

Prueba de muestras emparejadas para el grupo control

Diferencias emparejadas					t	gl	Sig. (bilateral)
Media	Desviación estándar	Media de error estándar	95% de intervalo de confianza de la diferencia				
			Inferior	Superior			
-,079	2,725	,442	-,975	,817	-,179	37	,859

Por otro lado, en el grupo experimental, como se plasma en la Tabla 3, la correlación de las muestras tiene un nivel de correlación significativamente alta. Asimismo, se aprecia que el promedio de los puntajes obtenidos por los estudiantes en el cuestionario antes de la intervención fue de 66,18 de 125 puntos posibles. En este sentido, los estudiantes de este grupo se encuentran en las mismas condiciones teniendo en cuenta sus flujos motivacionales por el aprendizaje del español como lengua de herencia. Posterior a la intervención en el grupo experimental, mediante la aplicación de la propuesta pedagógica curricular basada en los CCSS, el promedio de los puntajes obtenidos en el mismo cuestionario fue de 95,2. Como se

evidencia en la Tabla 4, la prueba significancia estadística permite entrever que hubo un cambio altamente significativo en las mediciones repetidas en el grupo experimental, ascendiendo el valor p a 0,000, muy por encima del límite estándar ($sig. >0,5$).

Tabla 3

Estadísticos de las muestras emparejadas para el grupo experimental

Momentos	Media	N	Desviación estándar	Media de error estándar	Correlación de las muestras	
					Correlación	Sig.
Prueba antes de la intervención	66,18	38	13,303	2,158	,558	,000
Prueba después de la intervención	95,24	38	15,723	2,551		

Tabla 4

Prueba de muestras emparejadas para el grupo experimental

Diferencias emparejadas				t	gl	Sig. (bilateral)
Media	Desviación estándar	Media de error estándar	95% de intervalo de confianza de la diferencia			
			Inferior Superior			
-29	13,813	2,241	-33,593 -24,512	-13	37	,000

Así las cosas, se acepta la hipótesis alternativa de esta investigación; hay una diferencia significativa (positiva) en la motivación de los estudiantes hacia el aprendizaje del español como lengua de herencia, luego de la implementación de una propuesta pedagógica curricular basada en los CCSS.

En cuanto a la información recabada desde las sesiones a profundidad, se destaca que, producto de su contraste con la teoría de la motivación integradora de Gardner (2001), se propone un esquema (véase Figura 1) que plasma los diversos factores que condicionan la motivación de los hispanos frente a al aprendizaje del español como lengua de herencia, entre estos, el deseo y las actitudes por aprender los aspectos formales de la lengua; la intensidad motivacional orientada hacia determinadas conductas: las actitudes hacia la situación de aprendizaje, englobando a los docentes y los cursos de lengua de herencia; la orientación instrumental e integral; y las actitudes y el interés hacia la comunidad lingüística. Todo esto, permeado por la situación socioeconómica, política y cultural de esta población.

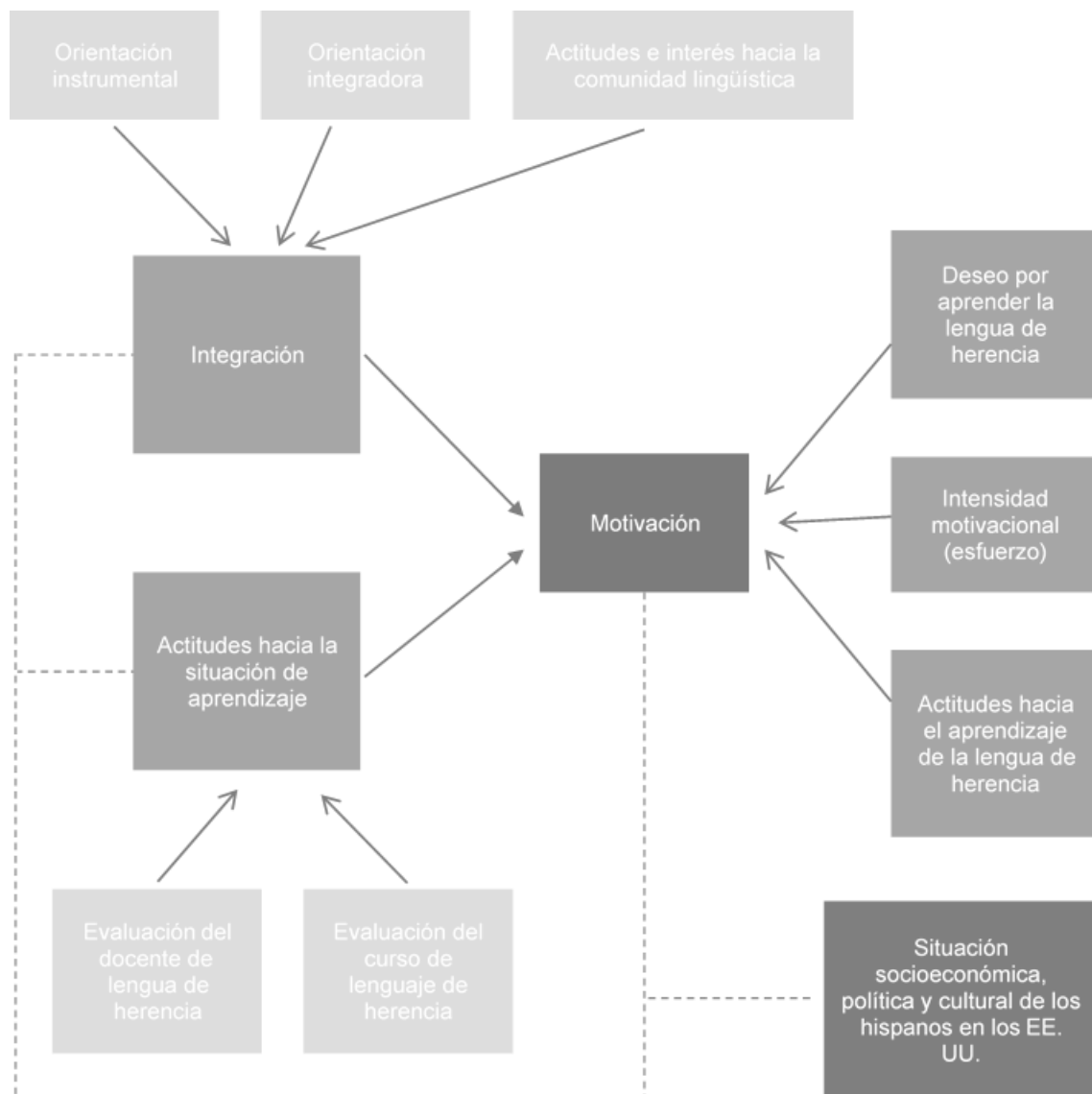


Figura 1. Dinámica motivacional en la población objeto de estudio

Posterior a la transcripción de las sesiones a profundidad, se realizan los siguientes procesos: una codificación abierta, consistente en un barrido de los aspectos más relevantes en torno a las variables de la investigación; una codificación axial, en la cual se da el agrupamiento por códigos; una codificación selectiva, en la que se refinan las categorías y se revisan las conexiones entre categorías; y, por último, la teorización, donde se establecen los argumentos centrales sobre cada categoría; en esta fase se articula la teoría con los hallazgos recabados. En la Tabla 5 se condensan los principales hallazgos.

Tabla 5
Hallazgos recabados en la sesión a profundidad

Categoría	Hallazgo	Relación teórica
Orientación instrumental	Los estímulos de orden monetario, de bienestar familiar, calidad de vida y oportunidades de empleo tienen una repercusión considerable, ya que los estudiantes perciben que el español no es indispensable para triunfar en estos ámbitos, debido a la hegemonía del inglés en el país.	(Lynch, 2003). (Gardner, 2001).
	Los estudiantes no tienen objetivos claros a corto y largo plazo con respecto a la importancia del dominio del español en su vida escolar, universitaria y futuro profesional.	(Locke & Lathman, 1990). (Gardner, 2001).
	Los estudiantes están usualmente motivados a aprender inglés como un medio para alcanzar la movilidad social, en detrimento de su lengua nativa. Se constata que los estudiantes de tercera generación presentan en gran medida monolingüismo orientado hacia el inglés.	(Hakimzadeh & Cohn, 2007).
	Los estudiantes no consideran importante el aprendizaje del español, debido a su relevancia social, el valor percibido del mismo y el contexto sociocultural. En este sentido, el contexto, en términos de dinámicas familiares, el sistema educativo local, los conflictos de intereses, las normas culturales y las expectativas y actitudes sociales condicionan las conductas de los estudiantes en los contextos de instrucción formal del español.	(Gardner, 2004). (Wentzel, 1999). (Dörnyei, 2001, 2007).
Motivación intrínseca y aspectos cognitivos	La motivación de los estudiantes se ve condicionada por la sensación de competencia, la consciencia en el desarrollo de competencias, el dominio en un área determinada y la eficacia personal.	(Dörnyei, 2001, 2007).
	Se identifica a la concepción del yo entre los factores que confluyen en la motivación intrínseca de los estudiantes, donde se evidencia la consciencia realista de los puntos fuertes y débiles en cuanto a las competencias necesarias, definiciones personales y valoraciones sobre el éxito, el fracaso y la impotencia aprendida.	(Dörnyei, 2001, 2007).
Establecimiento de objetivos	Los estudiantes tienen un acceso limitado al español en interacciones orales auténticas y a materiales impresos en el hogar.	(Neuman & Celano, 2006). (Proctor, August, Carlo & Barr, 2010).
	Los estudiantes se orientan hacia el logro y el establecimiento de objetivos, englobando la necesidad de obtener logros (éxito académico en otras asignaturas mediante el reforzamiento del inglés en detrimento del español).	(Locke & Lathman, 1990).
Fenómenos lingüísticos derivados	Se identifica una carencia de <i>input</i> , el cual se agrava por la exogamia parental. Asimismo, se determina una ausencia de adultos en el hogar que tienen el español como su lenguaje dominante.	(Potowski, 2012).
	Los estudiantes participantes experimentan en sus sistemas gramaticales de procesos de adquisición incompleta, atrición y la adquisición de una variedad de contacto, lo cual influye en su motivación.	(Potowski, Jegerski & Morgan-Short, 2009).

4. Discusión y conclusiones

La intensidad motivacional, el deseo, las actitudes hacia la situación de aprendizaje de la lengua de herencia y las orientaciones integral e instrumental de los estudiantes hispanohablantes propician, en gran medida, la consecución de los logros instruccionales, los estándares, competencias y habilidades consecuentes al alcance del nivel de proficiencia requerido para el nivel de las clases de español como lengua de herencia. No obstante, estos elementos se encuentran condicionados a múltiples factores que involucran las dinámicas migratorias, sociopolíticas y culturales características en los hispanos en los Estados Unidos. Uno de estos factores son los estímulos de orden monetario, de bienestar familiar, calidad de vida y oportunidades de empleo asociadas al dominio adecuado del inglés en el país. En consecuencia, como se constató en este estudio, los estudiantes consideran poco relevante y significativa la instrucción de los aspectos formales del español como lengua de herencia y, en cambio, manifiestan explícitamente que la enseñanza o adquisición del inglés es más importante. Además de esto, se aprecia un establecimiento de objetivos a corto y largo plazo con respecto al aprendizaje del inglés, motivados por estímulos pragmáticos. Entre este tipo de objetivos no se contempla el fortalecimiento de la proficiencia del español como lengua de herencia.

Partiendo de las implicaciones antes descritas y de las necesidades en las que esta investigación fue concebida, tuvo lugar el diseño de una propuesta pedagógica curricular basada en los CCSS. Producto del diseño e implementación de este instrumento de experimentación, se concluye que, coincidiendo con Potowski (2005), la instrucción del español como lengua de herencia en los Estados Unidos debe estar fundamentada en su mantenimiento, la expansión del espectro bilingüe y el empleo de estándares basados en la evidencia, alineados con las expectativas de los ámbitos universitarios y laborales. En el marco de lo anterior, los CCSS fungieron como una plataforma curricular con expectativas claras, comprensibles y consistentes, incluyendo contenido riguroso y la aplicación de conocimiento por medio de habilidades de alto nivel que promovieron la motivación de los estudiantes hacia el aprendizaje del español como lengua de herencia.

Ratificando los postulados de Potowski & Carreira (2010) y Potowski (2005), la instrucción del español como lengua de herencia, desde la experiencia de esta pesquisa, hizo hincapié en las dinámicas del español como idioma mundial, los principios pedagógicos de la expansión y enriquecimiento lingüístico, así como las teorías de los procesos cognitivos, sociales y lingüísticos involucrados en el bilingüismo y de las lenguas en contacto. Por tanto, se recomienda tener en cuenta durante la construcción del currículo y las prácticas pedagógicas en el aula los temas sociales, políticos y afectivos asociados a los diferentes grados de competencia en una lengua de herencia, el nivel de proficiencia y las actitudes de los alumnos hacia el estudio de su lengua de herencia, la democracia y la convergencia de culturas hispanas en el aula de clase.

Por otro lado, se corrobora que la instrucción del español como lengua de herencia debe propiciar la integración de contenido, el fomento de la construcción del conocimiento, la reducción del prejuicio, la justicia social y el desarrollo académico. Así pues, un enfoque para la enseñanza con sensibilidad cultural del español como lengua de herencia coadyuva al fortalecimiento de la motivación de los estudiantes, así como las actitudes positivas hacia su lengua de herencia y la situación de aprendizaje. Se debe concebir un ambiente de aula caracterizado por el respeto hacia las múltiples diferencias culturales de herencia de los estudiantes hispanoparlantes. Lo anterior ratifica el marco motivacional para la instrucción de estudiantes culturalmente diversos (Bui & Fagan 2013; Hernández, Morales & Gail, (2013; McKinley, 2010).

Además, el aprendizaje basado en proyectos y la instrucción diferenciada favorecen la motivación, aprovechando la adopción del fomento de la lectura y de la escritura como procesos secuenciales, colaborativos-interactivos, creativos y críticos. Se fomenta el alcance de las competencias, logros instruccionales y los CCSS desde la cooperación entre pares y el

reconocimiento de las preferencias individuales al momento de aprender. Asimismo, se asevera que el uso de organizadores gráficos, escritura colaborativa, transversalización curricular y discusiones enriquecedoras promueven el fortalecimiento de las competencias lingüísticas de los estudiantes, así como su motivación.

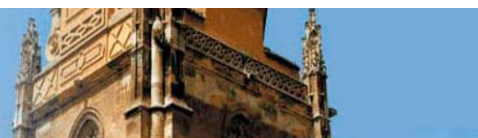
Finalmente, se anota que se hace patente la necesidad de una reforma en cuanto a la enseñanza del español como lengua de herencia en los estudiantes hispanoparlantes de los Estados Unidos. En este contexto, es indispensable la visibilización de iniciativas, estrategias y reformas curriculares adelantadas por docentes, instituciones educativas, distritos escolares, asesores curriculares y académicos que contribuyan al mantenimiento de la lengua en mención, la identidad hispanoparlante, el éxito académico y la calidad de vida en general de los hispanos en este país.

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L'impact des formations continues à distance aux enseignants des sciences physiques dans des logiciels de simulation informatique

The impact of continuous distance training on teachers of physics in computer simulation software

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 9 de abril de 2017

Fecha de revisión: 12 de diciembre de 2017

Fecha de aceptación: 9 de abril de 2018

Mahdi, K., Laafou, M., & Idrissi, R. (2018). L'impact des formations continues à distance aux enseignants des sciences physiques dans des logiciels de simulation informatique. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 27 – 41.



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The impact of continuous distance training on teachers of physics in computer simulation software

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Resumé: Ce travail a pour objet d'étudier les faiblesses du processus d'apprentissage des sciences physiques ainsi que la possibilité de bénéficier des avantages des nouvelles TIC par l'intégration des simulateurs informatiques. Pour ce faire, et en se basant sur les résultats initiaux d'un questionnaire, Nous avons commencé par la mise en place d'une formation à distance concernant la conception et l'utilisation pédagogique des simulateurs pour plus de deux cents enseignants marocains qui n'ont utilisé les technologies de l'information et de la communication (TIC) en classe que pour la préparation des cours et des contrôles. Les enseignants concernés étaient répartis sur les différentes académies du Royaume. La formation a duré six semaines pendant lesquelles étaient programmés des cours interactifs, des rencontres synchrones et asynchrones, des tests et des projets de réalisation d'un simulateur informatique. L'analyse d'un questionnaire délivré en ligne aux dits enseignants avant et après cette formation vise à montrer l'impact de ce genre de formations continues à distance sur l'utilisation des TIC en classe, sur la substitution des travaux pratiques ratés (faute de matériel didactique ou de son danger), sur l'apprentissage des phénomènes virtuels, sur le rendement des élèves marocains et par conséquent sur l'amélioration de la qualité d'enseignement des sciences physiques et ce en utilisant les simulateurs informatiques

Abstract: This work aims to study the weaknesses of the learning process in physics and the possibility of benefiting from the advantages of new ICTs by integrating computer simulators. To do this, and based on the initial results of a questionnaire, we began by setting up a distance training course on the design and pedagogical use of simulators for more than two hundred Moroccan teachers who used information and communication technologies (ICT) in the classroom just in the preparation of courses and tests. The teachers concerned were from different academies of the Kingdom. The training lasted for six weeks during which interactive courses, synchronous and asynchronous meetings, tests and projects of conducting a computer simulator were programmed. The analysis of a questionnaire launched online with those teachers, before and after this training, aims to show the impact of this type of continuous distance training on the use of ICT in the classroom on the substitution of failed practical work (Lack of teaching material or of its danger) on the learning of virtual phenomena, on the performance of Moroccan pupils and consequently on the improvement of the quality of the teaching of physics by using computer simulators

Mots clés: Enseignement; Formation à distance; Formation des enseignants; Sciences physiques; Simulateur informatique; TIC

Keywords: Computer simulator; Distance learning; Education; ICT; Physics; Teachers training

1. Introduction

L'éducation joue un rôle fondamental dans le développement socio-économique et culturel des pays et dans l'amélioration des conditions de vie des populations (UNESCO, 1998). De nos jours, son importance s'est accrue en tant que levier puissant pour la construction de la société du savoir et de la technologie. De ce fait, elle a été officiellement classée en deuxième priorité nationale après l'intégrité territoriale. Dès lors, il fallait engager une profonde réflexion pour l'amélioration de la qualité du système d'éducation et de formation (Roi Mohammed VI, 2012).

L'enquête internationale TIMSS (Trends in International Mathematics and Sciences Study) de 2011 a montré que les élèves marocains sont parmi les moins performants au monde en ce qui concerne le rendement général en Sciences et en Mathématiques. Ils ont même enregistré un résultat plus faible que celui de 2007 et 2003 en se classant avant-dernier en sciences, devant le Ghana qui a participé pour la première fois (Tawil, Cerbelle, & Alama, 2010). Une autre recherche indique que l'enseignement des sciences au Maroc est confronté à plusieurs défis comme la faible performance des élèves en sciences physiques (CSE, 2009).

L'apparition des technologies de l'information et de la communication (TIC) et leur intégration dans la pratique pédagogique dans le monde de l'éducation - d'une part - nous ont offert des opportunités technologiques pour l'amélioration et la favorisation de l'apprentissage. Mais d'une autre part, elles nous mettent en face des défis de l'élaboration et l'intégration pédagogique des simulateurs (ou des animations) dans le processus d'enseignement-apprentissage. Cette intégration des TIC dans l'espace éducatif donne des valeurs ajoutées au processus de l'enseignement: On cite - par exemple - la continuité du temps d'apprentissage dans et hors la classe (e-Éduc, 2008).

Afin d'améliorer la qualité d'enseignement des sciences physiques et augmenter le rendement des élèves marocains, nous avons essayé dans ce travail d'identifier les failles de ce processus d'enseignement auxquelles on peut remédier en recourant aux TIC. Pour ce faire, nous avons commencé par des entretiens avec des enseignants des sciences physiques et d'autres acteurs éducatifs (appartenant à l'Académie Régionale de l'Éducation et de la Formation de Tanger-Tétouan) qui nous ont permis d'élaborer et de distribuer un questionnaire en ligne aux enseignants marocains des sciences physiques du cycle secondaire qualifiant. L'objectif étant de repérer et délimiter les difficultés qui entravent la bonne compréhension des sciences physiques chez les lycéens. Et d'après les résultats de ce questionnaire, il s'est avéré que les enseignants ont besoin d'un certain nombre de formations continues spécifique afin de pouvoir surpasser les problèmes reliés à la complexité de la réalisation des travaux pratiques. Et par conséquent simplifier la concrétisation des phénomènes physiques chez les lycéens par l'intégration des simulateurs dans leurs pratiques pédagogiques. Et dans le but de satisfaire leurs besoins, et de répondre à nos questions de recherche, nous avons programmé une formation continue à distance durant six semaines sur la construction et l'intégration pédagogique des simulateurs informatiques.

Finalement, pour vérifier la pertinence de nos hypothèses - d'une part - sur l'amélioration de la qualité du processus d'enseignement-apprentissage des sciences physiques, et d'autre part sur l'augmentation du rendement des lycéens par l'intégration des simulateurs informatiques dans l'enseignement des sciences physiques au Maroc au niveau secondaire qualifiant on se basant sur les formations à distance des enseignants, nous avons diffusé un autre questionnaire en ligne à ces enseignants.

Le reste de cet article est organisé comme suit: La section suivante présente la problématique et le cadre théorique dans lequel s'inscrit ce travail. La section 3 est dédiée à la méthodologie que nous avons adopté pour notre recherche et qui est basée sur les éléments suivants: une étude analytique des documents et des travaux de recherche précédente, des entretiens avec les principaux acteurs pédagogiques et deux questionnaires (avant et après la formation à distance). Les principaux éléments et la méthode que nous avons suivis dans notre formation à distance sont présentés dans la section 4. Alors que dans la section 5, nous présentons les résultats de ces deux questionnaires que nous avons distribués et qui ont pour objectif de

montrer les valeurs ajoutées de la formation précédente. La dernière section est réservée à la conclusion et elle présente une liste des perspectives.

2. Problématique et Cadre théorique

L'enseignement de toute discipline a pour but de transmettre des savoirs spécifiques. Le caractère expérimental de la science physique est très rigoureux, il lui accorde une place particulière. À ce titre, elle doit être enseignée à partir de l'observation des expériences; l'expérience est conçue aussi comme un moyen de preuve, de compréhension et de validation des lois (Slaïmia, 2014). Le fait d'expérimenter et de manipuler permet de passer par le concret afin que les notions scientifiques soient mieux acquises par les élèves. Ainsi, lorsque l'élève expérimente, il a l'occasion de se poser des questions et d'analyser les résultats qu'il peut obtenir (Gruson, 2012).

Au Maroc, 68% des enseignants ne réalisent que moins de 50% des expériences programmées dans le manuel scolaire, ce manque d'activités expérimentales est dû, suivant la même étude, au manque de matériel scientifique au sein des laboratoires (Chekour, Laafou, & Janati-Idrissi, 2015). Dans cette situation, les simulations constituent une alternative pour les élèves afin qu'ils puissent refaire les expériences réalisées par l'enseignant ou bien de simuler les expériences non faites à cause du manque de matériel dans les lycées marocains. Aussi la simulation fournit aux élèves l'opportunité d'observer une expérience réelle et d'interagir avec elle, de faire des expériences virtuelles, de contrôler les expériences, d'examiner de nouveaux modèles et d'améliorer leur compréhension intuitive des phénomènes complexes. Donc, on peut considérer la simulation informatique comme une expérience concrète de second genre (Varenne, 2003).

Une autre recherche (Droui & eL Hajjami, 2014) considère que la simulation sur ordinateur peut être considérée comme un support des nouvelles activités dans le cadre de l'enseignement scientifique et que ces simulations sont de plus en plus efficaces si elles sont intégrées au bon moment et pour la bonne activité, en utilisant une stratégie pédagogique adéquate et avec des objectifs pédagogiques très précis. D'autres recherches affirment que les élèves sont conscients des complexités et des difficultés que génère la nature de l'enseignement des sciences physiques, et pensent que l'intégration des TIC - sous forme de simulation informatique - peut franchir ces difficultés et amener à des apprentissages significatifs (Ahaji, Zahim, Droui, & Badda, 2013).

Néanmoins, les enseignants doivent avoir des compétences technologiques (pour l'utilisation des TIC en général et des simulateurs informatiques en particulier) et des compétences pédagogiques (pour qu'ils puissent intégrer ces simulations informatiques dans les activités scolaires) comme à dit Brown: *"Si la technologie doit être utilisée par les élèves, les enseignants doivent posséder la confiance, la compréhension et les habiletés pour les intégrer efficacement dans leur pédagogie. Ceci sera possible seulement en recevant une formation et un développement professionnel adéquat"* (Brown, 2003).

Au Maroc, la plupart des enseignants des sciences physiques jugent que les simulations augmentent le rendement des élèves (Chekour, Laafou, Janati-Idrissi, & Mahdi, 2014.), mais ils ne les intègrent presque jamais dans leurs activités scolaires. Et ce à cause de leurs faibles compétences dans le domaine d'utilisation des simulateurs, du manque des simulateurs adéquats et aussi du manque des formations continues spécifiques à la pratique et l'utilisation pédagogique de ces simulateurs (Mahdi, Sofi, Laafou, Janati-Idrissi, & Madrane, 2017). Aussi, 97% des enseignants interrogés (Mahdi, Laafou, & Janati-Idrissi, 2015) expriment le besoin et la nécessité de poursuivre des formations continues permettant la conception et l'usage des simulateurs éducatifs, alors que la quasi- totalité d'entre eux ne possèdent ni le savoir-faire technique ni la pédagogie relative à ce genre de simulateurs.

Ces formations continues des enseignants peuvent renouveler leurs méthodes d'enseignement et encourager l'innovation dans l'éducation; Pour parler plus concrètement, elles permettront de mobiliser des éléments de connaissance et d'expertise dans les pratiques pédagogiques. Ainsi,

les enseignants (UNESCO, 2002) sont invités à développer leurs compétences professionnelles et même acquérir de nouvelles compétences afin de rendre leur enseignement plus efficace. Egalement, plus les enseignants ont des occasions de se former à l'usage pédagogique des TIC, plus les TIC sont intégrées aux activités pédagogiques en salle de classe.

K. Mahdi et al. a affirmé que la formation à distance des enseignants peut aider ces derniers à améliorer leurs méthodes et stratégies d'enseignement et de mettre à jour leurs connaissances pédagogiques, scientifiques et techniques sans aucun obstacle de la non-disponibilité, de déplacement ou de temps: le professeur choisit de son plein gré le moment qui lui convient pour suivre ses cours, il peut le faire chez-lui, par exemple, et bien sûr sans avoir de la déperdition scolaire (Mahdi, Chekour, & Laafou, 2014).

Notre question de recherche peut être alors formulée sous la forme suivante:

Jusqu'à quel point cette formation continue à distance aux enseignants des sciences physiques (en l'intégration pédagogique et la conception des simulateurs ou animations informatiques) pourrait lutter contre les problèmes de la non-réalisation des Travaux pratiques (foute du manque du matériel de sa médiocrité ou de son danger) et par la suite élever le rendement scolaire des élèves?

3. Méthodologie

Pour étudier les contraintes auxquelles se confrontent les élèves et les enseignants en classe des sciences physiques pour un enseignement/apprentissage de haute qualité, nous avons adopté dans cette recherche une démarche méthodologie qui s'articule autour des éléments suivants:

3.1. Etude analytique et statistique

Une étude analytique des documents et des travaux de recherche précédente qui concerne l'enseignement des sciences physiques au Maroc, et dans laquelle nous avons constaté que les élèves marocains sont parmi les moins performants dans le monde en ce qui a trait au rendement général en Sciences ("TIMSS and PIRLS International Study Center", 2011). Ainsi avons-nous trouvé dans d'autres recherches que l'enseignement des sciences au Maroc est confronté à plusieurs défis comme la faible performance des élèves en sciences physiques (CSE, 2009).

Nous avons opté pour le choix d'une étude statistiques selon les notes des examens du Baccalauréat - pour l'année scolaire 2014 - pour mesurer le niveau de performance des élèves scientifiques (de l'Académie Régionale de l'Éducation et de la Formation de Tanger-Tétouan) en sciences physiques.

Le tableau 1 ci-dessous que nous avons élaboré montre, alors, la distribution de ces notes en question:

Tableau 1
Distribution de notes

Notes	0 - 2	2 - 4	4 - 6	6 - 8	8 -10	10-12	12-14	14-16	16-18	18-20
Effectifs	1303	1257	1027	751	528	363	231	124	48	13
Effectifs cummulé	1303	2560	3587	4338	4866	5229	5460	5584	5632	5645
Féquence	23,1%	22,3%	18,2%	13,3%	9,4%	6,4%	4,1%	2,2%	0,9%	0,2%
féquence cummulé	23,1%	45,3%	63,5%	76,8%	86,2%	92,6%	96,7%	98,9%	99,8%	100%

En définitive, et après les calculs statistiques effectués, on a constaté que la moyenne générale des élèves est très faibles puisqu'elle est égale à 5,42. Le quart des élèves ont obtenu des notes inférieures à 2,25, la moitié d'entre eux ont obtenus des notes inférieures à 4,5 et les trois quarts d'entre eux ont des notes inférieures à 7,75. Tandis que juste 13,8% de la totalité des élèves ont pu dépasser la moyenne. Ce qui en résulte une grande dispersion: 3,94.

Ce constat nous a amené à poser un ensemble d'hypothèses et de questions précités sur le rendement scolaires des élèves.

3.2. Brainstorming

Nous avons réalisé un remue-méninges avec des chercheurs, des inspecteurs, des enseignants de la matière et aussi des élèves scientifiques (faisant partie de la région Tanger-Tétouan) pour identifier les limites d'enseignement-apprentissage des sciences physiques dont les principaux thèmes de débat ont porté sur:

- Les problèmes de l'acquisition des sciences physiques en général;
- La manière la plus efficace pour que les élèves puissent comprendre les phénomènes physiques;
- Le pourcentage de travaux pratiques réalisés par les élèves en classe;
- Les TIC peuvent améliorer la qualité d'enseignement des sciences physiques chez les enseignants;
- Les TIC peuvent améliorer la qualité d'apprentissage des sciences physiques chez les étudiants;
- Les enseignants bénéficient-ils des formations continues pour les aider à bien maîtriser les nouvelles théories d'apprentissage;
- Les enseignants ont-ils bénéficié des formations continues en matière TIC;

3.3. Questionnaire

L'interaction de ces acteurs pédagogiques avec nos questions ainsi que leurs réponses convaincantes pendant ces entretiens nous ont aidé à élaborer un questionnaire pour les enseignants des sciences physiques (parce que l'enseignant est l'acteur principal de l'acte d'enseignement-apprentissage).

Nous avons distribué ce questionnaire préliminaire aux enseignants des sciences physiques de l'Académie Régionale de l'Éducation et de la Formation de Tanger-Tétouan pour détecter les problèmes que les enseignants des sciences physiques rencontrent dans la matière enseigné. Et pour que l'échantillon soit représentatif et qu'il puisse couvrir les différentes régions du Maroc, nous avons partagé en ligne ce questionnaire en utilisant l'outil Google-Forms dans plusieurs pages et sites web marocains de l'enseignement des sciences physiques.

L'analyse des résultats extraits de ce questionnaire (cité en détail dans la partie IV – Analyse des questionnaires) ont été traités par le logiciel SPSS 10.0. Cette analyse a prouvé la nécessité d'une certaine solution comme la formation à distance.

3.4. Formation à distance

Selon les différents choix des enseignants sur la formation en les sciences de l'éducation (pédagogie, psychopédagogie et didactique...) et les outils informatiques (simulateurs informatiques, systèmes d'exploitations, traitement de textes, tableurs, Logiciels de présentation assistés par ordinateur...) qui étaient adéquats avec une autre recherche (Mahdi, Chekour, Laafou, Janati-Idrissi, & Madrane, 2014), il s'est avéré que la totalité des enseignants des sciences physiques ont besoin des formations continues dans le domaine de l'intégration des simulateurs en classe. Et ce afin qu'ils puissent surmonter les difficultés reliées à la réalisation des travaux pratiques et par conséquent, la concrétisation des phénomènes physiques chez les élèves par l'intégration des simulateurs dans leur pratique pédagogique. D'autres recherches montrent que les enseignants des sciences physiques ont de faibles compétences sur l'utilisation des simulateurs informatiques (Mahdi et al., 2015). Et afin de leur apporter un peu d'aide, nous avons programmé une formation continue à distance durant six semaines sur la construction et l'intégration pédagogique des simulateurs informatiques.

Après l'analyse de ce questionnaire et la formation des enseignants que nous avons organisée, nous avons envoyé - par email - un autre questionnaire aux enseignants. Et ce afin de mesurer l'impact de cette formation sur le processus d'enseignement-apprentissage en général.

4. Etapes de notre formation à distance

4.1. Introduction

Afin de satisfaire le besoin des enseignants des sciences physiques en formation continue sur les simulateurs informatiques, Nous avons planifié une formation à distance concernant la conception et l'utilisation pédagogique des simulateurs informatiques basée sur une plateforme pédagogique pour plus de deux cents enseignants marocains qui n'ont jamais utilisé les TIC en classe sauf pour la préparation des cours et des contrôles. Ces enseignants appartiennent aux différentes académies du Royaume. La formation a duré six semaines pendant lesquelles nous avons programmé pour les cinq premières semaines des cours interactifs (textes, vidéos et animations), des rencontres synchrones et asynchrones et un test à la fin de chaque semaine. Et pour la dernière semaine, les enseignants ont élaboré un produit final sous forme d'un simulateur informatique selon leurs choix.

4.2. Simulation informatique

Les simulations informatiques, ou simulations numériques sont des programmes informatiques qui possèdent un modèle simplifié d'un système ou d'un processus (Droui & eL Hajjami, 2014). Les simulations numériques scientifiques reposent sur la mise en œuvre de modèles théoriques et servent à étudier le fonctionnement et les propriétés d'un système modélisé ainsi qu'à en prédire son évolution.

Nous avons programmé cette formation à distance en simulateurs informatiques (basée sur efront comme une plateforme pédagogique). Ces derniers ayant des avantages pédagogiques comme par exemples:

- Ils fournissent aux élèves l'opportunité d'observer une expérience réelle et d'interagir avec elle.
- Ils peuvent activer des compétences procédurales de base chez les élèves en science comme: observer, mesurer, communiquer, classer et prédire (Roth & Roychoudhury, 1993).
- Ils peuvent aussi activer des compétences procédurales intégrées à la démarche scientifique comme: contrôler des variables, formuler des hypothèses, interpréter des données, expérimenter et formuler des modèles (Padilla, Okey, & Dillashaw, 1983).

4.3. Choix de la plateforme pédagogique

Une plateforme pédagogique (en Anglais Learning Management System) est un portail qui fournit un soutien à une communauté d'apprenants autour de contenus et d'activités d'apprentissage en ligne; elle permet la gestion d'étudiants, d'apprenants au sens large du terme et facilite la mise en œuvre de stratégies pédagogiques.

Ses principales fonctions sont pédagogiques ou communicatives, elles permettent de créer un environnement d'apprentissage en ligne. Par l'intermédiaire du réseau, cette application permet de créer des interactions entre des pédagogues, des apprenants et des ressources pédagogiques.

Nous avons choisi la plateforme d'apprentissage en ligne (e-learning) eFront pour notre formation continue à distance car elle est facile à utiliser. Aussi, elle intègre des concepts pédagogiques solides guidant les utilisateurs en les maintenant motivés. En outre, elle comprend une grande variété de composantes qui aident les tuteurs à créer leurs structures de leçon en ajoutant du contenu et en construisant des tests en ligne. Il est à signaler aussi que eFront permet de communiquer entre tous les intervenants dans l'acte d'enseignement-apprentissage (tuteurs-apprenants, apprenants-apprenants), de suivre l'historique et le progrès de l'apprentissage, de conduire des enquêtes, d'assigner des projets et de délivrer des certifications (DistriSoft, s. d.).

4.4. Choix du tuteur:

Pour animer notre formation à distance, nous avons choisi - comme tuteurs - sept enseignants d'informatique du cycle secondaire qualifiant (volontaires et déjà motivés) qui répondent à des critères de compétences prédéterminés (sciences de l'éducation, sciences physique et l'informatique). De plus, ils possèdent la capacité de susciter la synergie des apprenants en ligne (comme celle de l'apprentissage collaboratif à partir d'interventions individuelles en ligne). Sans oublier leurs esprits méthodique, leur flexibilité et leur patience (Walckiers & Praetere, 2004).

Selon le nombre des tuteurs volontaires, nous avons partagé les deux cents neuf enseignants en sept groupes. Chacun de ces groupes a été classifié selon son encadrement dans le domaine et accompagné d'un tuteur en ligne. Basée sur les méthodes de pédagogie par projet, d'apprentissage collaboratif et d'apprentissage réflexif, le dispositif poursuit les objectifs spécifiques suivants:

- Apprentissages pédagogiques: vivre une nouvelle façon d'apprendre, réfléchir à la manière d'utiliser les technologies éducatives pour l'enseignement et l'apprentissage, poser un regard critique sur les TIC;
- Apprentissages techniques: être capable de manipuler les nouveaux outils de communication et d'information liés à Internet;
- Apprentissages de la communication et de la collaboration à distance: pouvoir utiliser les TIC pour communiquer et collaborer dans un groupe de travail;
- Réflexivité: être capable d'analyser sa propre façon d'apprendre dans un dispositif innovant, d'évaluer cette façon d'apprendre, de faire des liens avec la pratique professionnelle;

4.5. Rencontres Asynchrones:

La plateforme d'apprentissage en ligne eFront permet aussi un apprentissage collaboratif, à travers un forum de discussion fermé; les apprenants répondront aux questions posées par le tuteur en saisissant des messages, qui présentent leurs réactions, leurs reformulations ainsi que leurs synthèses. Ces messages permettent de baliser leurs processus de compréhension et de développement de leurs propres pensées.

Les avantages de l'apprentissage collaboratif en ligne via des forums de discussion offert par les plateformes d'apprentissage en ligne sont désormais connus: La flexibilité, l'autonomie, l'esprit critique, la convivialité ainsi que la permanence des contributions sont autant de termes qui reviennent pour décrire l'apport des interactions pour la construction et la co-construction des savoirs (Jelmam, 2010).

4.6. Rencontres synchrones

Les tuteurs planifient chaque semaine une rencontre synchrone avec leur groupe d'apprenants, ces réunions en ligne (rencontre synchrone) ont pour objectif de collaborer, de partager des idées ou des documents et d'apprendre ensemble en toutes flexibilité sans déplacement. Nous avons choisi le logiciel des réunions en ligne GoToMeeting de Citrix car il est gratuit, simple à utiliser, intègre tout (VoIP, téléphone, vidéo HD) pour une conférence Web nette et professionnelle. C'est presque aussi bien que de se réunir à la même table (GoToMeeting, s. d.).

4.7. Conclusion

Après la formation en question, nous avons diffusé un autre questionnaire en ligne aux deux cents neuf enseignants bénéficiars, pour vérifier nos hypothèses concernant l'impact de telle formation sur l'augmentation du rendement des élèves marocains et par conséquent sur l'amélioration de la qualité d'enseignement des sciences physiques.

5. Analyse des questionnaires

Dans cette partie nous présentons les résultats de notre étude auprès de deux cents neuf enseignants et enseignantes de science physique du second cycle de l'enseignement secondaire, et qui appartiennent aux différentes académies du Maroc. Leur participation était volontairement selon leurs désirs sans aucune contrainte d'âge, du sexe, du niveau universitaire ou de l'ancienneté.

Les données issues de ces deux questionnaires sont analysées en utilisant le logiciel de l'analyse statistique SPSS (Statistical Package for the Social Sciences).

5.1. Réalisation des enseignants des Travaux Pratiques dans leurs classes

La réponse des enseignants à la réalisation des Travaux Pratiques (TP) en classe pour enseigner des concepts expérimentaux montre que seulement 2% parmi eux qui utilisent les TP d'une manière régulière alors que 51% des enseignants ne réalisent presque jamais les TP en classe.

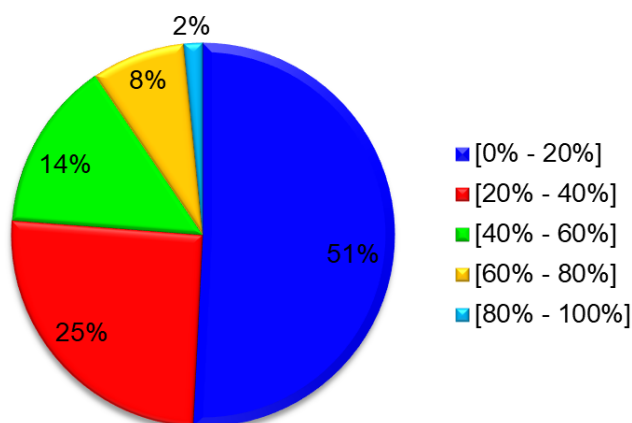


Figure 1. Le pourcentage de la réalisation des TP par les enseignants

D'après les mêmes résultats, on constate que la moyenne des travaux pratiques réalisés par les enseignants des sciences physique est:

$$\bar{x} = \frac{\sum_{i=1}^p x_i \cdot f_i}{\sum_{i=1}^p f_i} = 26 \%$$

5.2. Les obstacles qui entravent la réalisation des Travaux Pratiques

Pour savoir la nature des obstacles qui empêchent les enseignants de réaliser des Travaux Pratiques en classe, nous avons programmé une autre question à choix multiples dont les réponses sont illustrées par la Figure 2:

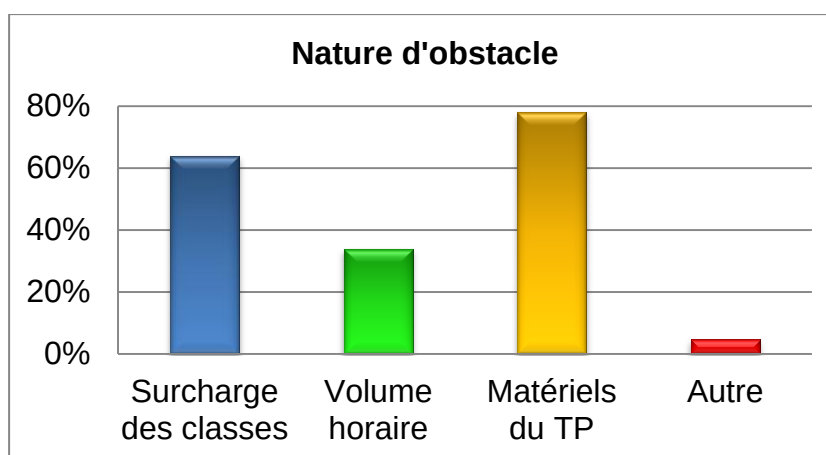


Figure 2. Le pourcentage des obstacles de la réalisation des TP en classe

Les enseignants considèrent que ce manque des TP est dû essentiellement à la non-disponibilité du matériel destiné aux expériences pratiques ou à son état détérioré, par un pourcentage de 78% et aussi à la surcharge des classes 64%.

5.3 Utilisation des animations ou simulation en classe

Pour rattraper les travaux pratiques non-réalisés, les enseignants utilisent des animations ou bien des simulateurs pour vérifier et compléter les connaissances dispensées dans les cours théoriques. La figure 3 montre le pourcentage d'utilisation de ces outils informatiques.

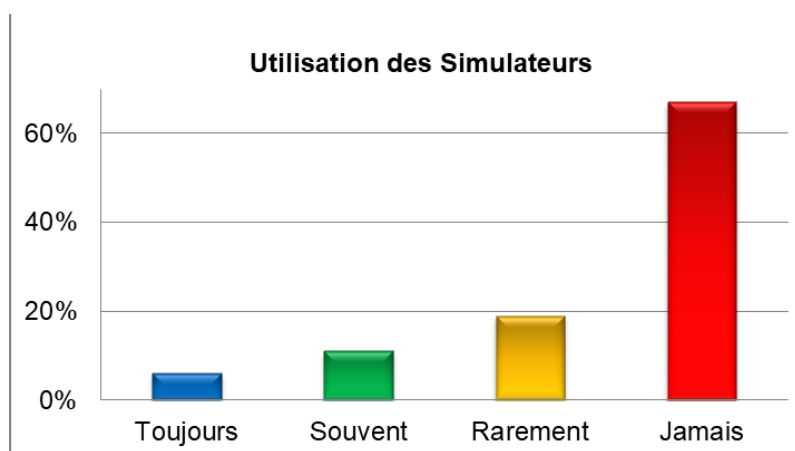


Figure 3. Le pourcentage d'utilisation des simulateurs informatiques par les enseignants en classe

On constate que la majorité des enseignants 67% n'ont jamais utilisé les animations ou les simulateurs informatiques, et que seulement 6% parmi eux qui intègrent l'utilisation de ces outils informatiques pour l'illustration des phénomènes physique ou pour remédier un TP.

5.4. Les contraintes d'utilisations des simulateurs en classe

Pour connaître les contraintes qui empêchent les enseignants d'utiliser des TIC en classe, nous avons posés une questionne à choix multiples dont les réponses sont illustrées par la figure 4.

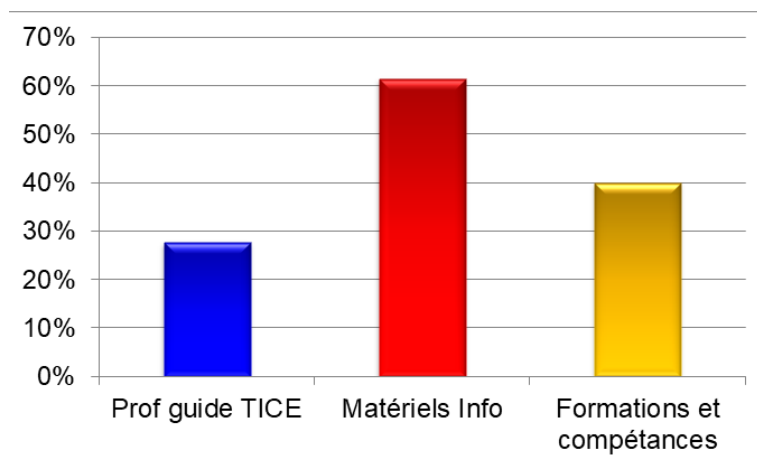


Figure 4. Obstacles d'utilisations des TIC en classe

Selon ces enseignants, les problèmes sont d'ordre:

- Matériels: Le manque de matériels informatiques (ordinateur et vidéoprojecteur) et la non-disponibilité de la salle d'informatique est considéré par la plupart des enseignants 62% comme étant le premier obstacle de la non-utilisation des TIC en classe.
- Pédagogique: La qualification techno-pédagogiques des enseignants en TIC, et le manque de formations spécifiques à l'utilisation des programmes informatique destiné à la matière des sciences physiques a un facteur de 40% pour l'obstruction de l'intégration des TIC en classe.
- Humain: La non-disponibilité d'un Professeur conseiller en TIC dans les lycées pour aider ces enseignants en vue de mieux intégrer les TIC dans leurs activités pédagogiques.

5.5. Influence de ces formations continues à distance

Pour remédier aux problèmes du non-remplacement des expériences non réalisées par des simulations informatiques et pour satisfaire le besoin de la plupart des enseignants en formation continue en simulation informatique (Mahdi et al., 2015), nous avons dispensé gratuitement une formation continue à distance durant six semaines (du 19 avril au 31 mai 2015) pour des enseignants qui ont des connaissances de base en informatique et désirant développer leurs compétences en matière des technologies de l'information et de la communication éducatives (TICE), et qui n'ont jamais utilisé les animations ou les simulateurs informatiques en classe.

A l'issue de cette formation, les enseignants bénéficiaires ont été amenés à réaliser un projet personnel et à produire une animation multimédia tout en respectant les normes, les modèles et les fondements pédagogiques en vigueur.

Ensuite et après sept mois de cette formation et exactement en janvier 2016, nous avons envoyé un questionnaire par e-mail à ces enseignants qui ont participé et complété leurs parcours d'apprentissage pour avoir l'impact de cette formation sur leurs parcours professionnelles.

La figure 5 montre le pourcentage de ces enseignants qui ont pu intégrer les animations ou les simulateurs en classe.

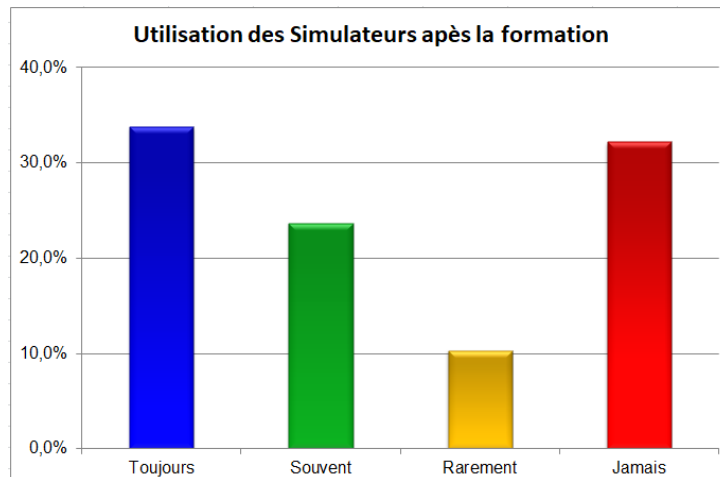


Figure 5. Pourcentage des enseignants formés qui intègrent les simulateurs en classe

Nous avons constaté que cette formation continue à distance a aidé 67,8% des enseignants à intégrer les TIC en classe. Par contre 32,2% de ces enseignants présumant qui n'ont pas pu utiliser les simulateurs informatiques à cause de la non-disponibilité de la vidéoprojecteur en classe.

En ce qui concerne la transposition didactique, la figure 6 montre que 77% des enseignants ont confirmé que cette formation continue à distance a mieux aidé à simplifier la transmission des concepts virtuels.

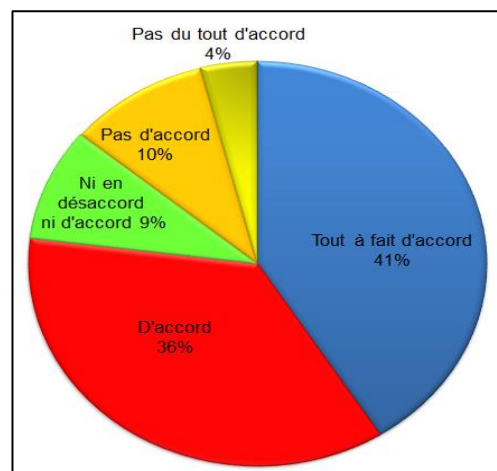


Figure 6. Aider à transmettre des concepts virtuels

Les enseignants peuvent surmonter les difficultés de réalisation de quelques travaux pratiques ratés faute de matériel didactique, de sa médiocrité ou de son danger (cas des réactions chimiques) par l'intégration des simulateurs informatiques. La figure 7 montre le pourcentage de remplacement des travaux pratiques ratés par des simulations informatiques après que les enseignants ont suivi la formation.

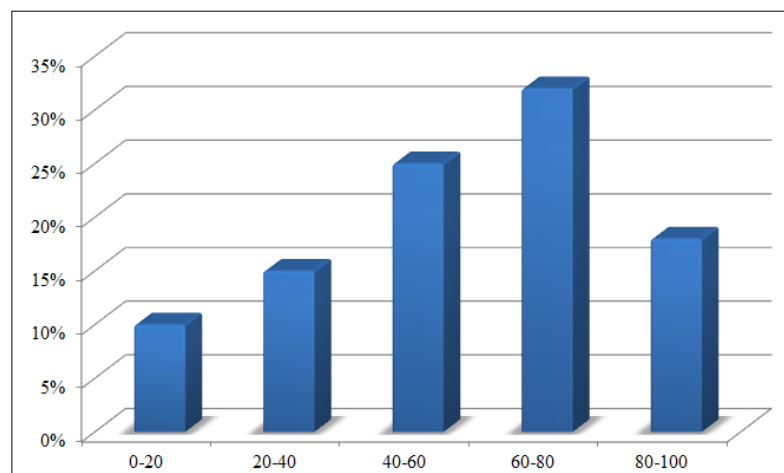


Figure 7. Remplacement des travaux pratiques par des simulations informatiques

Cette figure montre que 75% des enseignants ont remplacés plus de 40% des travaux pratiques ratés, et que 50% ont remplacés plus de 60%, alors que juste 10% des travaux pratiques ratés n'étaient presque pas remplacés.

En ce qui concerne le rendement des élèves, les enseignants ont communiqué les résultats affichés dans la figure suivante:

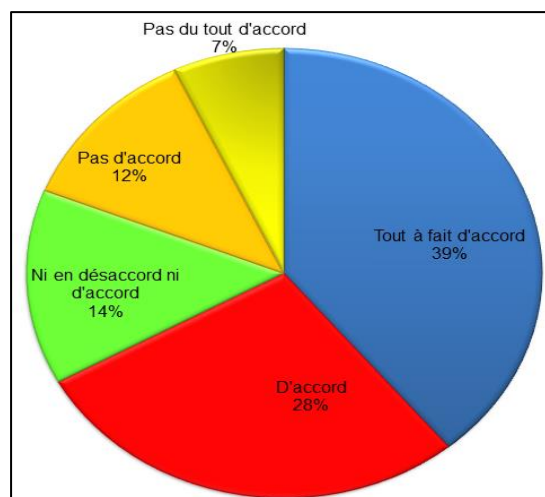


Figure 8. Augmentation du rendement des élèves

La figure 8 montre que 67% des enseignants ont garanti une augmentation du rendement des élèves après avoir intégré les simulations informatiques dans leurs pratiques pédagogiques.

En ce qui concerne la qualité d'enseignement des sciences physiques, 73% de ces enseignants ont confirmé - d'après les résultats montés par la figure 9 - que la formation précédente a amélioré la qualité d'enseignement.

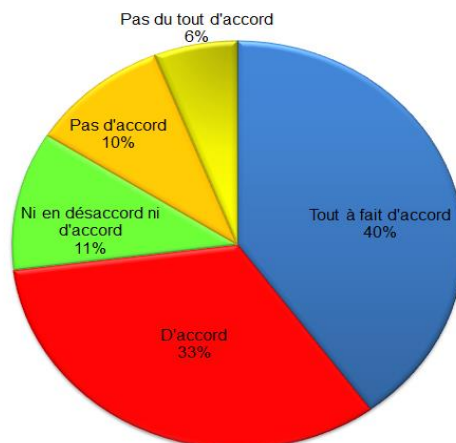


Figure 9. Le pourcentage d'amélioration de la qualité d'enseignement par l'intégration des simulateurs en classe

6. Conclusion

Au terme de cette étude, on peut dire que les résultats obtenus nous permettent de répondre à la question que nous avons formulés au départ.

En effet, la moitié des enseignants de sciences physiques ne réalisent que rarement les expériences avec leurs élèves en classe, et ce manque de travaux pratiques est dû essentiellement à la contrainte de la non-disponibilité ou à l'état détérioré du matériel destiné aux expériences pratiques et aussi à la surcharge des classes.

Les enseignants pourraient remédier à ce manque de travaux pratiques par l'intégration des simulations informatiques mais malheureusement seulement une petite proportion des enseignants qui utilisent les TIC en classe. Et cela est dû essentiellement aux obstacles d'ordre suivants:

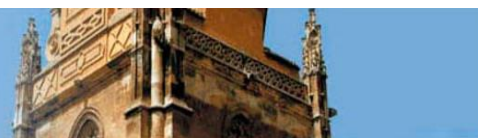
- Matériels: Le manque de matériels informatiques dans les classes de sciences physiques et la non-disponibilité de la salle d'informatique.
- Pédagogique: L'incompétence et la non qualification des enseignants en intégration pédagogique des TIC en classe à cause de l'absence des formations continues techno-pédagogiques ciblées pour les enseignants de sciences physiques pour l'utilisation des logiciels adéquats au programme scolaire.
- Humain: L'absence d'un conseiller en informatique au lycée en vue de préparer et d'installer pour les enseignants des simulateurs adaptés aux modules enseignés.

Afin d'améliorer la qualité d'enseignement des sciences physiques et de surmonter les obstacles de l'incompétence et la non-qualification des enseignants à l'intégration pédagogique des TIC en classe et l'absence des formations continues, le ministère de l'éducation nationale doit organiser des formations techno-pédagogiques continues à distance aux enseignants des sciences physiques en intégration pédagogique des simulateurs informatiques. Ce genre de formations augmente d'une manière remarquable le taux d'intégration des TIC en classe. Cela permet aux enseignants de combler le manque des travaux pratiques par l'utilisation des simulateurs informatiques à condition que les laboratoires ou les classes soient équipés d'un vidéoprojecteur considéré comme facilitateur de l'opération d'enseignement-apprentissage.

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Adolescentes y redes sociales: panorámica general sobre el uso, el tiempo y los riesgos

Adolescents and social networks: the general uses, the time spent and the possible risks

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 03 de julio de 2017

Fecha de revisión: 12 de diciembre de 2017

Fecha de aceptación: 16 de julio de 2018

Martínez, N. y González, E. (2018). Adolescentes y redes sociales: panorámica general sobre el uso, el tiempo y los riesgos. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 42 – 54.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

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Adolescents and social networks: the general uses, the time spent and the possible risks

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Resumen

En este estudio se presenta el análisis y los resultados del cuestionario de investigación sobre la panorámica general y específica de los usos, el tiempo empleado y los posibles riesgos, contemplando la posible dependencia y la preocupación ante esta, con una muestra de 182 adolescentes, 85 chicas y 97 chicos, de edades comprendidas entre los 15 y los 18 años de la provincia de Granada. Los resultados más destacados señalan una correlación positiva entre el tiempo de uso y la dependencia a las redes sociales. Muestran que existe una elevada preocupación en torno a la dependencia, poniendo de manifiesto la necesidad de patrones educativo-preventivos para el uso seguro, intentando no caer en la dependencia producida por un uso excesivo

Abstract

In this research paper, we present the analysis and the results of the questionnaire about the general and specific uses, the time spent and the possible risks, considering the possible addiction to social networks. We have considered a sample of 182 teenagers, 85 girls and 97 boys, of ages included between 15 and 18 years old of the province of Granada. The most outstanding results indicate a positive correlation between the time of use and the addiction to the social networking sites. They show that a high worry around the dependency exists, revealing the need to develop educational-preventive patterns for a safe use, trying not to fall down in the dependency produced by an excessive use

Palabras clave

Adolescencia; Internet; Redes sociales; Función social de los medios; Relaciones sociales; Padres

Keywords

Youth; Internet; Social networks; Social role of the media; Social relationship; Parents

1. Introducción

Nunca antes la información y el conocimiento habían estado al alcance de cualquier individuo, teniendo ciertas competencias de búsqueda de la información y los recursos tecnológicos necesarios, toda persona puede autoformarse. Esta es la característica de la sociedad actual; antiguamente la información sólo estaba al alcance de unos pocos. Para Castells (2000), la Sociedad de la Información supone una nueva revolución industrial. Ahora bien ¿a qué nos referimos cuando hablamos de la sociedad de la información y del conocimiento? Barroso (2013) hace una clara distinción entre estos dos conceptos: Sociedad del conocimiento (aquella en la que todos los miembros de la sociedad poseen capacidades y competencias para ser miembros activos en la construcción social del conocimiento) y la sociedad de la información (vinculada a las posibilidades de difusión de información que ofrece el entorno digital) (p.64).

En esta época, gracias a la tecnología, la expansión de la información se hace de manera ágil, fluida, instantánea y global, pues una persona puede publicar algo en España y otra persona puede estar consultándolo casi a la vez en otro continente, a esto hace referencia la sociedad de la información, que no es estática, sino *“cambiante y amplia (...) viene impulsada por el avance científico y los intereses globalizadores económicos y culturales existentes en la sociedad actual”* (Domínguez, 2009, p.1). Los intereses científicos, económicos y globalizadores entran al escenario de la difusión de la información, es decir, no toda difusión de la información es neutra.

La sociedad del conocimiento va más allá de la difusión de la información, porque considera a todos los miembros de la sociedad como agentes constructores de conocimiento, ya no sólo habla de difusión sino de construir conocimiento, como ejemplo muy claro se puede ver en Wikipedia, en donde cualquier persona puede aportar nuevos temas, completar temas existentes y hacer correcciones, es decir, se genera un nuevo tipo de conocimiento que nace de la interacción de los saberes anteriores y de las nuevas tecnologías.

La sociedad del conocimiento y de la información son conceptos diferentes pero a la vez relacionados. Así pues, *“la sociedad de la información, vinculada a la sociedad del conocimiento, sería aquella que hace de la transmisión de informaciones el soporte para la amplificación y desarrollo de los conocimientos, valores y tecnologías o técnicas disponibles”* (Barroso, 2013, p.64). Los medios tecnológicos en la sociedad del conocimiento sólo son parte de la sociedad de la información, cuando se utiliza para ampliar y desarrollar conocimiento.

El uso de internet durante los últimos años ha ido creciendo a un ritmo acelerado. En la actualidad, se estima que hay más de 600 millones de usuarios de internet en todo el mundo (ITU-Istanbul Technical University, 2005).

La población accede de manera vertiginosa a los equipos tecnológicos y los utiliza con una frecuencia cada vez más alta, para fines tan diversos como comunicarse, trabajar, educarse o simplemente distraerse o divertirse. En este sentido, consideramos que toda nuestra actividad está ligada de un modo u otro al mundo digital, hasta tal punto, que se vuelve impensable afrontar la vida sin estas nuevas herramientas. Esta oleada tecnológica no está exenta de flaquezas, pues se manifiesta en un mundo donde existe una gran brecha entre las diferentes partes del planeta. Por ejemplo, la posesión de ordenadores e Internet en casa. El 74% de hogares de los países desarrollados poseen un ordenador y el 71% Internet, mientras que en el resto de regiones del mundo, los porcentajes se encuentran entre el 25% y el 20% (ITU, 2010). A pesar de ello, estas diferencias tan significativas están disminuyendo a pasos agigantados. En el 2006 el 82 % de la población mundial no usaba Internet, y en el año 2011 se redujo al 65 %. China pasó de representar el 28 % de usuarios de Internet de los países en desarrollo, al 37 % en menos de cinco años (ITU, ICT Facts and Figures, 2011). La Unión Internacional de Telecomunicaciones (ITU), estimó aproximadamente en 5.900 millones el número de abonados de telefonía móvil para el año 2011 en un planeta donde habitamos unos 7.000 millones de personas. Todo esto nos demuestra que el acceso a la tecnología gracias a aparatos como el teléfono móvil o Internet, descenderá en un periodo de tiempo muy corto.

España también se hace eco de esta tendencia mundial, según fuente del Instituto Nacional de Estadística (2013), el uso de los ordenadores entre los menores de 10 a 15 años es una práctica muy extendida, siendo ya el 95,2% los que han utilizado un ordenador en los últimos 3 meses y el 91,8% ha utilizado Internet. Otros estudios recientes, como los desarrollados por Bringué, Sádaba y Tolsa (2011), establecen que el 97% de los hogares con hijos de entre 10 y 18 años posee un ordenador y un 82% lo tiene conectado a Internet. A ello, se une que, antes de cumplir los 10 años, el 71% de los niños manifiesta haberse adentrado en el ciberespacio. En este mismo informe se establece que la mayoría de los menores dedica más de una hora al día a Internet; mientras que un 38% afirma que, durante el fin de semana, su uso de la Red supera las dos horas al día. Datos más actuales, indican que los escolares entre los 10-17 años acceden todos (58.8%) o casi todos los días a Internet (25.7%) entre 1 y 2 horas diarias (41.9%), 2-3 horas/día (22.3%) o más de tres horas/día (22.5%) (Ministerio del Interior, 2014).

Antes de adentrarnos en el mismo de las redes sociales así como los usos y riesgos que se puedan derivar de éstas y por ende, del manejo de internet en general, debemos mencionar algunas características de éstas.

La web 1.0 es conocida también como res estática. Los contenidos en esta son introducidos por personas concretas, es decir no comparte información de manera automática. De esta manera las redes solo se utilizan como herramienta informativa. Las emociones que transmite es la misma que la que transmite un libro (Martínez, Segura y Sánchez, 2010).

Según Lacalle, (2011) la web 2.0 es conocida también como web social. A diferencia de la web 1.0 esta permite generar contenidos propios y compartir producción. Aparecen como consecuencia a esto servicios de comunicación en línea, como por ejemplo los wikis, los podcart, weblogs y otras aplicaciones. Es decir, el individuo de manera activa participa. Sin embargo, aún no se ha generalizado esta web en todos sus niveles.

Por otro lado, la web 3.0 es para muchos una evolución evidente de la web 2.0 mientras que para otros es una nueva web diferente. Esta web supondrá otra forma de búsqueda diferente de información ya que se basará en un internet más *"inteligente"*. A esta web también se le denomina web3D porque podemos recrear nuestro mundo extender el virtual. Tim Berners-Lee, el creador de internet, entiende ésta como una web semántica *"hace referencia a la capacidad de las servidores web para comprender el contenido de todo lo que almacena o distribuye en la red, ya sea bajo la forma de texto, sonido, imagen o gráficos"* (Martínez, Segura y Sánchez, 2010, p.7). así pues, una web semántica o *"inteligente"* es capaz de funcionar sin intervención humana. Comienzan a surgir debates sobre la interactividad que surge en la web 2.0 definiéndola como la capacidad de crear intercambios entre usuarios, lo que incide totalmente con la comunicación. La interactividad facilita que el usuario intervenga de manera más individualizada en el comportamiento del sistema en línea. Destacamos de la interactividad rasgos como la *"inmediatez"*, la *"personalización"*, la *"ampliación"*, la *"no linealidad"* y *"participación"* tal y como afirman Martínez, Segura y Sánchez (2010).

En cuanto al uso que dedican los jóvenes a las redes sociales, un reciente estudio llevado a cabo en Andalucía, muestra que el principal uso de las redes sociales de los jóvenes andaluces es *«chatear»* (86,7%) como una forma de estar en contacto con el grupo social de referencia, que se sustituye por subir imágenes que ellos mismos hacen (69,2%) cuando el entorno o el acontecimiento no les permite otra cosa (Bernal-Bravo y Angulo, 2013, pp. 28-29).

El tiempo que los jóvenes dedican a la tecnología ha ido cambiando paulatinamente a lo largo del tiempo. Según un estudio, en Estados Unidos, en los años treinta, se les dedicaban alrededor de 10 horas por semana a la radio y al cine, ya en la década de los setenta los niños y niñas en edad de escolarización consumían 2,3 horas de televisión por día; en la época de los noventa, los niños y niñas de 8 a 18 años estaban expuestos a los medios 7 horas 29 minutos por día; llegando a la actualidad a sumar 10 horas 45 minutos por día (Lucas, Robb, Takeuchi y Kotler, 2011).

La multitud de opciones de entretenimiento y comunicación que se ofertan en la actualidad, están diseñadas de forma atractiva, incluso para los menores y, han sido comercializadas aprovechando su utilidad en ámbitos como el escolar, al acceso a la información y a la comunicación virtual. Sin embargo, actividades como las tareas escolares en casa, practicar deporte o relacionarse con la familia, apenas ocupan 90 minutos diarios (Bringué, Sádaba y Tolsa, 2011). En este sentido, consideramos que el uso de las tecnologías de la información y la comunicación también entraña riesgos si los jóvenes no reciben una adecuada información sobre su uso, tiempo que dedican y posibles riesgos, *“la adquisición de las competencias relacionadas con la alfabetización mediática e informacional es básica para su formación en un mundo constantemente cambiante”* (Tejedor y Pulido, 2012, p. 71).

Algunos de los riesgos que suponen un mal uso de Internet es que hay personas que buscan aprovecharse de los demás, hay contenidos inapropiados para niños, niñas y jóvenes, no todo lo que se dice en Internet es verdad, no todo el mundo es quien dice ser, de hecho no suele serlo. Ciberbullying, grooming, sexting,... (Ruiz-Corbella y De-Juanas Oliva, 2013), son términos que en la actualidad están siendo empleados debido al mal uso que se hace de la red. En este sentido, un reciente estudio realizado en la Universidad de Navarra, sobre los hábitos de uso y conductas de riesgo en Internet en preadolescentes nos muestra que algunas conductas de riesgo están relacionadas con quedar con desconocidos, dar datos personales o enviar fotos y vídeos. Asimismo, se encontraron comportamientos relacionados con el «ciberbullying» (Fernández-Montalvo, Peñalva-Vélez y Irazabal, 2015).

Conscientes de que tanto el uso como el manejo de las redes sociales se ha convertido en un nuevo entorno no sólo de socialización, sino en un espacio para construir su propia identidad social con sus iguales (Bernal-Bravo y Angulo, 2013), consideramos que el papel de los padres y madres en este aspecto es fundamental. Esto nos conduce a plantear la necesidad de concienciar a la familia sobre los posibles riesgos que tiene Internet, así como sobre la importancia de que supervisen a los hijos, incluyendo más tiempos de uso compartido de las tecnologías.

El presente estudio se plantea con el objetivo principal de conocer las características del uso de las redes sociales en una muestra de adolescentes con edades comprendidas de entre 15 y 18 años. Como objetivos más específicos, una vez establecido el uso concreto que los adolescentes realizan con las redes sociales, se pretende examinar el tiempo empleado durante su uso, junto con detectar la existencia de factores de riesgo relacionados con la dependencia entre los sujetos de la muestra, así como su preocupación. Este conjunto de datos nos permitirá conocer la existencia o no de un problema real dentro de nuestros jóvenes, junto con la necesidad de elaborar programas educativos-preventivos para paliarlo.

La finalidad última es doble: a nivel descriptivo, la información recogida debe traducirse en un mejor conocimiento de la realidad existente y, a nivel aplicado, los resultados deben traducirse en recomendaciones concretas tanto a la familia, profesorado, como a los implicados, proponiendo estrategias de prevención y control. Varios autores (Mayorgas, 2009; Echeburúa y De Corral, 2010; Johansson y Götestam, 2014), proponen que la familia junto con los educadores, deben ayudar a los adolescentes a hacer un uso responsable de las redes sociales, un uso limitado de conexión, ubicación de los ordenadores en zonas comunes, control de los contenidos, fomento de las relaciones sociales, potenciación de aficiones tales como el deporte, la lectura, etc., desarrollo de actividades grupales y estimulación de la comunicación y el diálogo en la propia familia.

2. Metodología e instrumentos

2.1 Participantes

La muestra está compuesta por 182 alumnos y alumnas de Educación Secundaria Obligatoria de distintos centros públicos educativos de la provincia de Granada. Debemos decir que se trata de centros escogidos al azar. Tras la selección de los centros, se procedió a la realización

de la investigación llevada a cabo durante el primer trimestre del curso académico 2015/2016. En la selección de la muestra se han seguido los siguientes criterios de admisión:

- Cursar Educación Secundaria.
- Tener una edad de entre 15 y 18 años.
- Poder participar de manera voluntaria teniendo en cuenta la autorización de padres, profesores y centro.

Atendiendo a la muestra (tabla 1) el 53,3% eran varones (N=97) y el 46,7 mujeres (N=85).

Tabla 1.
Características de la muestra

		Frecuencia	Porcentaje
Válidos	Hombre	97	53,3
	Mujer	85	46,7
	Total	182	100,0

2.2 Instrumentos para la recogida de la información

Para recoger la información necesaria para la realización de este estudio se adaptó y posteriormente se validó por medio de un juicio de expertos, un cuestionario del Centro Reina Sofía sobre “*Jóvenes en la red: un selfie*” (Ballesteros y Megías, 2015) que recogía información sobre los datos demográficos (edad, sexo, curso y colegio), la panorámica general y específica de los usos, el tiempo empleado y los posibles riesgos que entabla el uso de dichas redes sociales. Se trata, en su mayor parte, de preguntas con respuesta de escala Likert (“1” Con frecuencia. “2” A veces. “3” Rara vez. “4” Nunca. “0” no sabes o no quieres contestar). La validación del cuestionario se realizó siguiendo las siguientes pautas:

- Definición del objetivo del juicio de expertos para validar el cuestionario “*Jóvenes en la red: un selfie*”.
- Selección de cinco expertos pertinentes teniendo en cuenta los criterios definidos anteriormente, considerando su formación académica y experiencia profesional.
- Evaluación por medio de los expertos atendiendo a la pertinencia, claridad y adecuación de los indicadores del cuestionario utilizando una planilla.
- Una vez obtenidos los resultados se calculó la concordancia entre jueces y finalmente se elaboraron unas conclusiones atendiendo a la descripción psicométrica de la prueba.

Una vez realizado el juicio de expertos, el instrumento se centró principalmente en los siguientes aspectos:

- Ficha de identificación: engloba el sexo, la edad, la actividad actual y nivel de estudios que realiza.
- Panorámica general de los usos: consta de dos partes bien diferenciadas; una referente al uso realizado en las redes sociales y otra sobre el tiempo empleado.
- Posibles riesgos que conlleva el uso de las redes sociales: en este aspecto se contempla la posible dependencia y la preocupación ante ésta.

2.3 Procedimiento

La recogida de datos se llevó a cabo por dos profesionales de la Facultad de Ciencias de la Educación de la Universidad de Granada, las cuales forman parte del equipo de trabajo para desarrollar esta investigación. En concreto hablamos de dos Pedagogas, ambas con experiencia en este tipo de problemáticas. Una vez obtenidos los permisos para poder pasar el cuestionario, la realización de éste se desarrolló en una sesión, en la cual estaban presentes las dos profesionales, así como el tutor de cada aula.

2.4 Análisis estadístico

Los análisis estadísticos han sido llevados a cabo por medio del programa SPSS versión (20.0). Las características de la muestra se han determinado a través de la realización de un análisis de carácter descriptivo (porcentajes, medias y desviaciones típicas).

3. Resultados

Antes de describir los resultados específicos sobre el uso concreto de las redes sociales, es conveniente apuntar algunos datos referidos a su consumo. El uso de las redes sociales dentro de los adolescentes se encuentra muy extendido. El uso de las redes sociales entre los adolescentes se ha convertido en una actividad diaria, empezando a formar parte de su vida cotidiana. El Gráfico 1 nos muestra cómo existe un justo uso de su utilización (47,8%) pero también un uso algo excesivo de las mismas (36.3%).

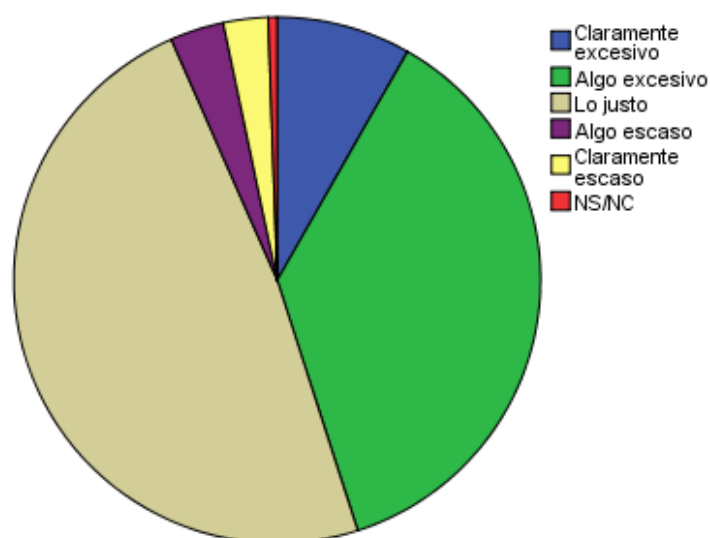


Gráfico 1. Tiempo dedicado al uso de las redes sociales

a) Panorámica general de los usos

Tabla 2.
Panorámica general de los usos

		Frecuencia	Porcentaje
Subir fotos personales	NS/NC	7	3,8
	Con frecuencia	45	24,7
	A veces	58	31,9
	Rara vez	54	29,7
	Nunca	18	9,9
Buscar información y documentación	NS/NC	4	2,2
	Con frecuencia	63	34,6
	A veces	74	40,7
	Rara vez	32	17,6
	Nunca	9	4,9
Mirar información de otras personas	NS/NC	10	5,5
	Con frecuencia	31	17,0
	A veces	50	27,5
	Rara vez	68	37,4

	Nunca	23	12,6
Subir fotos (no personales), videos, etc.	NS/NC	6	3,3
	Con frecuencia	39	21,4
	A veces	60	33,0
	Rara vez	41	22,5
	Nunca	36	19,8
Mantener su propia web, blog, etc.	NS/NC	28	15,4
	Con frecuencia	21	11,5
	A veces	20	11,0
	Rara vez	26	14,3
	Nunca	85	46,7
Seguir blogs, webs, youters, etc.	NS/NC	9	4,9
	Con frecuencia	57	31,3
	A veces	52	28,6
	Rara vez	36	19,8
	Nunca	28	15,4
Participar activamente en foros	NS/NC	26	14,3
	Con frecuencia	16	8,8
	A veces	16	8,8
	Rara vez	27	14,8
	Nunca	97	53,3
Compartir información y novedades de otros	NS/NC	17	9,3
	Con frecuencia	20	11,0
	A veces	40	22,0
	Rara vez	53	29,1
	Nunca	50	27,5
Compartir opiniones con otros	NS/NC	12	6,6
	Con frecuencia	30	16,5
	A veces	51	28,0
	Rara vez	43	23,6
	Nunca	46	25,3
Jugar online (conectado a internet)	NS/NC	18	9,9
	Con frecuencia	40	22,0
	A veces	35	19,2
	Rara vez	40	22,0
	Nunca	48	26,4

El principal objetivo de nuestra investigación era conocer el uso que los jóvenes realizan hacen de las redes sociales. Se preguntó de manera específica por las actividades que realizaban a través de las redes sociales, en la tabla 2 se presentan los resultados obtenidos en cuanto a ésta utilización. Debemos decir que la mayor parte de los adolescentes de la muestra ofrece un mayor uso de las TIC para buscar información y documentación, seguido de la utilización de blogs, webs; subir fotos o jugar de manera online... destacamos las menos habituales concitan al mantenimiento de su propia web; compartir información y participar activamente en foros. En los resultados, se observan comportamientos de riesgo teniendo en cuenta la edad de nuestros encuestados, tratándose de subir fotos personales con un porcentaje del 24,7.

b) Posibles riesgos del uso de las redes sociales

Tabla 3.
Dependencia a las redes sociales

	Frecuencia	Porcentaje
Dependo demasiado de las redes sociales.	11	6,0
Uso constantemente redes sociales y necesito hacerlo, pero no creo depender de ellas.	42	23,1

Uso las redes sociales, pero no me genera ninguna inquietud su ausencia.	71	39,0
No concedo excesiva importancia al uso de redes sociales, las uso poco.	23	12,6
No uso las redes sociales	10	5,5
NS/NC	5	2,7

Tabla 4.
Preocupación por la dependencia a las redes sociales

	Frecuencia	Porcentaje
Mucho	21	11,5
Bastante	62	34,1
Algo/Regular	54	29,7
Poco	28	15,4
Nada	14	7,7
NS/NC	2	1,1

En relación con los posibles riesgos derivados del uso de las redes sociales atendiendo a la dependencia, los principales resultados se presentan en la tabla 3 y 4. En los resultados se observa un uso de las redes sociales pero sin generar ninguna inquietud ante su ausencia con un porcentaje del 39%, pero debemos tener en cuenta que analizamos comportamientos de riesgo llamativos teniendo en cuenta el porcentaje de 23,1% ante la utilización constante de las redes sociales y necesidad de hacerlo aunque crean no depender de ellas. Por último, vemos una creciente preocupación por la dependencia generada a las redes sociales destacando porcentajes del 34,1 %.

Finalmente, nos gustaría destacar que el uso elevado de las redes sociales puede ayudar a mermar el pensamiento crítico y creativo de nuestros adolescentes, así como crear problemas de concentración, de escritura o incluso dificultades para conciliar el sueño. Del mismo modo, las redes sociales crean un gran debate en torno a la privacidad, el descenso de las notas en el instituto, la posible adicción de estar conectados constantemente con cientos de amigos “*imaginarios*”, teniendo en cuenta los riesgos que pueden desatar dichas relaciones sociales.

El uso constante de las redes sociales puede llevarte a descuidar otras actividades personales, familiares, sociales o extraescolares, así como postergar las horas de estudio o el cuidado de la salud... Muchas veces se pierde la noción del tiempo y se miente acerca del tiempo real que se está conectado a internet y a las redes sociales, entrando en conflicto con padres, profesores o incluso amigos. Todos estos riesgos pueden aislar socialmente al adolescente, creando problemas de autoestima, empatía...

4. Discusión y conclusiones

Los resultados de esta investigación suscitan una discusión en torno a tres cuestiones: tiempo dedicado, usos de las redes sociales y posibles riesgos. A la luz de los datos obtenidos, destacamos que los adolescentes emplean un tiempo intensivo a las redes sociales, puesto que la frecuencia de realización de todas las actividades planteadas en el cuestionario ha sido relativamente alta de acuerdo a sus puntuaciones. Los adolescentes asumen que consideran que su uso es justo, con un 47, 8%, pero hay que destacar que muchos de ellos opinan que su uso es excesivo con una puntuación de 36,3%. El tiempo empleado se dedica en mayor medida a la búsqueda de información y documentación junto con la utilización de blogs, webs...

Estos datos coinciden con los obtenidos por estudios recientes, que muestran cifras de uso de las redes sociales superiores al 80%. El estudio realizado por García, López y Catalina (2013), por ejemplo, realizado en España con una muestra representativa nacional de 2077 adolescentes con edades comprendidas de entre 12 y 17 años, mostró que las redes sociales

son muy frecuentadas en los adolescentes, conectándose con mucha frecuencia el 75,3%, llegando incluso a alcanzar el 90% de aquellos adolescentes que hacen una utilización de éstas en ocasiones. Además, este estudio español, mostraba, al igual que nuestro estudio, una media bastante alta en relación con la búsqueda de información junto con la navegación por distintas páginas webs. Del mismo modo, encontramos en el extremo opuesto el acceso a chats y foros. Si tenemos en cuenta el perfil de uso que poseen las redes sociales, podemos apreciar una relación positiva entre el uso de las redes sociales y el tiempo on-line. Observamos que los realizan un mayor uso de las redes sociales son aquellos que practican actividades, a excepción de compartir información y participar activamente en foros. Un estudio desarrollado por Rial, Gómez, Braña y Varela (2014) recoge un 60,4% de conexión diaria a internet, explicitan que 6 de cada 10 adolescentes realiza un uso diario o regular de internet de internet, a lo que añaden que un 26,8% solamente se conecta dos o tres veces por semana. Por lo que una vez más podemos ver que existen un uso bastante elevado de internet en nuestros jóvenes.

Atendiendo a al uso derivado de internet y las redes sociales la mayor parte de los adolescentes de nuestra muestra ofrece un mayor uso de las TIC para buscar información y documentación, seguido de la utilización de blogs, webs; subir fotos o jugar de manera online... destacamos las menos habituales concitan al mantenimiento de su propia web; compartir información y participar activamente en foros. Del mismo modo, el estudio denominado "*Jóvenes en la red: un selfie*" y del cual extrajimos nuestro cuestionario (Ballesteros y Megías, 2015) para su posterior juicio de expertos, concluye resultados similares a los nuestros debido a que atendiendo al uso de internet se reflejan tres tendencias claras: búsqueda de información y contenidos diversos con un 92%, seguimiento de blog con un 70% y un uso de las redes sociales con un 81% para ver información en los perfiles, subiendo fotos y/o videos con un 72%.

Además de las bondades obvias que presenta este avance tecnológico, no está exento de posibles dudas y riesgos. Muestra de los riesgos que se derivan de la red y sobre los que diariamente nos están alertando, destacan el cyberbullying o acoso cibernético, el fenómeno sexting o envío de textos e imágenes de índole sexual, el reciente gossiping o la creación de espacios (foros, chats, grupos, etc.) en los que se comentan rumores de forma anónima, también el phishing o engaño dirigido a revelar datos personales confidenciales, comportamientos adictivos que en ocasiones derivan en un uso compulsivo de Internet e incluso en un problema patológico (Grohol, 2005; Meerkerk, Vanden Eijnden y Garretsen, 2006; Ruíz-Corbella y De-Juanas, 2013). Las adicciones a internet ocupan una parte central de la vida en los adolescentes, ya que a veces utilizan la pantalla del ordenador para evadirse de la vida real y en ocasiones mejorar su estado anímico. En este sentido, debemos tener en cuenta que esta adicción puede provocar una grave pérdida de habilidades personales desembocando en la construcción de relaciones sociales ficticias.

La identidad digital se construye ya no sólo a partir de lo que somos, sino también de lo que hacemos y cómo nos relacionamos. Un 50% de adolescentes utiliza las redes sociales para experimentar cambios con su identidad, con el pretexto de superar la timidez y facilitar las relaciones con los demás (Valkenburg, Schouten y Peter, 2005). Un aspecto importante a destacar con el presente estudio, es el relacionado con la dependencia. Los resultados obtenidos ponen de manifiesto que un 39% usa las redes sociales pero sin generar ninguna inquietud ante su ausencia. Por otro lado, observamos que existe un porcentaje elevado (23,1%) ante el uso constante de las redes sociales y tener la necesidad de hacerlo, aunque no crean depender de ellas, tal y como muestra el estudio realizado por Linne en 2015, donde se afirma que los estudiantes universitarios españoles no son adictos a su juicio, de Internet y más concretamente de las redes sociales.

En relación a los resultados obtenidos con respecto a la preocupación por la dependencia a las redes sociales, observamos que existe un alto porcentaje (34, 1%) por parte de la muestra, seguido de un 29, 7% que opinan que la dependencia se encuentra presente, esto puede ser un detonante del uso elevado de las redes sociales. Algunos estudios (Echeburúa, Labrador y Becoña, 2009; Castellana, Sánchez-Carbonell, Graner y Beranuy, 2007; Widyanto y Griffiths,

2009) muestran que un 16,25% de los jóvenes se considera dependiente o adicto. Estos datos nos sugieren que los adolescentes son conscientes del uso excesivo que hacen de ellas. Según Estévez et al., 2009, durante la adolescencia existe la necesidad de establecer nuevas relaciones sociales, así como un sentido de pertenencia e identidad a un grupo, siendo ambos, piezas clave para el buen desarrollo en el uso de las redes sociales, constituyéndose como un elemento facilitador.

En síntesis, los resultados señalan una correlación positiva entre el tiempo de uso y la dependencia a las redes sociales. Muestran que existe una elevada preocupación en torno a la dependencia, poniendo de manifiesto la necesidad de patrones educativo-preventivos para el uso seguro, intentando no caer en la dependencia producida por un uso excesivo. Dentro de la educación se resalta la importancia de incluir en el currículum contenidos específicos sobre los riesgos derivados del uso de las redes sociales, así como una serie de pautas preventivas y recomendaciones que fomenten una reflexión crítica e inclusión de toda la comunidad educativa.

No obstante, este trabajo presenta algunas limitaciones. En primer lugar, se trata de un estudio descriptivo que abarca una muestra pequeña de 182 adolescentes de la provincia de Granada. Sería necesario contar con estudios que analicen muestras más amplias con patrones de uso específicos para cada edad. En segundo lugar, dada la naturaleza descriptiva del estudio, los resultados hallados no demuestran los posibles indicios de riesgo y vulnerabilidad de forma específica en el uso de Internet y las redes sociales, para poder establecer pautas preventivas para desarrollar diversos comportamientos seguros a través de las redes sociales en nuestros jóvenes. Por último, sería conveniente analizar los resultados en función del sexo para ver el patrón de comportamiento entre chicos y chicas, así como ampliar el estudio realizando un análisis cualitativo del tema.

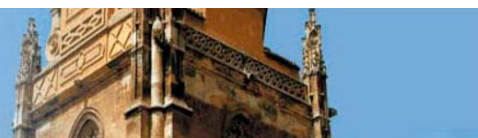
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Using specific test to access for initial teacher training

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 3 de junio de 2017

Fecha de revisión: 12 de diciembre de 2018

Fecha de aceptación: 19 de junio de 2018

Pérez-Granados, L. (2018). Using specific test to access for initial teacher training. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 55 – 72.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

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Abstract

Over recent years Finland has led the way in international research and studies into teacher recruitment and training. The number of people wishing to do a degree in teaching far exceeds the number of places available, meaning that universities set very high standards when selecting students. Having an understanding of the entry procedure for the most exemplary teacher education courses in the world could help us to identify the keys to success when choosing the most suitable prospective teachers and also to find new ways of carrying out the university admissions process in Spain and in other countries in Europe. In this regard, we focus on the following aspects: What would happen if we applied Finnish standards to students just starting their teaching degrees? What type of knowledge and/or personal dispositions should be taken into account when selecting prospective teachers? This article aims to show the results attained after recreating the Finnish selection procedure for teaching degree students, in this case involving a sample of students from the Faculty of Education Sciences of the University of Malaga. The results show that none of the students in the sample responded positively to the different tests they undertook.

Resumen

En los últimos años Finlandia se ha convertido en el país que lidera los estudios e investigaciones internacionales en materia de selección y formación de docentes. El número de candidatos que pretenden acceder cada año a los estudios de magisterio sobrepasa en mucho la cantidad de plazas ofertadas, por lo que las universidades establecen unos criterios muy exigentes para la selección de sus estudiantes. Conocer cómo es el procedimiento de acceso a los estudios de formación docente más ejemplar del mundo puede ayudarnos a entender cuáles son las claves del éxito a la hora de elegir a los candidatos más idóneos y arrojar luz sobre posibles sugerencias y vías de avance para nuevos modelos de acceso a la universidad en España y en otros países de Europa. En este sentido, nos centramos en los siguientes interrogantes: ¿qué pasaría si aplicamos los estándares de Finlandia a los estudiantes que acaban de acceder a nuestras facultades de educación? ¿qué tipo de conocimientos y/o disposiciones personales son necesarios considerar a la hora de seleccionar a los candidatos? Este artículo pretende mostrar los resultados obtenidos tras conseguir recrear el procedimiento de selección que se lleva a cabo en Finlandia para admitir a los estudiantes de magisterio sobre una muestra de alumnos y alumnas de la Facultad de Ciencias de la Educación de la Universidad de Málaga. Los resultados muestran que ningún estudiante fue capaz de responder positivamente a las diferentes cuestiones planteadas.

Keywords

College admissions; Teacher qualifications; Teacher education; Higher education

Palabras clave

Acceso a la universidad; Competencias docentes; Formación de profesorado; Educación Superior

1. Introduction

Widespread dissatisfaction, both in Spain and around the world, with current educational systems and the pressures of the market economy have intensified concern for finding new forms of conceiving and understanding teaching and learning processes (Gimeno, 2008), questioning the quality of initial teacher training processes and discussing the procedures to reform their admissions process.

At the current time, in which the policy governing admissions to higher studies in Spain is immersed in a process of change, the analysis of alternative pedagogical models is an essential requirement and, in this sense, proposing rigorous mechanisms to select candidates prior to the training process could constitute one of the most interesting aspects to raise the status and quality of future teachers. Spain, as a member of the European Union, forms part of the common strategies and challenges in educational policy aimed at increasing the quality of teaching and of teacher training. It should be noted that the main goals set out in the Strategic Framework for Education and Training in Europe (Europe, 2020) focus on improving initial and on going training for teachers in order to ensure teaching is an attractive professional option. Indeed a recent report by the European Commission (2012) on support for the teaching profession includes proposals for Member States which stress that *"a key challenge for the European Union over forthcoming years is not simply to fill teacher vacancies, but rather to find the best candidates to fill them"* (p. 28).

As some authors have stated (Sahlberg, 2011; Jakku-Sihvonen & Niemi, 2011), selecting candidates for teacher training studies is an essential procedure in order to guarantee the success of students during their formative years, whilst also providing a suitable way to select prospective teachers who are committed not only academically but also ethically. In this regard Valle (2013) believes that *"if there is one single determinant factor when a social group constructs an image of the prestige of a profession, it is that this group considers it to be difficult to enter this profession due to the high level of training and standards required"* (p.14). Moreover, in order to improve the quality of teacher training and increase the social recognition of teachers, Imbernón (2013) believes it is necessary to improve the selection of prospective candidates for teacher training. These affirmations lead us to the following questions: Could we consider new models for access to initial teacher training which are more demanding than the one currently in place? Should education faculties set up specific tests to select students?

2. Selection before training

Research into admissions procedures and selection of candidates for teacher training has become a highly acclaimed field of study in Finland. According to Simola (2005), the teaching profession in Finland has always been held in great esteem, which has led to teacher training programmes becoming highly demanded and to students with the best academic records in secondary education looking to enter the Education Faculties. Every year, only one in ten candidates in the admissions process gains entry to the teacher training programmes. Given the high number of applicants and the difficulty in selecting them, in 2007 the Ministry of Education decided to reform the admissions process for teacher training studies, adding a national exam to the candidate pre-selection stage. This meant that there was an initial nationwide test for all people wishing to access any speciality in the education field. The aim in this initial stage is to gauge the prospective teacher's understanding and ability to apply knowledge. In addition to this generalised, standardised exam, each university has autonomy to decide the selection criteria for its candidates and draws up the tests it considers necessary to admit the most suitable students. Although the selection procedure varies from university to university, most of them carry out individual interviews with each applicant in order to discuss the reasons behind their decision to choose a career in teaching. This final stage takes into account not only their academic and interpersonal skills, but also their commitment and motivation towards their future profession. Authors such as Rähkä (2010) place importance on specific tests which pay attention to the motivation, aptitude and capability of youngsters to successfully navigate a

teaching degree, since such tests, despite their constraints, provide the most functional way of assessing the suitability of candidates.

In Spain the situation is significantly different: the disappearance of the University Entrance Test (PAU) and the option to establish a new university admissions procedure are prominent in the debate over the changes currently taking place in our educational system. This proposal provides universities with a new way of dealing with admissions by giving them autonomy to design their own selection tests. However, as we await the implementation of these new measures, the PAU remains in force and continues to generate significant public discussion and controversy amongst youngsters, despite having been in place for almost forty years. This test is carried out nationally and is the same for all candidates, whatever degree course they wish to take. This is made up of a compulsory general stage and a voluntary specific stage. The exams which make up the PAU focus on testing the content worked on during secondary education, broken down by area of knowledge, without any relation to the future exercise of professional activity.

In this transitory stage, as we await the implementation of the measures proposed by the government, it would be worthwhile asking what alternatives exist beyond our frontiers and what challenges need to be overcome in order to ensure the current process to reform university admissions in Spain achieves the highest quality possible.

The aim of this article is to present the findings after taking the standards and criteria used to select students for access to the Faculty of Behavioural Sciences of the University of Helsinki and applying them to students wishing to undertake the Primary Education degree at the Faculty of Education Sciences of University of Malaga.

The research work covers the following processes: definition of purpose, description of the method followed for data collection, sample selected, description of the procedure in carrying out the tests, assessment criteria for these tests, comparative results and conclusions of the analysis carried out.

3. The methodological approach

In order to carry out this research, the methodology we use is inscribed in the current known as interpretive or qualitative, which, from the hermeneutics of Dilthey through to the social constructionism of Gergen, has covered the entire territory of Human and Social Sciences. With regards to the foundations of these basic epistemological assumptions, our interpretive methodological approach has focused on descriptive aspects, in particular through content analysis, which also led us to the selection and application of quantitative techniques. This methodological pluralism, considered by Cook and Reichard (2005) to be the most suitable to deal with the multiple needs of research and to achieve extensive knowledge of the object of study through mutual support, is called mixed or plurimodal, thanks to the use of techniques and strategies of both currents (qualitative and quantitative). In this regard, we should also indicate the comparative perspective as a common theme in this research, in accordance with the tasks proposed in the work plan. Authors such as Noah (1990) justify the comparative approach in education with these words: *"knowing what is proposed and how it is developed in situations similar to those we experience is essential in order to establish a reasonable opinion on what to do in our country"* (p.180).

3.1. Sample

The initial research counted on 30 participants ($N=30$) from Year 1 of the Primary Education degree of the Faculty of Education Sciences of University of Malaga, academic year 2015-2016. The sample was chosen entirely at random, by taking the students with odd numbers on the class register (which totalled 67 students) and then continuing with the even numbers until all 30 places were taken. The sample was selected entirely at random to ensure objectivity in the choice of participants and avoid any unwanted skewing of results.

3.2. Procedures used in the quantitative data analysis

For analysis of the information, the descriptive statistics of central tendency (mean, median and mode), measures of position (quartiles Q1, Q2, Q3), absolute dispersion (standard deviation) and relative dispersion (coefficient of variation) have been estimated for the results attained by the candidates in both countries.

3.3. Instruments

The instruments, procedures and assessment criteria applied were the same as those used in the admissions process for the University of Helsinki in 2011.

▪ *Current affairs articles*

The test used three articles taken from the 2013 aptitude test for the Faculty of Behavioural Sciences of the University of Helsinki. These articles are not chosen based on any particular selection criteria but must simply be short (no more than one page long), deal with a question of current interest in the field of education and be published in the general press rather than in scientific reviews. Article 1 was titled: "*Schooling for immigrants is likely to be more successful when teaching the mother tongue*"; Article 2 was "*Children are left uncared for when parents are consumed by work*"; and Article 3 was "*There's no magic wand for having a good time at school*".

▪ *The interview and the assessment form*

Some of the questions which the assessors posed to the candidates were as follows:

- Why would you like to be a teacher? Why have you chosen Primary Education as your speciality?
- Were you involved in any associations, voluntary groups or other activities related to education or civil society before starting university?
- What type of teacher would you like to be? Could you name your strengths and weaknesses as relate to the teaching profession?

In Finland this interview is carried out by three teachers who pay attention to three fundamental aspects:

- 1) The suitability of the candidate for teacher training and the teaching profession.
- 2) His or her motivation towards the field of education.
- 3) His or her communication skills.

Finally, to assess and score the test (presentation of the selected article and interview), the assessors counted on the same assessment form as used in the tests in Finland.

This record sheet or assessment form is divided into four large sections, each of which is graded in line with an assessment scale from 1 to 5 (5 being the highest score). Each assessor will grade the candidate independently, noting down any remarks he or she considers appropriate, up to a maximum score of 20. In Finland the teams of assessors are made up of 3 teachers, meaning the maximum score which a candidate can reach is 60 points. The following formula or method is then applied to obtain the candidate's overall score¹: $y = 2x + 30$. This means that if a candidate achieves 60 points in the test, his or her final score will be 150. The minimum overall score which a candidate can therefore reach is 54 points, whilst the maximum score is 150. In our case, we formed 3 pairs of assessors to interview each candidate at the same time, with the maximum score, as is the case in Finland, being 20 points, meaning the

¹ This method is used to stress the importance of the aptitude test, since 40% of candidates are selected exclusively through this test.

total overall score which could be achieved was 40 points. The formula we applied for our maximum (40 points) to reach the 150 points of Finland is as follows: " $y=3x+30$ ".

3.4. Procedure

The candidates carried out the tests individually. The interviews took place every half an hour, meaning whilst one candidate read the text another was being interviewed by the assessors. The total time passed to complete the assessment sessions was two weeks.

The assessor team counted on 4 teachers from the Department of Didactics and School Organisation of the University of Malaga. In the days prior to the interviews with the candidates, the teachers in charge of carrying out the assessment held a meeting to explain the procedure, clarify the text selection criteria and read the texts which would be given to the candidates in the test. This meeting was therefore used to harmonise the terms, concepts, procedures and criteria of the assessment.

Once the assessors were duly informed of the entire process, students were given the schedule to start the tests. The test consists of two parts which are carried out in a single session. Half an hour before the start of the interview, the candidate is given three different articles to read. The candidate must choose one of these articles, which will then be presented to the assessors. Once the candidate has read the text, the interview begins. The candidate has 15 minutes to speak about the text, outlining its main ideas and indicating the reason why he or she chose it. Once this first part is complete, the interview focuses on the life history of the candidate, his or her interests, previous experience in the world of education, and the main reasons behind his or her wish to become a teacher. The estimated time for the two parts is 30 minutes.

3.5. Assessment criteria

The record sheet for each candidate must be used to evaluate the four assessment sections (presentation of the text, motivation, aptitudes and interpersonal skills).

- *Presentation of the text*

This initial criterion refers to the information collected in the first part of the test. In this first part, the candidate must talk about the text he or she has just read, fulfilling the following conditions:

- The applicant presents an interesting point of view, describes the text in a clear manner and is capable of locating the key concepts or terms which appear in it.
 - The applicant can use the text as an opportunity to demonstrate his or her oral language skills and to use precise, rich spoken language.
- The applicant is capable of justifying his or her point of view on the text in a coherent manner.

The following outline represents the subdivisions of this first assessment criterion. The information these criteria contain represent, principally, the assessment scale score closest to 5. The assessor's overall score for the candidate should be based on the level of depth of each of these criteria.

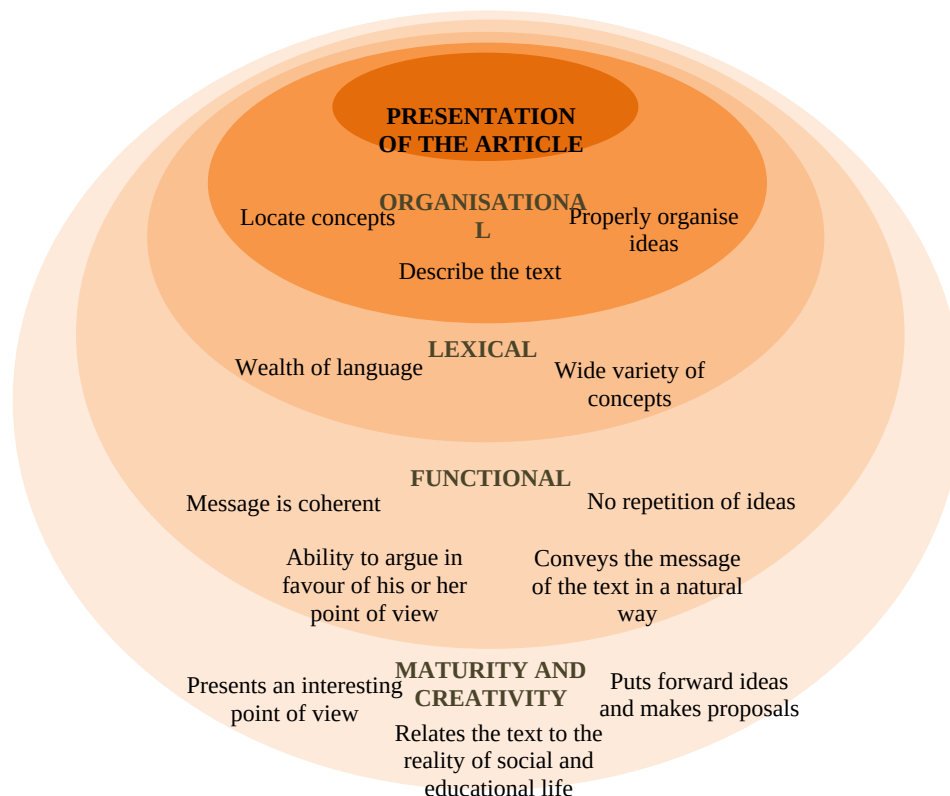


Figure 1. Assessment criteria in the presentation of the article
Source: Own elaboration

▪ Interview

In this second part the assessment criteria focus on evaluating three fundamental aspects: the motivation of the candidate to be a teacher, aptitude, and communication skills.

Motivation to be a teacher

- The applicant can justify his or her interest and enthusiasm for teaching in a realistic, credible and coherent manner.
- His or her previous work and life history show constant effort and interest towards social interaction tasks, including teaching.
- Planning and preparation focused on teaching. For example: the candidate can express his or her interest in teacher training, learning problems, teaching or education, and interest in the professional sector.
- The applicant's motivation is specifically targeted at his or her choice of speciality (primary education, infant education, etc.).

Teaching aptitude and attitude

- The applicant is interested in the teaching profession and can see him or herself as a teacher, and has consequently orientated his or her studies and life history to this end. His or her ideas are reasonable and can be feasibly implemented.
- He or she presents a realistic view of school life and the teaching profession.
- The applicant is capable of naming his or her strengths and weaknesses.
- The applicant must have a constructivist vision of him or herself and a realistic outlook on teaching.

Communication skills

- During the interview, the applicant is capable of establishing an adequate, open discussion with the assessors and, where necessary, is able to continue the discussion and bring up new aspects.
- The applicant's verbal expression and body language is natural, smooth and clear.

The following outline, similar to the one above, represents all subdivisions of the criteria assessed in this second part of the test. In this case the assessor scores each subdivision independently from 1 to 5.

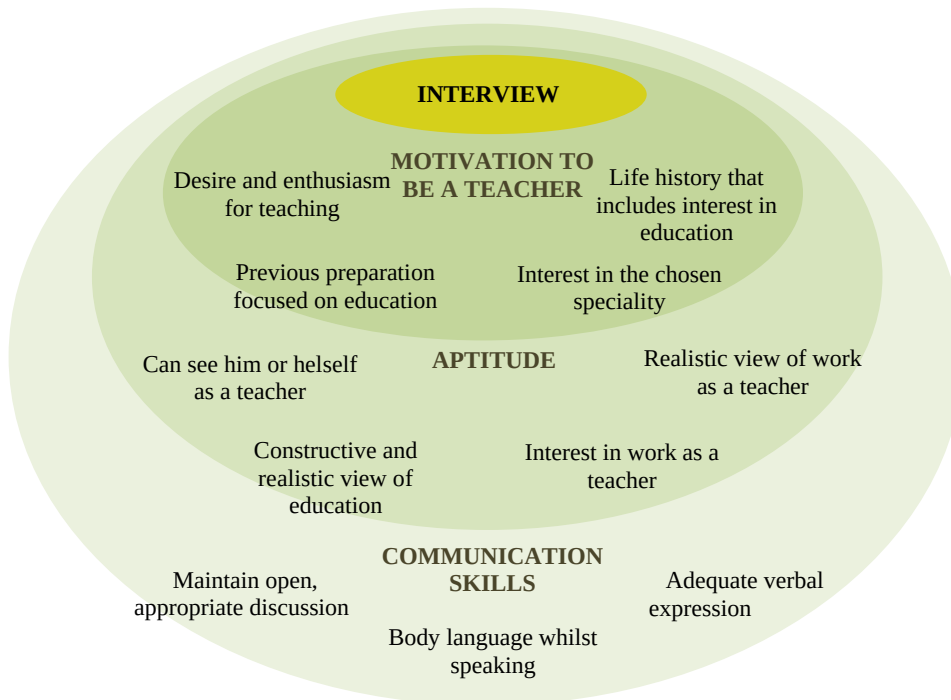


Figure 2. Assessment criteria in the interview
Source: own elaboration

4. Description and analysis of results

4.1. Spain and Finland total scores

The results attained by the Spanish sample are as follows:

Table 1.

Frequency of results ordered by scores. Spain

SPAIN SCORE	FREQUENCY
60	1
72	2
75	2
78	2
81	3
84	2
87	1
93	1
96	1
99	3
102	1
108	2
111	2
114	2
117	1
120	1
126	2
129	1

Source: Own elaboration

We have also included the results attained by the Finnish candidates below:

Table 2.

Frequency of results ordered by scores. Finland

FINLAND SCORE	FREQUENCY
132	2
134	6
136	3
138	11
140	12
142	6
146	1
148	5
150	2

Source: own elaboration

As can be seen, the scores for candidates in Spain are below the results attained in the same tests by students in Finland. In consequence, none of the candidates in Spain reached the minimum scores necessary to access teacher training studies. The minimum score attained by a candidate in Finland in 2011, and, in consequence, the score necessary to obtain access, was 132 points. The minimum score reached in Spain by one of the candidates (129 points) was 3 points below the minimum required in Finland for university admission. With regards to the difference between the minimum score attained in Spain (60 points) and the minimum demanded in Finland (132 points), it can be seen that there is a significant difference between the two countries, since candidates in Spain attained less than half of that achieved by candidates in Finland.

The following table provides a summary of the most relevant information on the scores obtained in both countries. It can be seen that the results are significantly different. The average score in Spain was 96 points, whilst in Finland the candidates achieved an average of 139.83 points. Moreover, the value which is most repeated amongst the Spanish candidates is 99, whilst in Finland the value most obtained by candidates is 140.

Table 3.
Results of the descriptive statistics in both countries

Descriptive Statistics	SPAIN	FINLAND
MEAN	96	139.83
MEDIAN	97.5	140
MODE	99	140
Q1	81	138
Q2	97.5	140
Q3	111	142
Standard Deviation	18.92	4.65
Coefficient of Variation	0.20	0.03

Source: own elaboration

As can be seen, deviation in Spain (18.92) is much higher than that attained in the scores in Finland (4.65).

Moreover, the coefficient of variation for Finland indicates that the values are highly concentrated relative to the mean, i.e. the scores attained by the candidates are more homogeneous. In the case of Spain, the coefficient of variation is 0.20, indicating that the results obtained by the candidates are highly disperse, i.e. they are much higher or lower than the mean. These results initially indicate that the Spanish sample is made up of a much more generic group which is not specialised in education; the Finnish sample, on the other hand, involves a much more homogeneous group, within a reduced interval which shows a certain level of pedagogical specialisation.

For further clarification of the overall scores obtained in Spain, the results of the candidates are presented below, grouped together by categories of the applied tests. This will allow us to carry out a more precise analysis in order to understand the distribution of the candidates' scores in each of the tests and to see the strengths and/or weaknesses of the Spanish students.

4.2. Presentation and analysis of the text

Chart 1 shows the percentage of candidates in each of the values which could be used when rating this section. As can be seen, most candidates (36.67%) are below the mean score (3), i.e. between the values ≤ 2 and > 3 . These scores include the candidate's ability to focus on the main point of the text and to suitably order its ideas and elements.

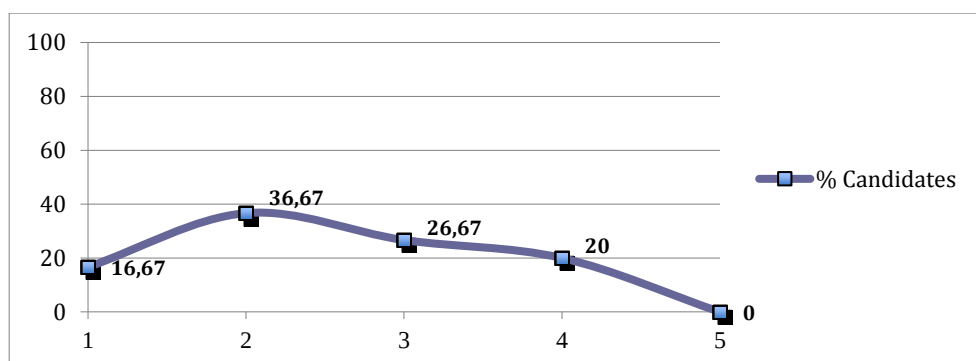


Chart 1. Presentation and analysis of the text

Source: own elaboration

26.67% of the participants are between the values ≤ 3 and > 4 ; this part of the test evaluated the candidate's ability to relate the role of schools to the subject of the article and to coherently justify his or her point of view on the text. In general terms, it can be seen that most of the sample is distributed in the values between 1 and 3, it being significant that there are no candidates in the highest value.

This group of candidates is characterised by taking just five minutes to finish this first part of the presentation of the text. They were not able to identify and organise the ideas in the text, nor did they show proper understanding of the concepts dealt with in the article and, moreover, failed to use the lexical resources or wealth of language necessary in a communication situation.

We can see an example of a candidate who scored one point in the following fragment of interview.

"Maybe... it's a recent phenomenon, now children are always left alone. Me too, I am always on my own... I mean, my parents don't work in the evening or anything but they are always out and I'm left alone whilst my sister is in the other room playing on the computer. You know, I've got cousins who are always on the computer and all they think about is buying new games and stuff like that... I think it's bad... I'm not sure... it does affect me... all children like to be with their parents, I think it's a little sad.. [...]" (Candidate 3, Article 2)

4.3. Motivation

Chart 2 shows the percentage of candidates in each of the values used when grading motivation to be a teacher. In general terms the data indicate that we are faced with a bimodal chart, in other words there is a group of unmotivated candidates (36.67%), between values ≤ 2 and > 3 , and a highly motivated group (30%), between values ≤ 4 and > 5 . In this regard, the first group of candidates, which is the most numerous, believe that it is important to have specific skills to work in teaching, even though their responses were full of stereotypes to express the reasons for their choice of study. We can see an example of a candidate given a score of 2 points:

It has been my vocation since I was young, and because my parents also studied this degree... I saw that I enjoyed teaching and being with children and things like that. [...] I don't believe that just anybody can teach children, well not properly anyway". (Candidate 4)

In the second group of candidates we find a life history which included a desire for teaching, resulting in enthusiasm for working with children of this school age, whilst most said that they had previous experience in social or school activities.

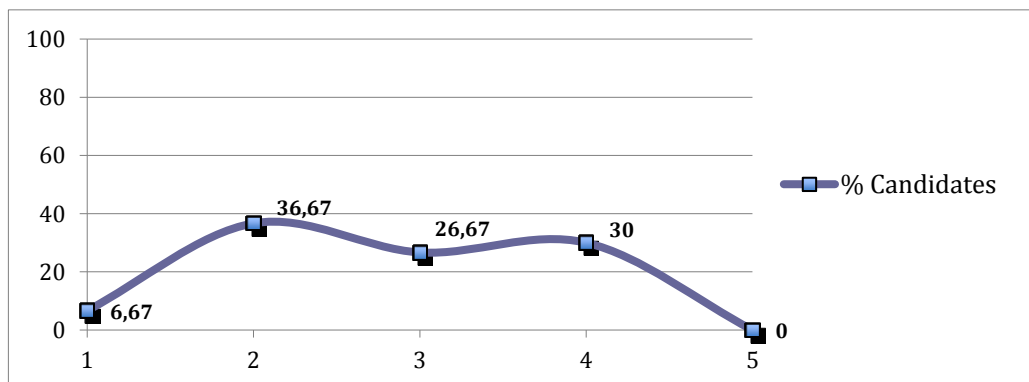


Chart 2. Motivation
Source: own elaboration

As shown in the data, once again no candidate achieved the highest score in this section, since none of them presented a suitable combination of reasons which proved they were motivated to match their professional aspirations with effort, persistence and commitment. It should also be stated that only 6.67% of the candidates are found in this first value interval (≤ 1 and > 2).

4.4. Teaching aptitude and attitude

Chart 3 shows the distribution of the percentage of candidates in each of the values which grade aptitudes and attitudes showing that they see themselves as future teachers. As can be seen, most candidates (40%) are 1 standard deviation below the mean. These candidates, which are accumulated between values ≤ 2 and > 3 , showed a degree of clarity when defining themselves as future professionals, even though they were somewhat hesitant when justifying their reasons for studying teaching and had some difficulty expressing a reasonable idea of the work of a teacher and the reality of school life.

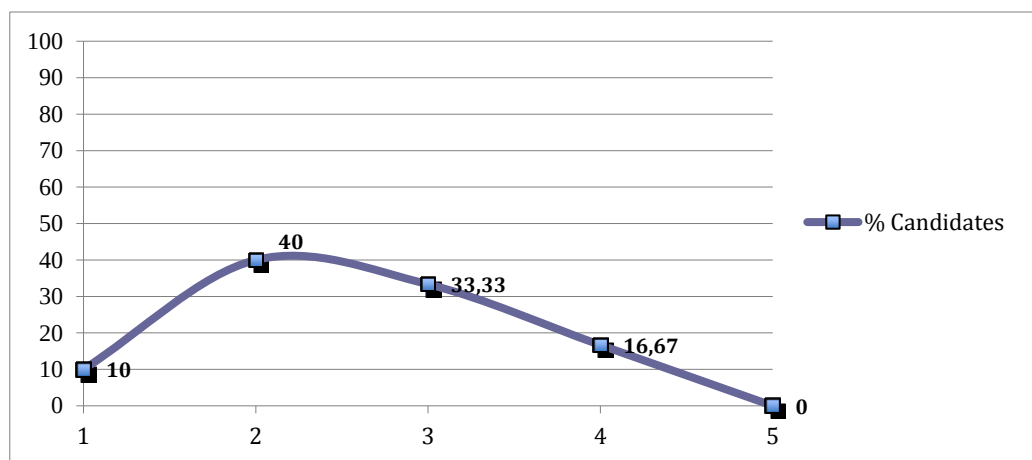


Chart 3. Aptitude and Attitude
Source: own elaboration

As with the previous charts, we do not find any candidate in the upper range of scores. Moreover, in the lower value with 10% distribution we find candidates whose responses were stereotyped or superficial when seeing themselves as future teachers. Meanwhile, in the intermediate to upper values we see 16.67% of candidates in the range ≤ 4 and > 5 ; these candidates stressed the importance of a commitment to society in order to exercise the teaching profession. This is reflected in the following fragments taken from interviews for candidates who were given a score of 4 points for this criterion.

"[...] I have always liked this graduate course because I see it as being highly social, allowing you to help others to learn. I would like to arouse a sense of dialogue in my pupils, meaning they would respect me but also trust me and speak to me as somebody who is close to them". (Candidate 17)

"I have always felt concerned with helping others; I take part in organisations with children, where we go on trips with them. This is where I learned that working with children is what I like best. I believe I can help society by being a teacher. I think education in Spain is in a very bad state, and I would like to change our concept of teachers. I would like pupils to respect me just as I respect them, not because they see me as an institution but rather because our relationship is closer". (Candidate 28)

Finally, in the mean value and 1 standard deviation above we find 33.33% of candidates, namely candidates who maintain a coherent discourse on the reality of schooling and are capable of expressing their virtues and defects when it comes to teaching.

4.5. Communication Skills

Chart 4 shows the distribution of the percentage of candidates who are in each of the values which grade communication skills during the interview. Similarly to the previous chart, we find most candidates in the values ≤ 2 and > 3 , with a significant 46.67% of the total. The first conclusion reached is that most members of the group are below the mean and, in consequence, in the lower part of the chart. The candidates in this interval were not able to convey the message fluently, had difficulty maintaining order in their discourse, and used a language with excessive use of pet expressions and fillers.

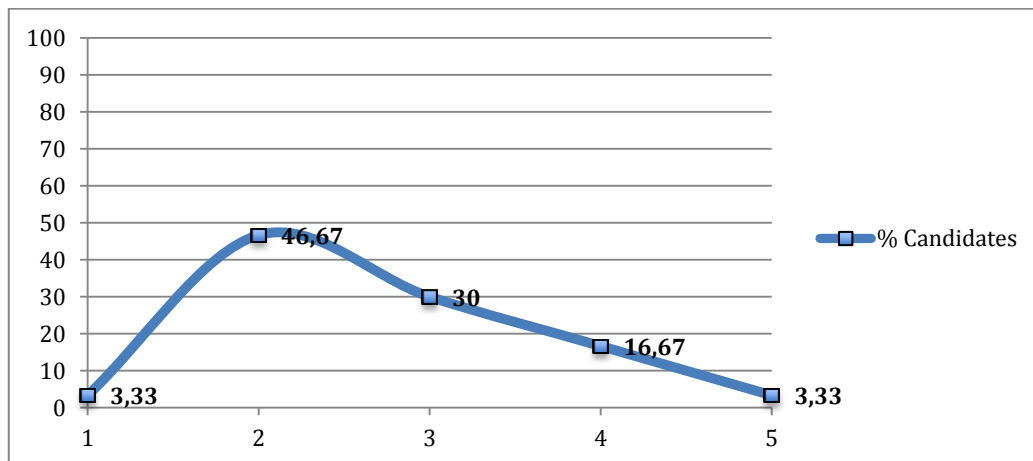


Chart 4. Communication Skills
Source: own elaboration

We find 3.33% of candidates in the lower and upper ends of the chart and between values ≤ 1 and > 2 , e = 5, respectively. In this regard we are faced with the same distribution of candidates, which, in both cases, is very low; these candidates have serious difficulties expressing themselves and maintaining a fluid conversation with the assessors or, to the contrary, they are very good at communicating in a natural way and can maintain an open, effective discussion with the assessors which is characterised by the use of a richness of language. We have taken some expressions of a candidate who received a score of 5 points and indicated them below.

"[...] I have a lot of doubts about how to organise the class and how to be a teacher. As a pupil I have often had to bite my tongue for fear of what the teacher's response would be. I have had teachers who have helped me be myself and express myself freely, always with politeness and respect; I would like my pupils to be able to speak to me". (Candidate 17)

30% of candidates are in the value range ≤ 3 and > 4 ; these are candidates who, despite having some difficulty using clear concepts when dealing with education, nevertheless had the ability to clarify or refine the information in line with the demands of the assessors.

To move forward with this analysis, we obtained the results they had achieved in the University Entrance Test in order to transfer these scores to a normal distribution and know whether the selected candidates were within the mean of the students who had passed this year.

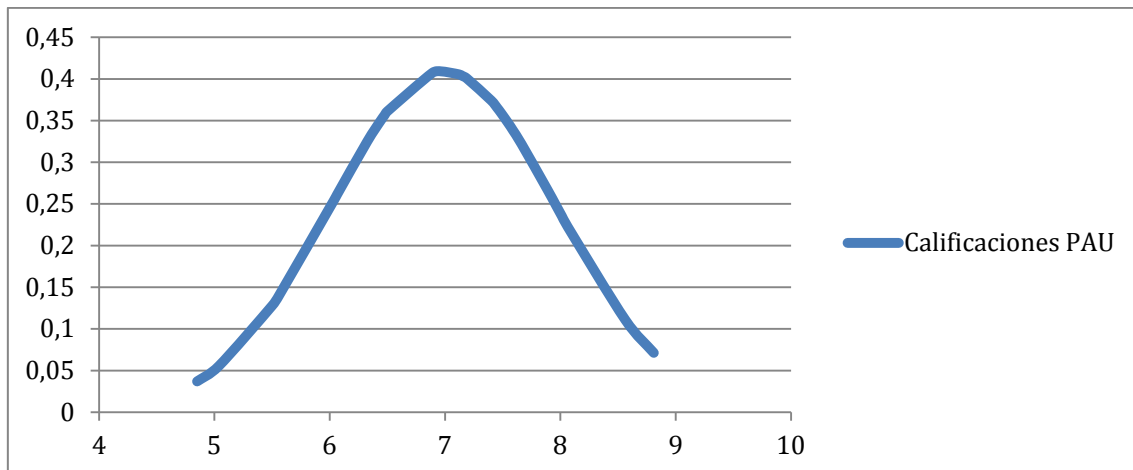


Chart 5. Distribution of candidates' results in the General Stage of the University Entrance Test
Source: own elaboration

The mean of the results in the General Stage of the University Entrance Test for the sample of candidates was 6.99 points. As is well known, this score is obtained by dividing the sum of the different scores of each of the candidates by the digit which represents them overall. As can be seen in the chart, the "University Entrance Test marks" variable is distributed practically as a mean with a normal curve, since, in this case, only those candidates who passed the entrance test are taken into account, i.e. those who achieved a score of at least 4 in this test. This variable is distributed practically like the Gaussian bell curve, meaning that the results which the candidates achieved in this General Stage of the University Entrance Test are within the normal mean of the population. Given all the foregoing, we can state that the candidates selected for our study are even slightly above the mean of those who passed in Spain this year, since the average was 6.346.

Moreover, in order to know the correlation existing between the results achieved in the University Entrance Test and those attained by our candidates in the Finland Aptitude Test, we calculated the Pearson correlation coefficient, the result of which was 0.02, indicating that the relation between both tests is nil. This would initially indicate that the tests demand different skills from the candidate. It should be remembered that the University Entrance Test focuses on measuring academic performance, whilst the pedagogical attitude and aptitude test in Finland stresses the importance of interpersonal and communication skills, the ability to analyse and comment on pedagogical texts, and the motivation of candidates with regards to the teaching profession.

5. Discussion of results

The results show that none of the candidates in Spain were successful in the selection tests for students wishing to do a teaching degree in Finland.

5.1. Exposition, understanding and analysis of the selected text

With regards to the abilities measured in this test, we can conclude that Spanish students show significant deficits in:

- Higher-order cognitive skills such as analysing, comparing, organising thoughts, defending positions and proposing alternatives. In this sense, the candidates do not have a critical attitude towards the issues presented in the article and were unable to use creative, innovative thinking in order to find solutions to complex problems which require more than just academic or theoretical knowledge for a successful resolution.

In general terms we can state that most candidates are concentrated in the lowest scores and have second-order skills, i.e. those which are related to the ability to recognise concepts, remember them, and understand the meaning of terms in a superficial manner. In this case, using current affairs articles which are related in some way to education offers candidates the opportunity to openly express their opinions on the subject and to analyse and diagnose the situation using all the resources, ideas and approaches developed throughout their academic, social and personal life. However, the scores for most candidates in this first part of the test are in the lower part of the chart, where the assessors were unable to obtain information on the personal richness of each candidate in terms of manipulating the concepts and the diversity of content in the article.

5.2. Why did they decide to become teachers? The importance of personal dispositions

With regards to the skills considered in this test, Spanish students showed an important deficit in terms of the subjective dispositions which lead to them deciding to become teachers.

However, in this aspect the results (see chart 2) on the motivation of the candidates to do a teaching degree show an irregular distribution characterised by two modes, i.e. our candidates are accumulated principally in two groups. The first group, and also the most numerous with 36.67% of candidates between the values ≤ 2 and > 3 , display low motivation towards their professional future, showing a clear deficit when justifying why they had chosen this particular study option. Moreover, their responses were laden with stereotypes, as can be seen in one phrases most repeated amongst the candidates: <<I want to be a teacher because I like children>>. This phrase clearly indicates the superficial nature of the reasons which had led them to choose this option. There is a second group of candidates, located in the values ≤ 4 and > 5 , in which we find a life history which included a constant desire for teaching, resulting in enthusiasm for working with children of this school age, whilst most said that they had previous experience in social or school activities. We believe that this final group could be suitable to select prospective teachers in Spain, indeed it is difficult to argue that the group of students who were unable even to explain why they chose this profession could be in any way successful.

The results of our search for personal dispositions towards the teaching profession provided very disappointing results, since, as can be seen in the data on aptitudes and attitudes showing that candidates saw themselves as future teachers, most candidates are below the mean. These candidates, who make up 40% of the total, were bold when defining themselves as future professionals, but were unable to present a convincing approach with regards to the work of a teacher or to solving the problems of school life. It should also be mentioned that, as with the previous charts, there are no candidates in the upper end of the scores.

5.3. The relevance of communication skills in the interview

As can be seen in our results, the majority of candidates are once again found in the values ≤ 2 and > 3 . This means that our candidates were unable to convey the message in a fluent manner, with most of them stuttering and hesitating. When presenting their ideas, they found it difficult to maintain order in their discourse and generate a rapport with the listener, often speaking too quickly or in a monotonous tone. The image they portrayed was of a lack of naturalness with poor non-verbal communication. It is very disappointing that 46.67% of our interviewees are not able to maintain a fluent conversation about their school history, their motivations for choosing teaching as their future career or their concerns about school life and social realities. In this regard, candidates are not asked to memorise or reproduce data or theories, but rather to express themselves in a natural, coherent manner, putting forward arguments with rich spoken language which is delivered with appropriate tone, volume and rhythm, and to take care with postural aspects such as gestures, distance between them and the assessors, etc.

Finally, it should be highlighted that in this analysis we find the same distribution of candidates in the upper and lower ends of our chart. We find that 3.33% of candidates, respectively, have

enormous difficulty maintaining a conversation with the assessors –answering in monosyllables and finishing the test in record time– whilst, on the other hand, we find candidates with good communication skills who were able to hold an open, effective discussion with the assessors whilst using a richness of spoken language.

5.4. Caution when interpreting the statistics

We identify two elements to be taken into account when interpreting the results: the small size of the sample and the possible absence of motivation among the candidates selected for the test.

- *With regards to the small sample size*

N=30 is the minimum number which has been determined to carry out simple statistical calculations whilst keeping error and reliability within acceptable limits. In our case, this decision was also supported by the fact that each of the candidates selected by a team of assessors had to be interviewed, meaning that increasing the sample size also meant it was necessary to increase the number of teams required for the test. Given the unwillingness of teachers to take charge of the work, and also in order to maintain the need to establish coherent criteria between assessors and follow the same dynamic as used in Finland, we finally opted to adjust the size of the sample.

- *With regards to the motivational difference between the two samples*

In this regard, it is impossible for the sample selected amongst Spanish students to share the same desire and enthusiasm as the Finnish candidates, since our candidates do not receive any benefit from taking part in this research and, given that their professional and academic futures are not in doubt, they do not have the same motivation and interest. Whilst we tried to motivate the Spanish students, encouraging them to see the test as a part of the academic framework of the course which required commitment and concentration, their motivation can never be comparable to their Finnish counterparts, since these tests are prerequisites for admission to their university and course of choice.

Moreover, it should be remembered that the candidates selected did not understand the dynamics of the test: all they knew was that they would have to read a text and then be interviewed, without knowing what type of text or interview awaited them. On the other hand, Finnish students have a clear concept of the selection procedure for each university and prepare conscientiously for it.

Nevertheless, the results in terms of the differences between the two samples (Spain and Finland) are so significant, clear and overwhelming that it is possible to confidently state, beyond any possible sample errors, that the samples studied are significantly different relative to the variables studied in the different tests. The Spanish students do not reach the required knowledge, proficiency, pedagogical attitudes, communication skills or level of motivation required to be considered candidates who would be accepted at University of Helsinki.

6. Conclusions

The purpose of these tests is to allow the Finnish institutions to gauge the suitability of candidates and their motivation and commitment to the studies they aspire to. It is perfectly normal in Finland for university education faculties to implement specific tests to select students for different specialities. This high level of competition in university admissions and the ability to attract the most motivated youngsters are among the fundamental reasons why teaching is so highly valued and respected (Sajavaara, 2003). Moreover, the stringent selection process and the training of high quality, committed, motivated students is one of the key factors behind the highly successful educational system in Finland.

It should be stated that the maximum score obtained by our candidates is below the minimum score obtained by candidates in Finland in these same tests, clearly showing that the selection

of prospective teachers in Spain is governed by very different criteria. Indeed, it could be argued that an important deficit in the Spanish educational system is in the selection and training of teachers as required in a quality educational system. Our candidates show significant difficulties in responding to activities that require the use of skills such as discussion, transfer and creation, along with a lack of pedagogical sensitivity to relevant educational problems and motivation with regards to the requirements, conditions and expectations of teaching. The results attained by our candidates, based on the assessment criteria for such tests, highlight the shortcomings most of them have in terms of analysing the selected text in depth, which manifests itself through their limited command of its content and practically zero ability to transfer this content to the reality of social and school life. Moreover, the results evince the superficial nature of their reasons for choosing the teaching profession and their lack of arguments when trying to maintain coherent discourse on the organisation of teaching practice and their ability to see themselves as future teachers. Notwithstanding the aforementioned caveats, it is my opinion that the results fill us with concern for the process of selecting suitable prospective teachers who have the skills and quality required in today's complex reality.

In line with our experience recreating the Finnish tests, we can state, in general terms, that applicants wishing to do a teaching degree should be assessed beforehand to ensure they have sufficient interaction skills and higher-order cognitive abilities, as required in the complex profession of teaching. It is a well-known fact that the teaching profession is ever more demanding in terms of characteristics which cannot be shown in tests focused on purely academic reproductive content. In consequence, it is necessary to design tests in which these characteristics, relating to higher-order learning and subjective dispositions regarding the attitudes and motivation required in a profession as vocational and singular as teaching, can be demonstrated.

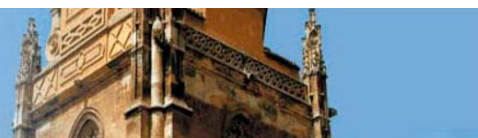
Although this type of test, which fundamentally involves assessing personal dispositions based on opinions given by the candidates, may have some constraints, it is nevertheless important to extract those mechanisms or practices which can help establish a university admissions procedure in Spain in which applicants are assessed using a holistic approach, thus allowing us to choose those who are most suitable for a degree in teaching.

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Language education policy and teachers in Puerto Rico: implications for identity, sovereignty, and community in a context of displacements

La política educativa y los docentes en Puerto Rico: implicaciones para la identidad, la soberanía y la comunidad en el contexto de los desplazamientos

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 12 de septiembre de 2017

Fecha de revisión: 11 de febrero de 2018

Fecha de aceptación: 22 de junio de 2018

Harrison, K. M. (2018). Language education policy and teachers in Puerto Rico: Implications for identity, sovereignty, and community in a context of displacements. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 73 – 86.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

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La política educativa y los docentes en Puerto Rico: implicaciones para la identidad, la soberanía y la comunidad en el contexto de los desplazamientos

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Abstract

In the post-hurricane María Caribbean, Puerto Rico presents a unique case for teacher educators and policymakers. The article offers a critical reflection about the experience of the colonial non-autonomous U.S.-imposed school system, and contributes to teacher education and language education policymaking (LEP) by exploring the effect of displacements, schooling on identity, and the role teachers can play. The article is based on an analysis that broadened the notion of language and education policy to include standards, textbooks, and teaching practices. The research question is about indigenous identity in a context of not only colonial schooling but conflicting visions of history, and loss of oral tradition in lieu of standardized school-sanctioned knowledge. The article suggests that community and indigenous models and educational autonomy would be more sustainable, practical, and just than standardized notions of school.

Resumen

En el Caribe post-huracán María, Puerto Rico presenta un caso único para educadores de docentes y formuladores de políticas. El artículo ofrece una reflexión crítica sobre la experiencia del sistema escolar colonial sin autonomía impuesto por los EE. UU., y contribuye a la educación del profesorado y la formulación de políticas de educación lingüística (LEP) explorando el efecto de los desplazamientos, la escolarización en la identidad y el papel de los docentes. El artículo se basa en un análisis que amplió la noción de lenguaje y política educativa para incluir estándares, libros de texto y prácticas de enseñanza. La pregunta de investigación trata la identidad indígena en un contexto no solo de educación colonial sino de visiones conflictivas de la historia y pérdida de la tradición oral en lugar del conocimiento estandarizado sancionado por la escuela. El artículo sugiere que los modelos comunitarios e indígenas y la autonomía educativa serían más sostenibles, prácticos y justos que las nociones estandarizadas de la escuela.

Palabras clave: Política educativa; Migración; Conocimiento indígena; Educación comunitaria; Sostenibilidad

Keywords: Educational policy; Migration; indigenous knowledge; Community education; Sustainability

1. Introduction

The article offers lessons from an extreme example of colonial schooling, and how these lessons can be useful to many marginalized cultural groups that lack control of their own education policies and institutions. In the wake of disaster, it extends a study about the indigenous identity in Puerto Rico, the role of U.S. schooling in erasing this identity in the early 20th century, and documentation of its erasure in the early 21st century; in effect a study of the implications for assimilative, standardized schooling on identity and traditional, place-based knowledge (Harrison, 2016)¹. In the context of a century of migrations, the island was nowhere near self-sufficient, in massive debt. The extension of the study focuses on the importance of language education policy and teacher preparation for community, sovereignty and identity.

Puerto Rico exists now in the aftermath of Hurricane Irma and especially Hurricane María, which devastated many Caribbean islands in September of 2017. As a recent article suggests, it was a man-made disaster: the issue is why Irma and María were so devastating and why rebuilding so difficult (Schwartz, 2017), made more difficult given the lack of political and economic autonomy. The hurricane is causing another massive displacement of Puerto Ricans to the U.S.—whereas 89,000 people had left in 2015 due to economic or other reasons, between late September and early December 2017, at least 200,000 people fled the island (Matthew, 2017) in the wake of a lack of electricity, death, and destruction. However, hurricane relief has been hindered by lack of political autonomy.

Puerto Rico is not on the United Nations' list of 'non-self-governing territories'², because since 1952 it has its own elected officials. However, the island lacks autonomy and self-determination: the U.S. maintains a stranglehold on its institutions, affecting the economy and education. After being colonized by Spain from 1493-1898, a second colonial period began. Spain lost the island to the U.S. in the Spanish-American war, during which the Dominican Republic and Cuba became independent (McCoy & Scarano, 2009; Mintz, 2010). In 1899 just a few months after the U.S. invasion, Hurricane Ciriaco caused over 3000 deaths, the destruction of most agriculture, and great loss of homes and infrastructure. The U.S. had military control of the island at the time, and helped with recovery. In fact the 1917 Law of Cabotaje or Jones Act means that only U.S. ships can transport anything to the island. Since 90% or more of the island's food is imported, when Hurricane María hit, donations and supplies from or via the U.S. only sat in the ports for other unknown bureaucratic problems. Trump still has not lifted the Jones Act, despite many calls to its effect.

The U.S. also brought an education army in 1898, and began the work of educating what the U.S. administration viewed as an illiterate people who did not even speak correct Spanish. For example, at the 25th Lake Mohonk Conference for Indian and other Dependent People³ in 1907, Mrs. Samuel McClune Lindsay, the wife of the 2nd education commissioner said;

When we first went down into the island, the first problem was to put a public school system into Porto Rico with the greatest possible speed; to enlist as many of these children as we could in school armies; to import from America the best, most highly trained teachers we could obtain, and to bring up in Porto Rico a generation of native teachers who could eventually take charge of those schools. That was done. And it was very well done. (Lake Mohonk, 1907, p. 165, italics mine)

Mrs. Lindsay also spoke about how to adapt and apply “*our own system of education*” to tropical races. Indeed, the schoolteacher followed the soldier who already had experience with the indigenous Americans (P. Navarro, 2006) of the U.S. “*Our own system of education*” meant progressive education goals to americanize and teach English (del Moral, 2013; Negrón, 1977),

¹ The author lived in Puerto Rico from 2013-2017

² <http://www.un.org/en/decolonization/nonselfgov.shtml>

³ These conferences had started a few decades before. The “*other dependent people*” part would have been added after 1898 when the U.S. acquired Puerto Rico, Guam, Hawaiian islands, Phillipines, and Guam

using the same model of cultural and linguistic assimilation practiced with Native Americans (del Moral, 2013; J. Navarro, 2002; P. Navarro, 2006; Torres, 2002; Adams, 1995), whose resources, land and lives were being displaced through the boarding school system. This system physically removed children from families, cultures, and languages, stripping them of these rights and resources.

Puerto Ricans have had U.S. citizenship since 1917⁴, so migrations and its effects are a huge topic in Puerto Rican studies, given the political and economic climate (see Duany, 2002). After the 2017 hurricane, the most exact number available a few months later was that in Florida, 10,324 Puerto Rican students had been enrolled in schools (Sesin, 2017). Physical displacement precedes another layer of displacement: cultural and linguistic, because afterwards they must learn English, which for Puerto Ricans has been a complex, even strange, political issue since U.S. colonization began (see Pousada, 1999; L. Torres, 2010). Puerto Ricans are very patriotic and their *puertorriqueñidad* or Puerto Rican-ness is a source of pride. However, this identity—beginning in the 19th century as a separateness from colonial Spain, then becoming assertiveness vis a vis colonial U.S.—was then in the early 20th century forged into a simplistic and democratic mixture of African, Spanish, and indigenous by the Institute of Puerto Rican culture, without serious scholarship to solve the dilemma of language; and who the *jibaros*, the majority of the rural population, represented (see Castanha, 2011; Curet, 2015; Nieves, 2014; Pedreira, 1935; Scarano, 1996); nor how long the indigenous people had survived after 1492. The latter is a huge debate in Caribbean historiography, with many scholars demonstrating survival (see Castanha, 2011; Delgado, 2006; Forte, 2006) in rather large numbers until the middle of the 19th century, and in smaller numbers beyond. Survival is evidenced by language, phenotypes, social and spiritual practices, worldview, oral tradition, song, music.

Issues of identity, schooling, and education policies may indeed be interconnected with rebuilding after a hurricane. Education policies are part of governance, within a larger picture that includes self-sufficiency and relations with other countries. These effect migration, outside aid, and humanitarian efforts to stem the death toll after a hurricane.

The school system before the hurricanes was considered a failure. In the century of U.S. administration, the school curriculum replaced community knowledge tied to the land, and various displacements such as from home to school culture and language, from rural to urban areas, from local languages to standard Spanish, from Puerto Rico to the U.S., from Spanish to English (in U.S.) have occurred. All of these have effects on identity as well.

After describing the study that investigated the role of U.S.-created schools in erasing the rural indigenous knowledge base and identity formation, the discussion will return to the two ideas laid out in this introduction: 1) the role of colonial schools and identity imposition, 2) how community models of local schooling and subsistence would have put Puerto Ricans in a better situation to survive and rebuild from a devastating hurricane after a century of U.S. control, and 3) what lessons the experiences offer policymakers and teacher educators.

The next section gives a context of ‘schooling’ by describing Puerto Rico’s earlier rural characteristics.

2. The rural context

During the Spanish period the island’s population was 80% rural (del Moral, 2013). The people were often called ‘*jibaro*’, described by Melendez (1963) as a mix of various races, who preferred to work and reside in the interior of the island without leaving often:

⁴ Whereas Puerto Ricans were granted U.S. citizenship in 1917, Native Americans paradoxically got it in 1924

The differentiation between the population of the rural zones and the coast of the island is profound and clearly demarked in customs, traditions, methods of harvest and work that polarizes into two social groups that possess their genotype characteristic and particular idiosyncrasies (p. 460).

Jíbaro⁵ was a loosely-defined term for rural people who had preserved almost “*intact, the traditions, habits, and thoughts of his ancestors*”, whose traits had to be eliminated in order to modernize and industrialize (Rodríguez, 1943, p. 16). The term jíbaro is debated in literature, and Delgado (personal communication, 2015) maintains that many different types of jíbaros existed, but true jíbaros had certain characteristics. Living in the mountainous interior of Puerto Rico rather than the relatively flat coast with the bigger towns and cities; jíbaros would have lived locally, place-based, earth-centered (including soil, harvests, and water) or in small communities. Before the U.S. invasion, even fewer formal schools existed in the interior than the coast. Their language (see Alvarez, 1990; Navarro, 1948) reflected traditions and survival knowledge that existed until the U.S. period.

The U.S. education army appointed generals as commissioners of education, declared English and then Spanish as the national language and language of instruction, built eventually 1500 schools with U.S. curriculum (see Lopez Yustos, 1997; Osuña, 1949), contributing to make the “*modern man (who) must learn how to find meaning in many structures to which he is only marginally related*” (Illich, 1971, pdf p. 15).

3. Conceptual

I used the indigenous conceptual framework using the indigenous survival knowledge linked to jíbaros of four centuries in the interior. I wanted to find important qualitative analytical tools to “*assess how knowledge production and theories of the past and the present have been shaped by ideas and power relations of imperialism, colonialism, post-colonialism...and racism*” (Chilisa, 2012, p. 46); as well as how the ways of the dominant civilization (epistemology, ontology, axiology) become embedded as “*natural*” rather than historically evolved social constructions (Chilisa, 2012); so strong that whole peoples’ knowledge bases and identities change.

The indigenous conceptual framework includes non-western ways of knowing and being, considers life as a whole rather than many parts, and does not reduce education to school and official knowledge. These principles and processes are epistemological—how to know and learn, to transmit knowledge, ie ‘education’ (songs, stories, petroglyphs, books, memory). The focus is on the relation between parts and the whole in terms of unity or non-separation of parts (for example, language, culture, education, earth, air; subsistence). It is also adaptive and dynamic rather than rule-governed—thus processes and dialogues. Finally, it is place-based: communities where people have roles. Multiple realities between living things, relations and processes co-exist. All of these have importance for identity, belonging, and survival of communities. Studies that have used Indigenous methodology come from many disciplines, and challenge deficit thinking and pathological descriptions of the formerly colonized, to reconstruct a body of knowledge that carries hope and promotes transformation and social change among the historically oppressed (Chilisa, 2012; Smith, 1999). The research process itself is social-justice oriented because it seeks to decolonize methodologies and epistemologies that have affected Indigenous people and knowledge about them. It addresses a gap in research methodology because dominant research traditions are founded in Euro-western thought and academic institutions; excluding the knowledge system of the researched, colonized Other.

Since the majority of Puerto Ricans were rural at the time of the U.S. invasion, in conceptual terms, they were also place-based, and their lives and language were tied to the land. If factors such as local history and geography caused Caribbean communities to develop differently

⁵ One of the earliest descriptions of the jíbaro is by Alonso (1849) *El Gíbaro: cuadro de costumbres de la isla de Puerto Rico*

according to island or place (Mintz, 2010); this geographical variance is consistent with the indigenous conceptual framework described in this section and an interconnection between people, land, history, knowledge and language (Maffi, 2001).

Displacement extends the indigenous approach to school issues. I use it as an umbrella concept that covers physical, cultural, and linguistic factors. Displacement, whether from one nation to another or from one region of a country to another, is often caused by violence, wars, natural disasters, and extreme economic hardships. Layers and relations among the various aspects of displacement before and after migration relate to individual, family, cultural, environmental-structural, and historical factors (i.e., roots, heritage, and displacement events) (Coughlan & Owens-Manley; 2006). Displaced persons must adjust their language and customs.

A continuum begins where physical displacement proceeds through a transition to a new life. Individuals adapt differently to the new life and school: some remain attached to home culture, language and memories; others may be more adaptive and assimilate quickly. The different degrees of assimilation vary between generations (Nibbs & Brettell, 2016). Though some try to retain their core beliefs and cultural elements, these may fade according to an individual's attitudes, strengths, beliefs, and capabilities. Children are especially vulnerable to pressure to assimilate, acculturate and acquire hybrid identities. Thus identity and the physical displacement continuum co-exist dialogically. Identities may also be displaced (Harrison, 2018).

Whatever the reasons for massive displacement, schools play a very important role in shaping young people's experiences and identity through education policies, teaching practices, content knowledge taught and learned, and language of instruction. These two concepts—indigeneity and displacement, intertwine in the discussion below.

4. Method

The research question was: *In the construction of knowledge and identity related to the Indigenous presence in Puerto Rico, how does curriculum act as language education policy; and how do teachers act as policymakers—translators and mediators—of the language education policy?*

The Indigenous principle of interconnectedness and interdependence is intertwined with the study's methodology, an Interpretive Policy Analysis (Yanow, 2000) that entails ideology, assumptions, and numerous actors and stakeholders at various levels in the policy process. Between the written texts of policies to the curriculum and teaching practices, policies are mediated. Thus it is a complex and challenging way to analyze. The use of the term "*policy*" is theoretically broadened in this study. Three bodies of language education policy data were analyzed, namely: (1) policies at the federal (U.S.) and Puerto Rico Department of Education (DE) level; (2) curriculum—including standards and textbooks, and (3) interviews with 28 teachers to see how they teach this part of history and identity. As a chain of interpretation each layer of 'policy' is an implementational space (Hornberger & Johnson, 2007) or process by different actors along the way between policy to classroom. The use of an Interpretive Policy Analysis (IPA) in this study is grounded in the Indigenous framework that stresses Indigenous principles and seeks to uncover meanings and values.

IPA was appropriate since the U.S. has governed the island politically, constantly using policy to govern the daily lives of its "*problem populations*": Native Americans, immigrants, and other politically-conquered people like Puerto Rico and Guam (Adams, 2014). Just as it was with Native Americans in the U.S., after territorial or political conquest, policy entered the realm of culture and the home with the goal of assimilation—erasing traditional practices, language. The result has been a myriad of changing policies. IPA also seemed most appropriate for a non-Puerto Rican and non-indigenous researcher, in order to not undermine anyone's voice by speaking for people about their school experience, knowledge of indigenous history, and personal identity.

Table 1.
Summary of data

Language Education Policies	U.S. and Puerto Rico: For example, federal (No Child Left Behind) and Puerto Rican (Organic Law, Circular Letters)
Curriculum, including standards and brief curriculum history	1. Previously used textbooks 2. Current standards and objectives related to research question 3. Textbooks—in use now
Teacher Interview Data	4 th and 7 th grade Spanish and Social Studies Teachers

In summary, the research design was a chain of interpretive analysis. The policy framework included how policy shapes school language and culture, and how policies encourage the orientations. It addressed the role of policy and policy language, including curriculum as policy and teachers as policymakers; in other words, three sets of “*policies*”. The interpretation addressed (the threefold) policy-generated categories, and the consequences of (the threefold) policy language as a perpetual and dynamic process. Beginning with the federal policy, policymakers interpret into the laws by the territory (not state) in the Puerto Rico Department of Education (DE), writers interpret these into the curriculum, which teachers interpret and enact in the classroom.

5. Results: policies, curriculum, teacher interviews

The “*LEP*” governance of the previous section means the Language Education Policy(ies) govern the question at hand, and show how the policies reach the classroom. Puerto Rico has 7 educative regions each with 4 school districts; each district has from 2-5 towns (larger ones are divided); with a total of 1499 schools, before schools started closing in the last decade⁶ and more after the hurricane. The “*local*” interpretations of the policy are in two steps: first, the Puerto Rico curriculum and standards as interpretation of the U.S. and Puerto Rican policy (including ideology), and second the teachers’ interpretations.

The first sub-question was: *How can language education policy be conceptualized as a current and historical interpretive frame for Indigeneity in Puerto Rico?*

I analyzed both federal and Puerto Rican language and education laws. The U.S. federal laws include: No Child Left Behind (NCLB): 2000; Plan de Flexibilidad 2014 (Flexibility Plan for the ESEA of 1965). The local policies included: Ley #149 (1999)- Ley Orgánica para el Departamento de Educación Pública de Puerto Rico; two Cartas Circulares: Español: #10 (2013-2014) and Social Studies #3 (2013-2014); and the 1993 Spanish language policy. Federal testing mandates the testing of Math, Science, and language, but in Spanish. The Ley #149 (1999)- Ley Orgánica para el Departamento de Educación Pública establishes the rights and obligations of educators and students. It has a few relevant parts, such as community or local orientation:

⁶ A report and plan by economists (Boston Consulting Group) in 2015 was for up to 580 schools to possibly be closed by 2020. In 2014, one day people were protesting in front of the Secretary of Education’s office, claiming that even “*Escuelas de Excelencia*” were being closed. Besides the alleged migration of people off the island and especially in rural areas where the distances are greater, and economics, the federal testing requirements cause schools to close. See for example <http://www.telemundo52.com/noticias/puerto-rico/Sugieren-cerrar-mas-de-500-escuelas-Departamento-Educacion-Puerto-Rico-Boston-Consulting-Group-282946581.html>.

The school should promote activities that enrich the life of the community, help to understand its problems and offer solutions; identify situations and/or necessities of the community that affect the school “p. 6). (also in 2.04c). The community is a “dynamic entity” (p. 7)

Nevertheless, the curriculum is standardized rather than local. Despite that Social Studies is not tested, “*The Secretary will reorient the curriculum of all public schools in the course of history of Puerto Rico, including the teaching of the history of the municipality where each public school is located. (aa. 28)*”⁷. While teaching history is becoming contested and is not tested, and does not bring federal money, this local interpretation mandates teaching local history, something none of the teachers interviewed reported.

Art. 3.03 is about the pertinence of the studies “*The programs will be adjusted to the necessities and experiences of the students*” (p. 16). “*They should be pertinent to the social, cultural and geographic reality of the students*” (a., p. 16). History in 1.02 C#1 is “*to develop a dynamic notion of historic time and geographic space in which they live*” (p. 5). Identity is mentioned in Article 1.02: a. education for everyone “*for the full development of his/her personality*” (p. 5), and in c. #8: “*To develop a positive and healthy consciousness of his/her identity in multiple aspects of his/her personality and to develop attitudes of respect toward his peers (semejantes)*” (p. 6).

Therefore, in policy the teaching of local aspects related to identity is established, which would require knowledge of local history. However, the indigenous history, identity, and people (past or present) in Puerto Rico are not recognized or mentioned in policy, and I found very little related to the research question of indigenous identity. What governs teaching more than the policies however may be the curriculum, both textbooks and standards:

Sub-question #2: *How is and how has curriculum acted as policy in the construction of Indigeneity in Puerto Rico’s Department of Public Instruction/Education curriculum, and what are the implications for identity formation?*

After analyzing the policies as an interpretive frame, this part of the study focused on the curriculum. I first analyzed the content standards, grade expectations and curricular maps—including teacher responses—for Spanish and Social Studies to demonstrate how they act as policy. I chose 4th and 7th grade Social Studies and Spanish curriculum, materials, and teachers; and policy that would affect the teaching of indigenous identity; because Puerto Rican history is taught in 4th, 7th, and 10th grades. In 7th grade, students begin to read Puerto Rican literature whereas the stories they could read in 4th grade are literature as well, but are more elementary “*stories*” or “*reading comprehension*”. I added Spanish for both grades because of the language and literature aspect.

Using the current standards, teachers could address processes of culture, identity, history and society. The teachers only named cultural identity (Standard 4), and sometimes “*people, places, and the environment*” (Standards 1). Teachers furthermore reported that culture and history is not given any importance by the Department of Education (or ‘government’). Many said that the standards are a burden, especially because they have to align the standards with the content or resources/materials they find themselves and without curricular maps. The Spanish is not “*supposed*” to include the Indigenous history, since disciplinary thinking means the subject belongs to the latter. The Spanish standards are skills, and a little different because they also have curricular maps. The teachers reported the same as the Social Studies, but perhaps a bit more frustration with the requirements in the curricular maps. They also have to align the content with the maps. Some of the teachers reported that they did not teach the Indigenous element at all, while others said it was an integral part of their responsibility to teach the culture and identity (even history as it appears in literature).

⁷ El Secretario reorientará el currículo de todas las escuelas públicas para en el curso de historia de Puerto Rico, incluir la enseñanza de la historia del municipio donde está localizada cada escuela pública.

The Social Studies standards are concepts meant to create the global and capable citizen. The first four standards are pertinent for the Indigenous element—change and continuity, people, places, and environment; personal development; and cultural identity. The Spanish standards relate to language use with transversal themes—I wanted to focus on the literary aspect, even though the ‘logical’ direction for my study would have been Social Studies only. This decision I based on how/what literature affords to teaching culture and identity and language. I asked if standards contribute or complicate the teaching of the indigenous theme. Most teachers reported teaching the standards more than the content, and that planning toward the standards was their main task. Furthermore, one teacher said standards “*make it easier, (but) depend on the importance that the teacher gives to it....there is no way to prove that the teachers master the culture theme/subject; that it empassions them...if they are in love with their culture, there is no requirement for that; if teachers are not passionate and love their culture; one can’t lift up/build a school* (Interview #8, Spanish, 4th-6th grade”.

Next, I looked at the teaching materials. The Social Studies and Spanish textbooks as a source of knowledge for teachers to draw on, and as reflections of the “official” ideology, were also considered policy because it is the material teachers have. I analyzed the Department of Education textbooks that the teachers reported using, including stories and poems. After each grade and subject, I put the methods that the teachers reported using. Spanish teachers mostly relegated the topic to Social Studies, except for a few, such as one who said “*the theme is there but must be worked (plow the field) she takes her time, so they internalize their roots. The theme costs her work in Spanish*”. (Interview #12, Cerrote, Las Marias; Social Studies, 4th – 6th grade, & Spanish) What are the roots, in other words the base of identity? The 7th grade Spanish textbook is clear, and reflects national policy:

One of the greatest legacies that, as a consequence of the colonization, we receive from the Spanish culture. For this reason, here Spanish is spoken. Despite the disappearance of the Taino (indigenous) language and the African languages, our Spanish maintains countless semantic elements proceeding from these cultures (Guzmán, 2000, p. 138, italics mine).

About oral tradition, traditional and indigenous knowledge, two responses from teachers were that;

Before (there was a lot of) song and poem, fables, stories, tales of grandparents; the parents of the kids used to tell stories; now they use the book and google; webpages educational like Wikipedia (Interview #7, Social Studies, 4th & 7th grade)

The practices have disappeared; the language (non-Spanish) is the most that they have, the dress and objects they have found in excavations; instruments; (Interview #20, Social Studies & Spanish, 4th grade)

In terms of identity displacement, textbooks in school teach who they are:

- Mix of Borinquen indian,
- White race, airs of Spain,
- Rhythm of blacks in the blood and the dreams
- Puerto Rican, sweet like the sugar cane (Guzmán, 2000, p. 137)⁸

Both subjects—Social Studies and Spanish—present the indigenous people very superficially and stereotypically. The Spanish texts that could be used are stories, usually with the same image. The images of Indians as primitive, and the ideologies of U.S. schooling were and are strong tools in the elimination of the Indigenous element as a lived and living experience. Looking at older textbooks, some textbooks let the Indigenous people hide in the mountains, while others got rid of them in less than a paragraph. Eventually the image is one of

⁸ Mezcla de indio borinqueño, raza de blancos, aires de España, ritmo de negro en la sangre y los sueños. Puertorriqueña, melosa como la caña

archaeological periods, naming them 'Tainos', and a rich primitive culture that contributed to the present day racial and cultural mix of Puerto Ricans. Teachers reported using visuals and some storytelling to interest older students, who are often presumed to already know the material from 4th grade. The few Spanish stories that were used deal with mythologized heroes, love affairs, and primitive people; again contributing even in personality traits like kindness. The textbooks create powerful images, none of them linking the rural or jíbaro people to the indigenous at all, nor stressing the rural history. Yet as the teacher above said, the choice of materials and time spent is dependent on the knowledge of the teacher, thus the next:

Sub-question #3 was: How do teachers make meaning, mediate, and implement the curriculum and language education policy in their classrooms?

I interviewed 28 teachers in rural mountain schools from 20-60 minutes each. The teachers' practices and interpretation of the policies, standards, and textbooks was the culmination of the policy analysis. Their power (as well as burden) of mediating the previous curricular issue with the knowledge given to students was perhaps the most important part.

The Indigenous element when taught is seemingly reduced, simplified, and frozen in the past as extinct, blended into an ambiguous and unknowable mix. Teachers must comply with standards and document compliance in daily and weekly lesson plans, according to stipulations in No Child Left Behind and based on the U.S. content standards⁹. Perhaps because of the nature of my questions alternating between questions about the Indigenous and Department of Education standards and teaching practices, some teachers focused more on the standards themselves than the Indigenous theme. Many were not very specific about their teaching method, although many had something to say about Puerto Rican history and people and identity. I noticed the frequency of archaeological words when referring to indigenous, accompanied by the concept of "heritage", that often felt (to me, as an outsider) very contemporary and near, at times more of a presence than something that would be in a museum.

About the indigenous identity a few teachers said:

(There are a) great many (un montón) that resemble them (the indigenous) and they talk about it (too); (about) grandparents that are (indigenous) and tell stories; (for example) in las Marias more than in this town – about a "great grandfather (that) was indigenous"; there was oral history (Interview #19, Social Studies 7th grade)

The heritage that they left (is a) contribution to Puerto Rico; many think that they were simple; nude, uneducated; with no contribution at all but it was the opposite; (there was) a great contribution; (especially in the) towns of the countryside (Interview #14, Social Studies 7th-9th grade)

and another said:

It (the indigenous element) makes the base (of)—important—history, they start with that; from there the race arises (de allá sale la raza); of what we are (Interview #3, Social Studies & Spanish, 4th grade)

but another said:

It (the indigenous knowledge) has been lost...only on holidays and at school; (this is) the reality; in the process of colonization; progress and what happened they don't know (Interview #26, Social Studies & Spanish, 4th grade)

Teachers reported a range of time between two days and two months spent on the indigenous theme. What teachers reported was how they want to teach Puerto Rican history but it is not

⁹ The same types of standards have dominated for over a hundred years, but now they are tested or more accurately excluded to favor science, math, and Spanish (language)

tested, how they motivate kids; how they deal with lack of resources and interest; how it is not given priority except during the week of Puerto Rico (Semana de la Puertorriqueñidad in November); how some teachers skip it assuming it is taught in earlier grades, or refer the question to other grades when students would have learned it. Teachers confirmed that knowledge is found in the books, because oral tradition and family stories are much less than previous generations, or non-existent, and the link was not apparent between the knowledge and oral tradition. They confirmed that non-standard varieties of Spanish still exist today, and existed much more in the past; and that the role of the school is to standardize language. The teachers almost unanimously agreed that local history is given little importance, and in general Puerto Ricans do not know (or are not allowed to know) their local history or culture; even though they are using a different knowledge base (the 'official' history) than the one I used. As part of their identity, some give the indigenous element a great importance, and others very little. However, even the former have the archaeological view. A few teachers stressed that the teacher decides where and how the importance is applied, it could be given to the African element instead, and that there is no requirement to value and be passionate about Puerto Rican history and culture to become a teacher.

In sum, the requirements create a situation where according to the knowledge and ideology of the teacher, the indigenous element is either skipped or emphasized; and according to the teachers' knowledge. The teachers who gave it the most importance still relegated it to the remote past, a paradox given the poem that teaches about the democratic mix of "*Borinquen indian, White race...of Spain, and Rhythm of blacks in the blood and the dreams*" (Guzmán, 2000, p. 137).

6. Discussion-focus on teachers

The discussion returns to lessons about 1) the role of colonial schools and identity imposition; and 2) how community or local models of education—in the sense of education according to the indigenous parameters and Ivan Illich's notion of traditional education—would have put Puerto Rico in a better situation after the hurricanes.

Ivan Illich was a philosopher, priest, and critic of western institutions. He spent time in the 1950-60's with Puerto Ricans both in New York and in Puerto Rico; "*very much attached to Puerto Rico*"¹⁰. The years in Puerto Rico were "*pivotal*" (Hartch, 2015, p. 124). He grew dissatisfied with the Church; and became a member of the Council of Education. Illich concluded that Puerto Rico had been schooled, but not educated, and that "*Puerto Ricans can no longer conceive of life without reference to school*" (Illich, 1969); likening education to a new religion, actually even more onerous than the Church rituals, because all levels of society "*from Governor to jíbaro*" (p.2) had grown to accept the ideology of teachers as before the theology of priests.

How did Puerto Ricans become so attached to schools, school knowledge? How could this have been different? The historical background of early policies in the U.S. administrative period was a crucial step in demonstrating the significance of the transition from a rural and agricultural, subsistence economy to an urban and industrial one, with massive migrations off the (is)land, simultaneous with compulsory schooling. Illich also maintains that school leads children away from community, while most knowledge is acquired outside of school. In contrast,

traditional society was more like a set of concentric circles of meaningful structures... Education did not compete for time with work or leisure. Almost all education was complex, lifelong, and unplanned... In the village, language and architecture and work and religion and family customs were consistent with one another, mutually explanatory and reinforcing (Illich, 1971, pdf p. 15).

¹⁰ This anonymous blogger (June 24, 2013) quotes two interviews that Illich gave: one in 1972 with "*Domenach*" and another with David Cayley in 1988 (Cayley, 1992). See also Fitzpatrick (1967).

Meaningful structures would relate to everyday needs, social and family relations. Mass and compulsory schooling is designed according to deficit thinking and backward planning. The variations of educational models by culture or language groups that still exist are marginalized, homogenized, and/or do not count, and are even erased in favor of standardized forms of 'knowledge' with controlled outcomes. This happens when families cannot maintain language, knowledge and traditional practices in the home; and communities lack resources; and migrations are constant—effectively displacements. A 45-year old rural man told me about walking to school barefoot, and being made fun of for being a Jíbaro.

The teachers were not exactly the kind of mediators I hoped to find, at least in terms of indigenous knowledge. I thought I would evaluate the present curriculum as “official” knowledge that may conflict with local beliefs and practices, and the teachers own stories of teaching. I realized that 117 years of schooling had been very thorough. However, a few were a motivation and made me realize the other ways they can contribute to positive identity. Thus, the discussion shows the importance of teachers. The policies and curriculum culminate and show how the burden of an important aspect of identity falls on teachers. The teachers have their own knowledge and experiences, and choose the materials. They interpret the policies in their classrooms, thus they are the ‘policymakers’. Teachers mediate and implement the curriculum through their meanings, thus demonstrating how/if curriculum acts as policy. They are held responsible when students fail. Even if the home culture teaches a certain identity, the school knowledge is often given more weight. This process deserves attention in teacher education programs—the home/school clash that many children face.

Community models of education as stipulated in the Ley Orgánica tied to the land could lessen the pushes to migrate. For example, in the first decades of the 20th century, the curriculum in the rural and urban areas was not the same. By 1928 the rural education was adapted to be practical for living in the countryside for the rest of life (Lopez Yustos, 1997). The “*Segunda Unidad*” (Second Unit) was a school adapted to the needs of rural communities, that “*commanded the attention of educators*” (Rodríguez, 1943, p. 62) in solving the problem of rural schooling in the U.S. and Latin America. It was community center that was a combination of vocational and academic activities schools. Rather than closing schools, perhaps the Segunda Unidad (Second Unit) schools could revive their original purpose. They could become what they were built for. After the Hurricane, people needed bridges, water, food—if the plantain, mango and breadfruit trees were not already rotting or did not blow down, surely other possibilities could have been found other than food donated in the U.S. and brought on a ship, sitting in the port, unable to be loaded on a truck without gasoline or a driver, or a road or lights to see.

7. Conclusion

In the colonial years since 1492, Puerto Rico has never had complete control of their own institutions, from society and community to national levels. When Hurricane María arrived in September of 2017, the island had 117 years of U.S. colonial schooling. The people had been schooled in the sense of having school buildings and education policies to administer their lives, imported notions of curriculum and a forged identity. Many people had migrated to the U.S. mainland: five million Puerto Ricans were living off the island, facing the issues of being English speakers or becoming English Language (ELL) learners in the U.S. At the time of María, the 3.5 million living on the island faced an enormous debt, and crumbling infrastructure. In post-María Puerto Rico, healing is in order—the island is broken. Many rural areas, months later, lack electricity; bridges are collapsed; there is little running water and the many streams that were already contaminated are now more so causing risk of infections; and many dead. Puerto Ricans are extremely proud and resilient but the situation has become extreme.

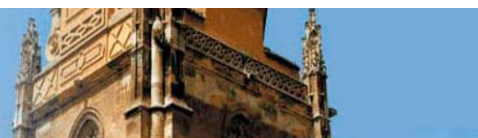
The study described in this article illustrates what happened to the indigenous identity through the years and especially through U.S. school; and the role the indigenous identity could play for communities. The Indigenous paradigm has a cyclical nature, a medicine wheel. Native American worldview integrates various factors. The four seasons and four cardinal directions represent this way of thinking, each representing a different aspect of life and experience. The

east is Spring and spiritual aspects of experience, the south is the summer and the natural world, the west is autumn and bodily aspects of knowing, and the north is winter and the mental process of balancing intellect with wisdom (Chilisa, 2012, p. 183-184). Community and place-based approaches, interconnection between humans, the water, the earth, and food are ingredients for indigenous models of education: educational autonomy rather than educational imperialism.

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A web 2.0 for science teaching and learning in upper high school by means of gamification: Jedirojo Science

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 24 de mayo de 2017

Fecha de revisión: 16 de julio de 2018

Fecha de aceptación: 22 de agosto de 2018

Fernández-Rubio, P. & Fernández-Oliveras, A. (2018). Una web 2.0 para la enseñanza-aprendizaje de las ciencias en bachillerato mediante gamification: Jedirojo Sciences. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 87 – 101.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

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Resumen

El método tradicional de enseñanza de las ciencias, en el que el alumno juega un papel de mero receptor de información, sigue teniendo un fuerte arraigo en el sistema educativo en muchos países, como España. Esta visión de la enseñanza ha quedado obsoleta con la aparición de las corrientes educativas fundamentadas en la gamificación y el uso de tecnologías digitales como la web 2.0. En consecuencia, los ejemplos de prácticas docentes refrendadas por investigaciones pueden favorecer que estas tecnologías se incorporen definitivamente a la educación formal. Asimismo, se hacen necesarias experiencias en las que se estudie si el interés del alumnado por los contenidos expuestos en la web puede potenciarse en un contexto que convierta la experiencia de aprendizaje en algo divertido y apetecible. En este trabajo se presenta una propuesta didáctica para la enseñanza de la biología en bachillerato desde una perspectiva lúdica mediante el desarrollo de una página web con la filosofía 2.0. Empleando elementos cinematográficos y del mundo del videojuego, la propuesta basada en la gamificación trata de explotar el reto y el compromiso del alumnado para mejorar su motivación en las disciplinas científicas. Con el objeto de fomentar la aplicación de estas metodologías se ha empleado parte de las tareas incluidas en la web para realizar una experiencia piloto, cuyos resultados cualitativos se muestran en este artículo.

Abstract

Traditional teaching methods of sciences, where students assume a passive role as mere recipients of knowledge, are still strongly established in many countries, as Spain. This perception of teaching became obsolete with the appearance of educational currents supporting gamification and the use of digital technologies as web 2.0. Consequently, teaching experiences supported by verified research can favor these technologies to be permanently adopted by formal education. It is likewise required to perform new studies to assess whether the interest of students for the web contents is increased when displayed in an attractive and playful context. In this paper we present an educative proposal to teach biology in upper secondary school from a ludic point of view by means of a web 2.0 development. Taking elements from cinema and videogame fields, this based on gamification proposal attempts to make use of challenge and engagement of students to improve their motivation for scientific disciplines. With the goal of encouraging the implementation of these methodologies a pilot scheme has been carried out using some of the activities displayed at the website, whose qualitative outcomes are shown in this article.

Palabras clave

Aprendizaje Lúdico; Gamificación; Web 2.0; Bachillerato; Didáctica de las Ciencias Experimentales; Biología Celular y Molecular

Keywords

Playful Learning; Gamification; Web 2.0; Upper Secondary School; Didactics of Experimental Sciences; Molecular and Cellular Biology

1. Introducción

El método tradicional de enseñanza de las ciencias, en el que el alumno juega un papel de mero receptor de información, sigue teniendo un fuerte arraigo en el sistema educativo actual en muchos países, tal y como sucede en España. Las limitaciones de una estrategia didáctica eminentemente teórica en la educación científica, y por ende de la biología, perjudica notablemente en no pocos aspectos al proceso formativo del estudiante.

La enseñanza de la biología o de las ciencias naturales cuenta con su propia problemática. La falta del tiempo en la programación académica para desarrollar y relacionar conceptos abstractos o que muchos docentes no trabajen con el alumnado posibles aplicaciones de dichos conocimientos en sus vidas cotidianas son sólo algunos ejemplos. No obstante, el mayor problema del aprendizaje de la biología en educación secundaria y bachillerato es el mismo que afecta a otras áreas de las ciencias. Buena parte de los estudiantes de estas etapas educativas tienen dificultades para poner en práctica los conocimientos científicos adquiridos haciendo uso de la razón, la reflexión y la deducción, elementos indispensables para el desempeño de la profesión científica (Pantoja Castro y Covarrubias Papahiu, 2013). El uso casi exclusivo de la memorización como recurso de aprendizaje de complicados términos científicos sigue siendo predominante en muchos casos (Pozo, 1993), lo que supone una fuerte desventaja durante la etapa de formación superior o universitaria. En la universidad, más allá de que se conozcan los aspectos teóricos de una materia, se da por sentado que el estudiante es capaz de desarrollar un pensamiento independiente y un criterio científico propio acerca de conceptos abstractos complejos. Es ahí donde se manifiestan las deficiencias y las carencias de un sistema educativo preuniversitario que no es capaz de captar eficientemente la atención del alumnado general sobre las ciencias o de proporcionarle las herramientas mentales adecuadas para afrontar los requerimientos de la vida universitaria, ya que muchos estudiantes continúan manifestando actitudes en las que prima la dependencia del docente y la falta de iniciativa académica (Fernández-Rubio, 2016).

El objetivo de este artículo consiste en proporcionar un ejemplo de modelo de trabajo para profesores de ciencias en secundaria y bachillerato basado en el desarrollo de materiales didácticos digitales en la red con un enfoque lúdico, a fin de mejorar la enseñanza y el aprendizaje de las ciencias. Para ello, se ha emprendido un proceso iterativo de investigación en la acción en el que el docente responsable de la propuesta didáctica analiza su propia práctica y la modifica en base a los resultados obtenidos.

En particular, en este trabajo se presenta un material didáctico multimedia para la enseñanza de la biología celular y molecular desde una perspectiva lúdica. El material se ha articulado mediante el desarrollo de una página web, empleando elementos cinematográficos y del mundo del videojuego para dinamizar el abordaje de contenidos científicos del currículo. La propuesta didáctica basada en la gamificación incluye un conjunto de tareas que tratan de explotar el reto y el compromiso del alumnado para mejorar su motivación en las disciplinas científicas. Dentro de una primera iteración del proceso de investigación en la acción, se ha realizado una experiencia piloto con estudiantes de bachillerato usando dos de las mencionadas tareas, cuyos resultados preliminares, de carácter cualitativo, se muestran en este artículo con el propósito de ilustrar el potencial de este tipo de herramientas didácticas y lúdicas.

1.1. La web, las redes sociales e Internet como recursos educativos

Los servicios web normalmente adquieren la forma de una interfaz donde se ejecuta una aplicación. En el campo educativo, el término web 2.0 hace referencia a una página web de lectura y escritura (McManus, 2005), que supera la visión tradicional de sólo lectura de la web 1.0 (Cormode & Krishnamurthy, 2008), en la que los estudiantes son meros receptores de conocimiento. La web 2.0 permite diseñar y poner en marcha prácticas o tareas colaborativas y participativas, donde se puedan distribuir responsabilidades entre alumnado y profesorado (Lankshear & Knobel, 2006). Es una plataforma en la que construir o alojar herramientas digitales educativas innovadoras (Cormode & Krishnamurthy, 2008): redes sociales, como

Facebook, plataformas para compartir contenidos multimedia, como *YouTube*, sitios donde desarrollar el conocimiento de forma colaborativa, como Wikipedia (Valverde-Crespo & González-Sánchez, 2016), blogs especializados y páginas que favorecen la creatividad artística, como Deviantart. Es una manera de interrelacionar las tareas académicas formales, como la realización de trabajos evaluados mediante revisión por pares, con otras tareas más informales que facilitan los recursos de la web 2.0, como publicar vídeos o archivos de audio sobre un tema de trabajo determinado (Cohen, 2007). Una razón por la que las tecnologías de la web 2.0 todavía no están ampliamente incorporadas en la educación formal es la falta de modelos elaborados por y para los docentes. Si bien algunos docentes están ya tanteando las opciones educativas ofrecidas por la web 2.0 (Domènech-Casal, 2016), no se dispone de suficientes ejemplos de prácticas docentes refrendadas por investigaciones, lo que frena el salto cualitativo del modelo de web 1.0 a web 2.0. (Bull *et al.*, 2008).

1.2. La gamificación

Según McGonial (2011), el uso de juegos no debe centrarse tan sólo en el ámbito del entretenimiento, ya que las habilidades que se ejercitan durante el juego pueden ser útiles para resolver problemas en la vida real. El interés de los juegos radica en la combinación de fantasía, reto y curiosidad que despierta en los jugadores, además de su capacidad para lograr que estos se impliquen de tal manera en el proceso que se sumerjan en un estado mental de alta concentración denominado “*flujo*” (Kirriemuir & McFarlane, 2004).

El objetivo de la gamificación (Werbach & Hunter, 2012) es lograr el compromiso de los estudiantes durante el aprendizaje mediante el juego y la competición (Fitz-Walter, Tjondronegoro & Wyeth, 2012). La gamificación permite a los estudiantes recibir un *feedback* instantáneo de sus progresos en el aula y el reconocimiento de haber completado una tarea (Kapp, 2012). En teoría, esta metodología genera mayores oportunidades para que los estudiantes se comprometan y motiven al realizar las actividades (Simoes, Redondo & Vilas, 2012), aunque hay estudios que demuestran la existencia de dificultades para lograr ese objetivo (Gibbs & Poskitt, 2010). Por ello, si bien existen publicaciones recientes sobre experiencias educativas que emplean una metodología lúdica (Fernández-Oliveras, Molina & Oliveras, 2016; Galera & Reyes, 2015; Vesga, 2015), ampliar su análisis es crucial en este sentido.

1.3. El Aprendizaje a través de los videojuegos

En los videojuegos los problemas incrementan su dificultad conforme se avanza, de modo que cada problema se convierte en un entrenamiento para alcanzar un nivel de habilidad superior con el que enfrentarse al siguiente reto. El jugador se reta a sí mismo a mejorar sus capacidades para avanzar en el juego y alcanzar unos objetivos muy claros a través de una información siempre disponible (McGonial, 2011). Lograr que esa información cobre sentido es un objetivo intrínseco a los videojuegos. Algunos desarrolladores de videojuegos han descrito que estos contextos de aprendizaje estratificado de probada efectividad se basan en la explotación de varios principios interrelacionados, a saber: el reto, la habilidad, el compromiso y la inmersión (Bellevue, 2007, 2011). De esos cuatro elementos, el reto y la habilidad son los más importantes para alcanzar el estado de “*flujo*” al emplear videojuegos como recursos didácticos (Hamari, 2016). Este término hace referencia a un estado mental caracterizado por una concentración claramente centrada y una elevada diversión durante el desempeño intrínseco de actividades interesantes (Shernoff, Csikszentmihalyi, Schneider, & Shernoff, 2003). Según Csikszentmihalyi (1996) la condición esencial para alcanzar esta situación es que el individuo emplee un alto nivel de habilidad para enfrentarse a un reto significativo. Pero la actividad tampoco debe ser excesivamente complicada, de modo que el individuo tenga unas probabilidades de éxito razonables si se compromete a esforzarse. Así, un videojuego educativo debe basarse en una dinámica de reto-habilidad que presente un principio de crecimiento intelectual inherente al aprendizaje (Fullagar, Knight & Sovern, 2013).

En cuanto a los otros dos elementos implicados en el aprendizaje mediante videojuegos, hay evidencias que sugieren que la fantasía implícita a las simulaciones y los juegos promueve la

motivación de forma natural. Además, puede potenciar el aprendizaje si se compara con procesos de instrucción carentes de elementos de fantasía (Lepper, & Hodell, 1989). Esto se logra en parte gracias a que dirige la atención hacia elementos relevantes del ambiente de aprendizaje (Lepper, & Malone, 1987).

Algunos estudios han concluido que, mientras las experiencias de flujo potencian el aprendizaje, el incremento del compromiso lo mejora. En otras palabras, el flujo tiene un efecto positivo en la ejecución del juego, pero no necesariamente en los resultados del aprendizaje. Por el contrario, si los estudiantes están comprometidos con la tarea, entonces, aprenden más (Admiraal, Huizenga, Akkerman & Dam, 2011). Por tanto, la inmersión y el compromiso pueden considerarse como marcadores de aprendizaje.

1.4. El Cine como medio para dinamizar la educación científica

El cine puede ser empleado como una poderosa herramienta didáctica en las aulas (Gouyon, 2016), pues permite construir conocimientos científicos, valores y habilidades sociales y antropológicas. Su fuerza radica en su capacidad para motivar y estimular la reflexión y el análisis a través de mecanismos emocionales (De Puig, 2006), tal y como se ha demostrado en numerosas experiencias educativas (Cottone & Byrd-Bredbenner, 2007; Pérez Parejo, 2010).

Aunque hay excepciones en las que el cine se emplea como base para organizar actividades científicas que motivan al estudiante (Dark, 2005), generalmente no es así. De hecho, los estudios que tratan de analizar el impacto de recursos cinematográficos en el aprendizaje emplean una metodología en la que los estudiantes adoptan un papel pasivo, como simples espectadores o receptores (Zauderer & Ganzer, 2011). No es común que se trabaje el proceso opuesto, donde los estudiantes usen sus conocimientos para identificar, reconocer o investigar aspectos teóricos de un problema y “construir” conocimiento a partir de ahí (Hyde & Fife, 2005). En estos casos se puede, además, romper con la perniciosa concepción clásica que establece una nítida y antinatural separación entre teoría y prácticas o problemas “de lápiz y papel” (Gil Pérez et al., 1997). Ésta es, sin duda, un obstáculo para comprender la labor investigadora y científica, puesto que da a entender que lo primero no está directamente relacionado con lo segundo.

2. Metodología e instrumentos

La página web Jedirojo Science ha sido desarrollada con la versión gratuita ofrecida por la plataforma Webs. Su coste nulo es una ventaja para cualquier docente o centro educativo que desee emprender una propuesta didáctica similar. El material docente se ha elaborado usando como guía el Real Decreto 1105/2014, de 26 de diciembre, por el que se establece el currículo básico de la Educación Secundaria Obligatoria y del Bachillerato (Real Decreto 1105/2014, 2014). El material científico (texto, imágenes o vídeos) es original y ha sido realizado expresamente para esta propuesta didáctica. También se han incluido elementos ajenos a la web indicando adecuadamente sus fuentes.

El uso de bandas sonoras para amenizar los vídeos publicados no ha supuesto una violación de los derechos de autor, ya que con ninguno de ellos se ha pretendido obtener ingresos económicos. Cuando se renuncia a obtener ingresos, *Youtube* y las compañías propietarias de los mencionados derechos de autor no ponen trabas para que el vídeo continúe en la red a disposición de toda la comunidad.

El desarrollo de la página web se integra dentro de las etapas que constituyen un proceso cíclico de investigación en la acción (Reason y Bradbury, 2001) en el que el docente responsable de la propuesta didáctica la diseña, implementa, analiza, obtiene resultados, extrae conclusiones y modifica el diseño conforme a ellas, volviendo al principio del ciclo.

Dentro de una primera iteración de dicho proceso en marcha, dos de las tareas incluidas en la propuesta didáctica se pusieron en práctica con cuatro estudiantes de bachillerato, a modo de

experiencia piloto. Todos los participantes fueron estudiantes de una academia privada, matriculados en la asignatura de Biología de 2º de Bachillerato. Se mostrarán de forma cualitativa los resultados preliminares de dicho pilotaje en base a las observaciones registradas por el docente responsable acerca del trabajo, la actitud y las declaraciones de los estudiantes participantes. Con su análisis preliminar, de tipo descriptivo y basado en el paradigma cualitativo-interpretativo (Schreier, 2012), se pretende estudiar la idoneidad de las tareas propuestas mediante la interpretación de lo expresado por los participantes en la experiencia.

2.1. Propuesta didáctica

La página web Jedirojo Science (jedirojo.webs.com) es una web 2.0 (Figura 1), que ha sido diseñada con el fin de facilitar la enseñanza, el aprendizaje y la difusión científica de la biología molecular y otras ciencias como la química o la geología, especialmente para alumnado de bachillerato. La web consta de cuatro partes: un foro donde se promueven discusiones y debates acerca de temas científicos de interés; un apartado sobre biocomputación con la idea de que los estudiantes de bachillerato tomen contacto con recursos científicos digitales disponibles gratuitamente en la red, que son esenciales en el ámbito de las investigaciones biomédicas; un espacio destinado a noticias científicas a fin de que los estudiantes se introduzcan en el uso de revistas científicas de gran impacto para contrastar la información que buscan en internet; y un blog. Seguidamente se describe la parte más relevante de la web desde el punto de vista de la propuesta didáctica: el blog, que incorpora entradas agrupadas en cuatro secciones.



Figura 1. Página de inicio de la web de enseñanza de las ciencias Jedirojo Science.

2.1.1. El Blog

El elemento más importante de la web es El blog del científico chalado (<http://jedirojo.webs.com/apps/blog/>), que consta de cuatro apartados, donde se tratan temas de actualidad científica que despierten cierta controversia (Rompiendo Mitos), conceptos y argumentos científicos tratados en el cine, la televisión y el mundo de los videojuegos (Ciencia y Ficción), experimentos o ensayos de laboratorio frecuentes en los centros de investigación de biología molecular y celular (Ensayos de Laboratorio) y donde también se proponen tareas bajo un enfoque gamificado, propio de algunos juegos de rol (Elemental, mi querido Watson).

Las entradas del blog exponen contenidos curriculares de biología, química, física y geología para bachillerato en clave de humor. Concretamente, se ha seleccionado el cine, los videojuegos y los juegos de rol como elementos básicos para enseñar y aprender ciencias con una metodología lúdica.

Las entradas admiten comentarios de los usuarios, tanto en forma de preguntas como de sugerencias relacionadas con los temas tratados. Ello permite a los estudiantes opinar sobre lo que han leído y proponer temas nuevos según sus intereses.

2.1.2. Entradas con trasfondo cinematográfico: ciencia y ficción

Las películas de ciencia ficción suponen una fuente inagotable de ideas y oportunidades para que los docentes de ciencias, independientemente de su campo de especialización, puedan trabajar elementos del currículo y poner a prueba los conocimientos de sus estudiantes. Con la excusa de destripar los gazapos o errores de populares series o películas, se trata de abordar contenidos como la evolución, la microbiología, la ingeniería genética, la biotecnología o la fosilización. En la web se propone una selección de series y películas como ejemplo, que es aconsejable ampliar tras sondear los gustos y aficiones de los estudiantes, para conectar mejor con ellos.

2.1.3. Entradas sobre temas controvertidos: rompiendo mitos

Actualmente, los estudiantes encuentran en los medios de comunicación referencias a temáticas científicas de suma importancia social. Con el objetivo de que sean autosuficientes para procesar información y desarrollar su propio criterio científico, en esta sección del blog se trabajan temas que por su naturaleza causan una fuerte controversia entre la población y son objeto de intensos debates entre la comunidad científica, como la medicina regenerativa, las investigaciones biomédicas y los conflictos éticos que provocan. Igualmente, se incluyen un segundo tipo de entradas sobre temas con connotaciones científicas, que son aquellas que afectan de un modo más directo a la vida cotidiana del estudiante y que generan un gran número de dudas y preguntas en las aulas, como son el estreñimiento, la alopecia o la intoxicación etílica.

2.1.4. Entradas de laboratorio: ensayos de laboratorio

En muchos casos, no se emplean los laboratorios de los institutos para realizar experiencias prácticas, lo que supone un importante perjuicio para los estudiantes que acceden a carreras universitarias científicas. Esta sección intenta amortiguar dicha situación, al menos para las áreas de biología, bioquímica o química, mostrando cómo se ejecutan diversas técnicas y cómo se han de interpretar los resultados que con ellas se obtengan.

En este caso, el docente puede valerse del cortometraje documental como herramienta ilustradora. Por este motivo, las entradas del blog suelen tener asociados enlaces a vídeos explicativos elaborados expresamente para esta propuesta educativa, tanto en español como en inglés. Estos vídeos están localizados en la red en el canal abierto de *Youtube Jediperseo* (<https://www.youtube.com/user/Jediperseo>) y cuentan con bandas sonoras tomadas de cantantes, grupos o películas de éxito del momento para incrementar su atractivo.

2.2. Las tareas: ¡Elemental mi querido Watson!

Los componentes más interesantes de la web son las tareas planteadas bajo los pilares de la gamificación, la dualidad reto-habilidad, la inmersión y el compromiso. Estos elementos, propios de los videojuegos, son importantes recursos en la enseñanza-aprendizaje de las ciencias. Los videojuegos son capaces de atrapar la atención de los jugadores durante horas instándoles a mejorar sus habilidades y a alcanzar la excelencia en el mundo virtual. Si se pudiera lograr una actitud semejante en un entorno académico las capacidades del alumnado serían impresionantes y las alcanzarían por el puro placer de superar un reto mientras disfrutaban del proceso. España, con tan sólo 47 millones de habitantes, es el tercer mercado más potente

de la industria del videojuego en el mundo, lo que no debe pasar desapercibido por los docentes españoles.

El conjunto de tareas presentado en la web pretende tomar el camino emprendido por los denominados juegos de aventura gráfica como Monkey Island, Maniac Mansion o Indiana Jones y las Llaves de la Atlántida (Lucasart). En ellos el jugador toma el papel del protagonista y debe interactuar con el medio y con otros personajes para solucionar problemas, puzles o acertijos haciendo valer su ingenio.

El docente puede tratar de exprimir las características que hacen a los videojuegos tan deseados por los jóvenes (y no tan jóvenes) para preparar actividades que motiven al alumnado y le inciten a aprender. Los juegos de aventura gráfica son, en cierto sentido, el paso siguiente en la historia de los juegos de rol y los libros-juego de lema "*escoge tu propia aventura*" (como los publicados en España por la editorial Timun Mas), en los que el lector hacía las veces de protagonista en historias de aventuras o misterio y debía emplear su intelecto para resolver el crimen o la situación.

Este sistema atrae cada vez a más usuarios al potenciar el planteamiento del reto con puntos de vista de la cámara en primera persona, lo que ayuda al jugador a meterse en el papel, algo que sucede en famosos títulos como X-Files de Play Station, Heavy Rain y L.A. Noire de Play Station 3 y Beyond de Play Station 4 y X-Box. La aventura gráfica en primera persona, basada en la resolución de crímenes, goza de un prestigio inigualable al contar con guiones elaborados, retos difícilmente rechazables, manipulación de documentos "*oficiales*" para dar realismo a la experiencia y la necesidad de adquirir conocimientos científicos del ámbito forense para avanzar, señas de identidad de esta generación de servicios digitales de ocio que están marcando los gustos de los estudiantes actuales.

El último de los elementos que ha servido de inspiración para completar estas tareas en la red es la televisión, a menudo promotora de vocaciones como la médica o la abogacía. Especialmente significativo es el creciente número de personas que desean dedicar su vida a la investigación en un laboratorio o a la medicina forense. Estos casos pueden asociarse al bombardeo de series policíacas y médicas en la parrilla televisiva: empezando por la incombustible CSI y sus mil variantes, pasando por el estrambótico House y finalizando con las actuales adaptaciones de Poirot y Holmes: Castle, Bones, el Mentalista...etc.

Del conjunto de tareas presentado en esta sección de la web, se describen a continuación las dos más destacadas.

2.2.1. El Caso Warren: los secretos tienen un precio

En esta actividad, presentada en forma de vídeo (<https://www.youtube.com/watch?v=1GujCrO5rTk>), se cuenta la historia del asesinato de Dana Warren. El alumnado ha de tomar, por tanto, el papel de forense novel para resolver el crimen. El reto consiste en que tras presentar los resultados de las PCR (reacción en cadena de la polimerasa), el estudiante debe deducir quién es el asesino entre un grupo de cinco sospechosos y elaborar un informe detallado. La dificultad del problema se ha adecuado a estudiantes de 2º de Bachillerato, añadiendo elementos propios de las series policíacas y de los videojuegos de aventura gráfica antes mencionados. Elementos que potencian la experiencia radicalmente para que el estudiante se sumerja con más facilidad en la ficción al adoptar un papel protagonista en la secuencia, lo que puede resultar divertido y estimulante. Algunos ejemplos son la cámara en primera persona cuando el estudiante se hace cargo de la investigación, la música de cine o la presentación de documentos como el dossier con las pruebas, las coartadas y la vida de los sospechosos (Figura 2).

El caso Warren: Los secretos tienen un precio.

publicada el 15 de febrero de 2016 a las 10:25

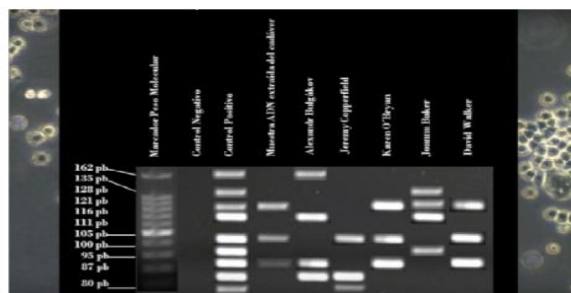
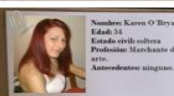


Figura 2. Actividad interactiva El caso Warren. Capturas de escenas de la película, en algunas de las cuales los personajes hablan directamente al estudiante, de los archivos con las averiguaciones sobre el crimen y los sospechosos realizadas por la policía y de una de las pruebas de ADN a interpretar.

2.2.2 El fármaco para la anemia falciforme

En esta actividad (Figura 3), el alumnado asume el papel de una puntera empresa del sector farmacéutico envuelta en una trama propia del cine negro y que gira en torno al desarrollo de un fármaco novedoso para tratar la anemia falciforme. El estudiante ha de ser capaz de relacionar la naturaleza de la enfermedad con la acción del fármaco y de otros factores externos sobre la composición de las membranas plasmáticas de los eritrocitos enfermos. Para ello tiene que hacer una búsqueda de información contrastada que avale su hipótesis. Es una propuesta de miniproyecto de investigación que debe potenciar el uso del razonamiento y de la lógica por encima de la memorización de datos concretos, algo crucial para el desarrollo del pensamiento científico de los estudiantes.

El fármaco para la anemia falciforme

Publicada el 9 Ee febrero Ee 2016 a las 8:15

Desde hace un año tienes la fortuna de trabajar para una gran multinacional farmacéutica, Natural Biotech, como relaciones públicas. La dirección de la empresa consideró que tu formación en ciencias biomédicas es un garante para transmitir correctamente las virtudes de los fármacos producidos por Natural Biotech a posibles inversores. Además, han aprovechado tu juventud para emplearla como imagen dinámica e innovadora de la empresa.



El "nuovo signore" de Nueva York: don Pablo Corleone



Figura 1. Eritrocitos humanos: los cinco de la abajo son normales y el de arriba procede de un enfermo de anemia falciforme (tomado de <https://goo.gl/63f78Y>). La imagen tiene licencia CC-BY-4.0

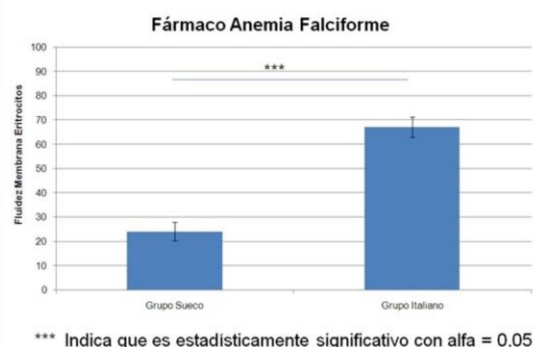


Figura 3. Presentación de la actividad de la anemia falciforme. El análisis de datos estadísticos y de los requerimientos para validar una prueba clínica siguiendo el método científico vienen acompañados de pequeños toques de humor como el periódico de época.

3. Resultados

La plataforma Webs proporciona un informe del número de visitas a la página que permite llevar un control regular y determinar qué publicaciones generan más interés. Jedirojo Science tiene actualmente 21 suscriptores y usuarios y, desde su inauguración en octubre de 2015, ha recibido 2500 visitas gracias a su anuncio en las redes sociales (Facebook y Twitter), y los vídeos del canal de Youtube.

Las entradas han recibido 22 comentarios y el foro 12 preguntas o respuestas. Algunos de los comentarios en Ciencia y Ficción son: “*Qué interesante!* yo pensaba que los que volaban eran dinosaurios y resulta que no. ¿Qué son entonces?” (Comentario del usuario “Rata de laboratorio” en “Parque Cretácico”) o “*De acuerdo con lo que he leído, entonces ¿cuándo aparece una especie nueva se extingue la anterior?*” (Comentario del usuario “Cometa” en “No es una película para adultos, pero son los X.Men”). Es interesante que, a pesar del trasfondo cinematográfico, las preguntas deriven hacia los temas científicos que se exponen más o menos veladamente.

En Rompiendo Mitos o Ensayos de Laboratorio las preguntas podrían relacionarse con la información disponible en otros medios: “*El video es super aclaratorio, de lo mejorcito que he visto. Por qué el café (contra más malo), tiene efectos laxantes? En algunas ocasiones es más efectivo que la fibra.*” (Comentario del usuario “Antonio” en “Evacuar o no evacuar...”) o “*...una vez obtenidos los resultados ¿Se realizan comprobaciones posteriores ante posibles falsos positivos/negativos? ¿si es así cuantas repeticiones del mismo resultado serían necesarias para darlo como válido?...*” (Comentario del usuario “NCG” en “Cultivos celulares”).

Las visualizaciones de los vídeos en *Youtube* han llegado a casi 13500 sólo entre aquellos que forman parte de esta propuesta didáctica. Este valor se ha beneficiado de las versiones en inglés, reproducidas internacionalmente más que las españolas. La página web está editada sólo en español y eso ha restringido mucho el tráfico de visitas internacionales.

Las entradas que han recibido más visitas han sido las de la categoría de Ciencia y Ficción (especialmente, las de análisis de películas), lo que apoya su potencial educativo y respalda la idea de que la ciencia, envuelta en un papel de ocio cinematográfico, llega más y mejor al público general. La sección de las tareas ha obtenido menos visitas puesto que los estudiantes de bachillerato han sido sólo una pequeña fracción de los visitantes de la web.

A pesar de ello, dentro de una primera iteración del proceso de investigación-acción en marcha, dos de las tareas de la propuesta didáctica se pusieron en práctica con un reducido número de estudiantes de segundo de bachillerato a modo de experiencia piloto y con el fin de ilustrar a grandes rasgos el potencial de la presente herramienta educativa. En sucesivas iteraciones del proceso, se llevará a cabo una ampliación de esta experiencia para poder obtener datos que permitan realizar un análisis más profundo con resultados sólidos que fundamenten las conclusiones pertinentes.

3.1 Tareas. Experiencia piloto

La actividad *“El caso Warren: Los secretos tienen un precio”* ha sido realizada por dos alumnos de Biología de 2º de Bachillerato: “Jose” y “María”. Ambos accedieron a realizarla de buen grado y entregaron sus respuestas en papel.

De los dos estudiantes “Jose” fue el menos implicado, dando respuestas generales y poco precisas que parecen indicar insuficiente reflexión y cierta precipitación al contestar: *“El ADN mitocondrial es el ADN que hay en las mitocondrias de nuestras células que fueron absorbidas por nuestras células hace millones de años”*. Ahora bien, fue capaz de llegar a algunas conclusiones correctas en base a los contenidos tratados en la página web: *“...y en el ADN del cadáver del ejercicio (en sus uñas), es de un hombre”*, pero no interpretó adecuadamente el conjunto de pruebas moleculares o su contradicción con otras evidencias forenses: *“Hay 2 asesinos: el marido Jeremy Copperfield porque ha dejado sus huella dactilares en el cuchillo y David Walker porque su ADN coincide con el de las uñas del cuerpo”*.

Por su parte, “María” acertó al identificar a los culpables del crimen ficticio, interpretando correctamente las pruebas moleculares (*“El culpable parece que es David Walker porque su patrón de ADN coincide con las pruebas encontradas (...). Es el culpable porque la amelogenina indica que tiene que ser hombre. La compañera de piso también tiene el mismo ADN de las mitocondrias. Tiene que ser familia del asesino...”*). Así pues, descartó los elementos dispuestos como señuelo, aunque sin explicar en qué se fundamentó para hacerlo (*“...y las pruebas encontradas que dicen que el asesino es su marido tienen que ser falsas.”*). Por tanto, demostró dominar los contenidos de biología molecular trabajados con esta tarea (*“Las células tienen ADN en el núcleo y en las mitocondrias y por eso coinciden las pruebas con el asesino”*).

Considerando que el objetivo consistía en elaborar un informe que respaldara sus deducciones, ambos alumnos respondieron de forma escueta y directa, sin profundizar demasiado en la síntesis del citado informe. En el caso de “Jose”, puede que se haya debido a una falta de compromiso con la actividad, mientras que “María”, más activa y dispuesta a sumergirse en la fantasía propuesta, es probable que haya contestado así por tener poca confianza y costumbre a la hora de redactar un informe de este tipo.

En vista de esto, tal vez sería conveniente proporcionar al alumnado una plantilla donde se desglosen todos los puntos que deben ser respondidos y justificados en esta actividad. Por otro lado, la actividad del Fármaco para la anemia falciforme fue bien acogida por las dos estudiantes que la realizaron en la red, (con nombres de usuario Merche y HurryPuchy

respectivamente), pero ninguna fue capaz de completarla de manera correcta por motivos distintos.

“Merche” hizo una buena búsqueda de información acerca de la anemia falciforme, que estuvo bien contrastada: *“Es una enfermedad en la que el cuerpo produce glóbulos rojos de forma anormal. Las células tienen forma semilunar, estas células no duran tanto como las normales, los glóbulos rojos redondos, y da lugar a anemia, las células falciformes, también se atascan en los vasos sanguíneos y bloquean el flujo (...) De origen genético por sustitución de un aminoácido (ácido glutámico por valina), produce fibras poliméricas al exponerse a bajas presiones de oxígeno. Eritrocitos más viscosos (...) estas fibras deforman las células y las hacen menos flexibles”*; pero no fue capaz de ver la relación entre la enfermedad y la composición lipídica de las membranas de los eritrocitos enfermos, de modo que no supo quién era el responsable del desastre experimental.

En cuanto a “HurryPuchy” hizo una búsqueda de información escueta y poco profunda, pero fue capaz de interpretar la importancia de la composición lipídica de las membranas en la enfermedad, aunque no terminara asociándola con la alimentación como factor determinante de la misma: *“Los factores que influyen en la fluidez de la membrana son la concentración de fosfolípidos y la concentración de colesterol. La enfermedad se caracteriza porque los glóbulos rojos enfermos son bicóncavos y su membrana es rígida”*. Al mismo tiempo se dio cuenta de que la razón por la que fue rechazado el fármaco fue un deficiente diseño experimental que no se atenía al método científico, por lo que identificó fácilmente al responsable del mismo. El problema es que llegó a las conclusiones correctas a partir de las razones incorrectas: *“Entonces, la investigación no debió centrarse en la rigidez de la membrana de los eritrocitos pues esta cualidad es un efecto secundario, sino en la hemoglobina S; por tanto fue un fallo en el diseño, planteamiento, del experimento, la responsabilidad de esto es de Kenneth Walther, por tanto será el objetivo de la mafia italiana”*.

El que ambas alumnas acertaran en algunos aspectos de la actividad y fallaran en otros, podría sugerir que dicha tarea sería más enriquecedora abordada por pequeños grupos heterogéneos. Lo cual también serviría de entrenamiento ante lo que es un trabajo experimental en grupos de investigación profesionales.

Las respuestas del alumnado en las dos actividades se han analizado según cinco variables, a saber: calidad general (CR), justificación mediante la búsqueda o la relación con información contrastada (J), compromiso con la actividad (C), interés y diversión suscitados (ID) y nivel académico en biología molecular (NA). Dichas variables fueron cuantificadas en una escala comprendida entre 5 (Muy Alto) y 1 (Muy Bajo) según las observaciones y el criterio del docente responsable de la propuesta didáctica, en su triple rol como experto en el área de biología molecular, docente e investigador.

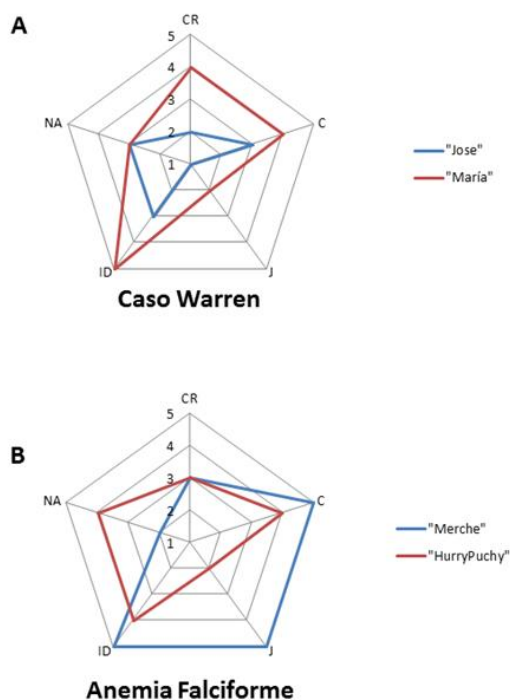


Figura 4. Análisis de las actividades “El caso Warren: los secretos tienen un precio” (A) y “El fármaco para la anemia falciforme” (B) según las respuestas proporcionadas por los estudiantes participantes de la experiencia piloto. Las variables: calidad general (CR), justificación (J), compromiso con la actividad (C), interés y diversión suscitados por la actividad (ID) y nivel académico en biología molecular (NA), se han cuantificado entre 5 (Muy alto) y 1 (Muy bajo).

En los resultados (Figura 4) se puede apreciar que ambas tareas parecen tender a destacar en el interés y diversión (ID) y el compromiso (C) que despiertan en los alumnos. Si bien, los valores de El caso Warren son más moderados que los de la Anemia Falciforme. En ninguno de los casos parece que la calidad de las respuestas (CR) dependa del nivel académico (NA) de los sujetos, sino del interés/diversión (ID) suscitado, y en menor medida del compromiso, lo que respalda la hipótesis de partida de esta propuesta didáctica. También se puede apreciar que en la tarea El caso Warren uno de los polígonos queda dentro del otro (Figura 4A), mientras que en el caso de la Anemia Falciforme los polígonos son secantes en dos puntos (Figura 4B). En otras palabras, la primera es una actividad cuyos resultados tienden a depender de las habilidades individuales, mientras que la segunda parece necesitar la colaboración entre estudiantes.

4. Discusión y conclusiones

La propuesta de enseñanza de la biología recogida en la página web de carácter 2.0 y el canal de *Youtube* presentados en este trabajo se revela como muy prometedora. Las tareas han sido probadas con estudiantes de bachillerato proporcionando datos preliminares que sugieren las posibilidades que ofrece, para la educación científica, una estrategia didáctica lúdica en la red fundamentada en el concepto de web 2.0. El desarrollo de una página web para la enseñanza-aprendizaje de las ciencias parece constituir un elemento positivo que favorece el interés y facilita la comunicación con el alumnado, tal y como indican los comentarios y preguntas realizados por los usuarios. Por otro lado, el compromiso del alumnado es muy importante para alcanzar objetivos de enseñanza-aprendizaje, y este puede potenciarse al presentar los contenidos curriculares asociados con elementos lúdicos como los cinematográficos, especialmente cuando las tareas implican que los estudiantes deban sumergirse en una fantasía en la que sean retados, tal y como se desprende de los resultados obtenidos con la experiencia piloto.

De las dos tareas analizadas parece que la actividad de La anemia falciforme abarca una superficie estadística mayor que El caso Warren, es decir, que la primera parece aprovechar más su potencial educativo que la segunda. Sin embargo, hay que considerar dos factores importantes que pudieran justificar estos resultados. En primer lugar, El caso Warren es una tarea más compleja que requiere de la creatividad del alumnado para resolver un caso práctico. Por tanto, se aproxima a los problemas a los que se verá expuesto el estudiante al acceder a grados universitarios o al mundo laboral, algo a lo que podría no estar acostumbrado si su formación se centra en lo teórico y le hace adquirir un papel pasivo. El problema planteado en La anemia falciforme, aunque también trata de asumir la forma de un caso práctico que implica un proceso de reflexión e investigación, quizás se acerque más al modelo de trabajo habitual de los estudiantes y por ello puede que haya obtenido un mayor éxito en la experiencia piloto. En segundo lugar, hay que considerar que de los estudiantes que participaron en la tarea El caso Warren, sólo una mostró un alto grado de compromiso, mientras que en la tarea La anemia falciforme las dos alumnas lo manifestaron.

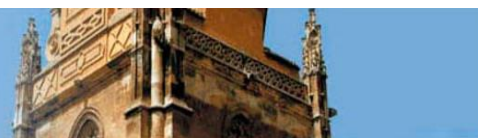
En cualquier caso, debe considerarse que los resultados presentados en este trabajo, que sólo incluyen el análisis preliminar realizado con una muestra muy reducida de participantes, corresponden a una primera iteración dentro de un proceso cíclico de investigación-acción en marcha. En consecuencia, el próximo objetivo de dicha investigación será realizar un estudio más profundo que permita corroborar con rigor la idoneidad del modelo de trabajo propuesto, que parece ser respaldada por las experiencias iniciales analizadas en este artículo.

A pesar del carácter preliminar de sus resultados, tras esta experiencia consideramos que el desarrollo de páginas web 2.0 para la enseñanza de las ciencias bajo un enfoque gamificado debería incluirse entre las herramientas de los docentes de nuestro sistema educativo por su alto potencial didáctico.

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Teachers' perceptions of professional development experiences: an ongoing concern

Percepciones de docentes acerca de las experiencias de desarrollo profesional: una preocupación que continúa

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 06 de diciembre de 2016

Fecha de revisión: 16 de junio de 2018

Fecha de aceptación: 17 de septiembre de 2018

Sanchez, J.E., Williams, S.L., & Ferrara, M.M. (2018). Teachers' perceptions of professional development experiences: an ongoing concern. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 102 – 115.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

Teachers' perceptions of professional development experiences: an ongoing concern

Percepciones de docentes acerca de las experiencias de desarrollo profesional: una preocupación que continúa

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Abstract

Teachers' perceptions of professional development experiences related to process, content, and context were explored to better address leadership preparation needs. Teachers responded to the Professional Development Questionnaire, three demographic variables (teaching experience, Title 1 status, and current grade level) pertaining to the individual, and one open-ended comment field. A total of 327 teachers from a large western school district in the United States responded. The findings indicated that there were no significant differences for the three demographic grouping variables. Overall, results revealed low mean values, indicating that teachers disagreed or strongly disagreed with statements related to their professional development experiences. Teachers also indicated that their own building administrators did not value professional development. Finally, teachers' perceptions of professional development also suggested that professional development topics were irrelevant, and that they were not provided with enough time to integrate topics into their current practice

Resumen

Se exploraron las percepciones de maestros acerca de las experiencias de desarrollo profesional relacionadas con el proceso, el contenido y el contexto, a fin de responder mejor a las necesidades de preparación para el liderazgo. Maestros respondieron al Cuestionario de Desarrollo Profesional, tres variables de agrupaciones demográficas (experiencia enseñando, estado de Título 1, y nivel de grado actual) pertenecientes al individuo, y un campo de comentarios de composición abierta. Un total de 327 maestros de un distrito escolar grande del occidente de los Estados Unidos respondió. Los resultados revelaron que no había diferencias significativas para las tres variables de agrupación demográfica. En general, los resultados revelaron bajos valores promedios, indicando que los maestros estaban en desacuerdo, o fuertemente en desacuerdo con las declaraciones relacionadas a sus experiencias de desarrollo profesional. Los maestros también indicaron que sus propios administradores no valoraban el desarrollo profesional. Finalmente, las percepciones de los maestros de desarrollo profesional también sugirieron que los temas al respecto eran irrelevantes y que ellos no tenían suficiente tiempo para integrar dichas cuestiones en su práctica cotidiana

Keywords

Teachers; Perceptions; Professional development; Principals; Capacity; Questionnaire

Palabras clave

Maestros; Percepciones; Desarrollo profesional; Directores; Capacidad; Cuestionario

1. Introduction

School education leaders face many complex challenges in today's era of accountability and increased level of student diversity. Some challenges are unique and created by today's changes in the way instruction is delivered or how curriculum is framed and selected for the classroom. Teachers are now faced with current demands on how to integrate technology in the classroom, implement state approved Common Core Standards, align learning targets to assessment methods, and build teacher capacity to address multiple areas of school reform effectively. One challenge is time-old but persists is high-quality professional development through teacher support and training (Dana & Yendol-Hoppey, 2008; Joyce & Calhoun, 2010; Killion, 2013). Ironically, this challenge is one that needs to be confronted and challenged. After all, professional development is an essential tool for increasing teachers' capacity related to knowledge, skills, attitudes, and beliefs to successful impact academic outcomes for students (Cohen & Hill, 2000; Dana & Yendol-Hoppey, 2008; Joyce, Weil, & Calhoun, 2015; Quint, 2011).

Teacher professional development largely dependent on administrator support. It is critical that leadership preparation programs provide opportunities for aspiring principals to consider and examine existing needs related to professional development for teachers, including teachers' perceptions of professional development experiences. As such, this study is part of a larger study (Williams, 2014) that explored teachers' perceptions of professional development experiences in response to the Professional Development Evaluation Questionnaire (Guskey, 2000, 2002). Teachers' perceptions of professional development experiences related to process, content, and context were explored to better address leadership preparation needs. Teachers responded to the Professional Development Questionnaire, three demographic variables (teaching experience, Title 1 status, and current grade level) pertaining to the individual, and one open-ended comment field. This study and its findings provide a stronger understanding of existing teachers' perceptions that may help leadership preparation programs support aspiring leaders in how to frame problems related to professional development, consider existing teacher data for exploration, and practice ways to effectively assess and implement professional development within a school leadership role.

2. The role of professional development

Guskey (2000) viewed professional development as an important endeavor central to the advancement of the education profession. He described professional development as a series of processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve student achievement. Guskey advocated that professional development is a process that is intentional, ongoing, and systemic. In addition, he believed that the vast majority of teachers and school administrators are keys to school improvement and are dedicated professionals who work hard under extremely demanding situations. Guskey (2000) highlighted that *"the importance of professional development did not stem from an acknowledgement of deficiencies; rather, it was rooted in the growing recognition of education as a dynamic, professional field"* (p. 30).

The concept of professional staff development has been explored as an essential mechanism to support student learning and achievement. Dana and Yendol-Hoppey (2008) noted that many educators believe teacher learning is an indispensable component of school improvement; the authors suggested that participation in certain kinds of professional development and time spent in those programs are related to gains in student achievement and teacher classroom practices. Fullan (2010) indicated that professional development is necessary in helping staff develop communication, build trust, collaborate, problem-solve, and facilitate skills needed for transformational leadership. According to Fullan (2010), professional development is also needed to help teachers engage in critical analysis of their teaching, better understand how students learn, and make their teaching more student-centered and meaningful to enable students to become active participants, critical thinkers, and life-long learners. Staff development is also important in assisting educators to critically examine and identify key

aspects of a school's culture, which may lead to changes in curriculum, instruction, and student achievement (Fullan, 2010). Lowden (2003) explained that teachers believed that effective professional development was critical for teacher growth and student achievement. Lowden (2003) also reported a strong correlation between teachers' reported implementation of new knowledge and skills in the classroom and the impact on student learning outcomes.

3. A framework for professional development

Guskey (2000, 2002) structured his professional development evaluation on a theoretical framework that included three categories and used six critical levels of evaluation to assess impact. The three categories are consistent with the Standards for Staff Development (National Staff Development Council, 2001). He defined process variables as the *how* of professional development. This includes not only the type and form of professional development but the way these activities are planned, organized, carried out, and followed up. Then, content characteristics refer to the *what* of professional development. Content is the foundation of professional development trainings that incorporates new knowledge, skills, and understandings. This is characterized by participants having a deeper understanding of particular academic disciplines, specific pedagogical processes, or new role expectations and responsibilities. Also included in content characteristics are the magnitude, scope, credibility, and practicality of the change required to implement new knowledge and skills. Finally, context characteristics are the *who*, *when*, *where*, and *why* of professional development.

In addition, to the three major categories, the theoretical framework for professional development evaluation includes six critical levels for gathering information about professional development. These are arranged hierarchically from simple to complex as follows: (a) participants' reaction; (b) participants' learning; (c) organization support and change; (d) participants' use of new knowledge and skills; (e) student learning outcomes; and (f) participants' change in attitudes and beliefs (Guskey, 2000; Lowden, 2003, 2005; Tallerico, 2012). The first level focuses on teachers' satisfaction and reactions to their professional development experience. It is primarily concerned with whether teachers liked the experience. The second level explores the acquisition of new knowledge skills; it is to validate the relationship between what was intended and what was achieved in terms of professional development. It can be used formatively to correct misunderstandings prior to implementation or summatively to clarify problems or difficulties experienced (Guskey, 1997, 2000). The third level provides questions that help analyze organizational support and change in a specific school or district. These include probes to explore teacher perceptions regarding how supportive the district policies are, the strength of leadership in the district, quantity of resources, and the atmosphere in the school and district (Guskey, 2000; Newmann, Smith, Allensworth, & Bryk, 2001).

The fourth level includes questions related to how participants use newly acquired knowledge and skills. Participants are asked whether the new knowledge and skills resulted in a change in their teaching practice and increased student achievement (Guskey, 2000). The fifth level explores the impact on student learning outcomes and can be used to focus and improve all aspects of the professional development progress-design, implementation, follow-up, and continuation (Guskey, 2000). Lastly, the sixth level addresses change in attitudes and beliefs of participants' teaching and learning. According to Guskey (2002), although professional programs differ in delivery there is generally a common purpose – to change teachers' classroom practices, beliefs and attitudes, and improve student learning through such changes. With these potential changes in mind, Lowden (2003) designed the Professional Development Questionnaire that incorporated six critical levels of professional development evaluation as framed by Guskey (2000, 2002).

4. The role of the principal

The desired changes related to professional development need the support and guidance of the school leader. The principal's role is to structure professional development to support the school culture, vision and mission, and ultimate goal of continuous improvement in student achievement. The outcome of professional development for teachers should be improved pedagogical skills that help all students gain essential knowledge and skills as part of life-long learning (Cook, 2015; Darling-Hammond & Richardson, 2009). More importantly, this type of effective professional development is identified by teachers and school leaders as essential for improving overall achievement in schools across the United States (Darling-Hammond & Richardson, 2009). This is an ambitious quest as the vast majority of practicing teachers currently in schools were educated under a different paradigm of instruction and learning (Fullan, 2010; Prothero, 2015; Thompson & Zeuli, 1999).

Currently, organizations such as Learning Forward have created the Standards for Professional Learning and one of the standards is to help administrators establish and sustain effective professional learning, one of which includes leadership. This particular standard specifically indicates a lens on professional development: "*Leadership: Professional learning that increase educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate and create support systems for professional learning*" (Standards for Professional Learning, nd, p. 2). The standard serves as a paradigm shift for school leaders who are charged providing ongoing and meaningful professional development for their school teachers and school staff (Cook, 2015; Zimmerman & May, 2003).

5. Methodology

The study took place in a larger western district, the second largest district in the state with approximately 63,000 students; 54% of the students are from diverse backgrounds and 46% as Caucasian. The district's most recent data profile from 2014-2015 indicated that the high school graduation rates are at their highest, 75%. The district has 64 elementary schools, 14 middle schools, and 11 high schools. There are approximately 200 administrators and 3,700 teachers. For this study, there were 327 teachers who responded to the questionnaire. Of those teachers, their teaching experience ranged from one year to 44 years of experience, the median was 13 years of experience. There were 166 (51%) and 160 (49%) who indicated having 1-13 and 14-44 years of experience, respectively. The teachers' grade levels also varied. The fewest group of respondents included 48 (15%) teachers within an auxiliary level, followed by 130 (40%) who taught at the secondary level, and 149 (46%) taught at the elementary level. For teachers who taught at the elementary levels, including 33 auxiliary teachers, data was collected regarding whether they taught at a Title I elementary school. There were 89 teachers at Title I elementary schools, and 93 teachers at non-Title I school.

Data for this study were collected using an electronic questionnaire available to all teachers in the school district. The questionnaire was distributed after a three-year period of time in the district during which there was a focus on a strategic improvement plan designed to direct and focus personnel to transition into a new phase of educational reform efforts. A section in the strategic improvement plan was devoted to providing appropriate, quality training and professional development to all staff members.

The researchers followed the protocol necessary to conduct this study. Approval was attained from the university's Institutional Review Board and from the school district. The district's chief accountability officer provided deidentified existing data that included the responses from the Professional Development Evaluation Questionnaire, which were then used for the purposes of this study. At the district level, teachers were informed about a questionnaire through the district's web-based weekly newsletter. The invitation seeking teachers' responses to the questionnaire remained on their web-based newsletter for eight weeks. The letter invited teachers to complete the questionnaire, which was available via a hyperlink and housed on the school district's server. A similar invitation to participate in the questionnaire was emailed from

the district officer to certified staff in all schools in the school district, and a total of 327 teachers completed the questionnaire.

5.1. Questionnaire

The Professional Development Evaluation Questionnaire (Lowden, 2003), from which data were attained for this study, is organized into two sections and consists of three major categories for professional development evaluation – process, content, and context. The first section of the instrument focuses on the demographic data, as well as the process and content categories for professional development. The demographic data asks teachers to indicate their total years of teaching experience, their years of teaching within the current district, the grade level they teach, their subject/content area, and whether they are at a Title I or non-Title I school. Then, the process category for professional development evaluation is identified by the first set of questions, which aim to identify teachers' perceptions of how they believe professional development is linked to particular goals and ask teachers to indicate the types of professional development models and delivery methods they have experienced. The next set of questions probe teachers' perceptions about professional development and recent professional development in which they were engaged. Both of these questions also have an open-ended option for teachers to provide additional input.

The second section of the instrument focuses on the third major category for professional development evaluation, which is the context. A total of 40 questions ask teachers to agree or disagree with statements about professional development related to context. Teachers are asked to use a Likert scale with five possible ratings, with 1 = Strongly Disagree, 2 = Disagree, 3 = No Opinion; 4 = Agree, and 5 = Strongly Agree. These questions are the core of the questionnaire and create the six levels of professional development evaluation (see Williams, 2014). The levels and their corresponding questions are as follows: (a) teachers' reaction with Questions 10 – 15, (b) teachers' learning with Questions 16 – 19, (c) organizational support and change with Questions 20 – 24, (d) teachers' use of new knowledge and skills with Questions 25 – 29, (e) student learning outcomes with Questions 30 – 37, and (f) teachers' change in attitudes and beliefs with Questions 38 – 52. As previously noted, there is a hierarchical arrangement to each level, which means each subsequent level provides more meaningful information about teachers' perceptions (e.g., Level 6 is more informative than Level 1). The ratings for each question and within each level provide a rating score and the sum of the levels can be used as an overall evaluation for professional development. An open-ended option at the end of the questionnaire is available for further comment by the teacher respondent.

5.2. Research design and data analysis

A quantitative research design was used as a guide in the analyses of this study. For each of the designated groups in the research questions, statistical analyses were conducted using Analysis of Variance (ANOVA) or *t* tests. Prior to each analysis, Levene's test was used to determine homogeneity of variance, and assumptions of normality were confirmed for the six levels of evaluation and the value for the overall total score of these levels, as attained from teacher responses to the Professional Development Questionnaire. Although the Pearson Correlation Coefficient was calculated by Lowden (2003), Cronbach's alpha was used in this study to assess the instrument's internal reliability. Specifically, the six subscales were analyzed using Cronbach's alpha; this resulted in a value of .842, which indicates strong internal reliability. For the questionnaire in this study, face validity was not assessed, but experts in the field of education and professional development have verified this validity (Lowden, 2003). Finally, the additional comments provided in regard to teachers' professional development experiences were examined in their entirety using content analysis to identify trends and patterns in order to make inferences (Stemler, 2001).

There were three independent variables (i.e., years teaching experience, Title 1 status, and current grade level) and seven dependent variables (i.e., six levels of evaluation scores and a total score of levels) used in this study. The dependent variables were comprised of several questions with a 5-point Likert scale, as previously discussed. A unique set of questions formed

the six levels and, therefore, provided a score for each level. The scores from each level were summed to create an overall total score of the levels. For the purposes of this study, the score ratings attained from the questionnaire were treated as continuous variables and analyses were conducted accordingly. Along with this, the areas of the survey that were open-ended for teacher comments were used to augment the descriptive data. The larger study provides further variable and coding details (see Williams, 2014).

6. Limitations

There are several limitations that were considered in this study. The first limitation is a lack of research on professional development in the district where the current study took place, so there was no comparative data to help determine whether there had been any changes in teachers' perceptions in professional development. Second, this study did not include a direct measurement of student achievement, which would have given the study another dimension. Third, inasmuch as multiple test scores were used, the statistical probability of a Type I error is increased (Green & Salkind, 2008). Fourth, this study was conducted in a large school district; however, the results were limited to those who responded and cannot be generalized.

7. Results

7.1. Descriptive findings

7.1.1. Process: questions 1-7

In analyzing teacher responses related to professional development process and goals, Questions 1-5 provided information about their views. The yes response with the highest percentage (80%) was in teachers indicating they received training in teaching English Language Learners. The next highest percentage was in being aware of the district's professional development plan (68%), as well as believing that their professional development plan is linked to school improvement and student achievement (68%). At the same time, a number of teachers (37%) indicated they were not sure if the professional development plan was related to the teacher evaluation process. Similarly, a number of teachers (42%) indicated that they had not received training in teaching students with special needs.

Question 6 asked teachers to identify how professional development was offered. There were 91% of teachers who indicated they participated in professional development during an early-release day. In addition, 73% also said they participated in professional development during the beginning of the academic school year. The next closest response was in professional development being offered in the evening, with 63% of the teachers choosing this option. However, the lowest response in professional development opportunities was during their lunch hour (3%).

Question 7 sought information about the type of activity in which they had participated for professional development within six major types as follows: (a) individually guided staff development, (b) observation/assessment, (c) involved in development/improvement process, (d) training, (e) inquiry, and (f) courses. The highest response was in the category of observation/assessment, where 91% identified their classroom evaluation by their administrators and the formal feedback as the type of professional development delivery. The next was within training, which reflected half-day or full-day workshops or seminars (90%) and presentations and demonstrations (82%). Courses were also selected as a prime type of professional development, with 80% of the teachers selecting graduate courses as a means of professional development. Interestingly, only 49% selected guided practice, 48% selected peer study groups, 43% selected peer observation, and 42% identified mentoring as professional development formats in which they had participated.

7.1.2. Content: questions 8-9

For Question 8, teachers could select multiple options to identify who was involved in the decision-making process for professional development. Many teachers (68%) responded that the district level administrators or the building level administrators were making decisions about the professional development content offered. Some teachers (34%) indicated that they decided the content for professional development, while other teachers (32%) indicated it was a combination of individuals who were part of the decision making process. Grade level or department chairs (22%) and a Professional Development Committee (20%) received a low percentage, indicating less involvement in the content decision-making for professional development in the district. The respondents were also given an open-ended option of *other* if they wanted to more specifically address who was involved in the decision-making process; there were 23 (7%) teachers who selected this option. However, their comments indicated that they did not know who was involved in the decision-making process for identifying the topics of teachers' professional development opportunities. In Question 9, 258 of the 327 respondents (79%) listed three professional development opportunities offered by the school district. Most notably, 91 of teachers (28%) specified professional development participation opportunities were related to academics, curriculum, and training for the Common Core State Standards (CCSS). The next highest response included 74 teachers (23%) who listed opportunities related to learning about instructional models. There were 19 teachers (6%) listed a topic related to assessment and data.

7.1.3. Context: questions 10-52

Questions 10-52 were examined in Section Two, which represented the hierarchical Levels 1-6 of the professional development evaluation. Level 1 responses were in regard to teacher's reactions about professional development in their district. There were six statements and the highest response was in the area of time well-spent ($M = 3.03$, $SD = 1.23$), while the lowest one was in regard to professional development being non-threatening ($M = 2.21$, $SD = .894$). Level 2 included four statements that aimed to identify whether a new skill or knowledge was learned as a result of the professional development. The highest rating was in learning the theory behind the practice ($M = 2.72$, $SD = 1.07$), while the lowest rating was in learning practical instructional strategies ($M = 2.35$, $SD = 1.04$). Level 3 represented five statements related to organizational support and change efforts that occurred through professional development in the district. The statement with the highest rating was related to professional development being recognized as extremely important by parents ($M = 3.37$, $SD = .896$), followed by being recognized as extremely important by colleagues ($M = 3.22$, $SD = 1.11$), and having a positive impact on the culture and climate of their school ($M = 3.03$, $SD = 1.17$). The response with the lowest mean ($M = 2.17$, $SD = .874$) was in regard to whether professional development in the district was recognized as being extremely important by building administrators.

Level 4 included five statements related to using new knowledge gained from the professional development. This addressed whether teachers applied, implemented, and experimented with new instructional strategies and classroom practices. Results indicated that teachers rated their commitment to new teaching strategies ($M = 2.69$, $SD = 1.02$) and long-lasting changes in their teaching ($M = 2.66$, $SD = 1.04$) among the highest means. The statement with the lowest mean ($M = 2.18$, $SD = .943$) was in regard to whether teachers experimented or practice the new instructional strategies when returning to their classrooms. In Level 5, teachers responded to eight statements that aimed to identify how teachers believed professional development generally impacted student learning. The statement with the highest mean ($M = 3.02$, $SD = .931$) was in regard to student increases on state or district assessments. Yet, the statement with the lowest mean ($M = 2.46$, $SD = .974$) was in regard to whether professional development had a positive impact on students' learning. Finally, Level 6 included 15 statements, which were about teachers' changes in attitudes and beliefs about teaching and learning. The highest mean ($M = 2.37$, $SD = 2.04$) was within teachers' attitudes and beliefs changing when professional development connects to district needs and overall school improvement. The statements with the lowest means were in regard to whether teachers' professional development experience was meaningful to them ($M = 1.86$, $SD = 1.03$) and whether teachers learned practical instructional strategies ($M = 1.83$, $SD = .936$).

It is also useful to consider a more holistic view and look at the mean of means for each of the six levels. These are presented in Table 1. The highest mean rating was within Level 3, which measures organizational support and change efforts. However, the area was the lowest mean rating was within the Level 6, which measures the greatest impact of professional development – student learning. Overall, these mean ratings further revealed that teachers were far from agreeing or strongly agreeing with positive impacts of professional development experiences. When examining means unique to each statement or the means for each level, all values were reflective of disagreement or no opinion. More specifically, none of the responses indicated positive agreements with statements related to their professional development experiences.

Table 1.
Level 1-6 Mean of Means

Dependent Variable	<i>M</i>	<i>SD</i>
Level 1	2.65	.87
Level 2	2.51	.94
Level 3	2.81	.61
Level 4	2.46	.88
Level 5	2.79	.89
Level 6	2.10	.88
All Levels (1 – 6)	3.16	.86

At the end of the questionnaire, Question 53, was an open-ended option for respondents to write comments concerning their professional development experiences offered by the school district. There were 107 comments provided; of those comments, 51 teachers indicated professional development was irrelevant, 16 teachers said they lacked time to implement any learnings, and 14 teachers indicated they lacked input in the process. While most comments clearly fit into these three themes, there were 26 teachers whose comment did not seem to fit into these themes; the comments were generic or unrelated to professional development.

7.2. Research question 1

Independent samples *t* tests were conducted based on 326 responses for years of teaching experience. Teachers with 13 or less years of experience were $n = 166$, while those with 14 or more years of experience were $n = 160$. These two groups were used to address the following question for this study: When groups are established by total number of years teaching experience, are there group differences on mean scores and total mean scores in each of the six levels of evaluation?

For this question, the dependent variables were Levels 1 – 6 and All Levels. Of note, during the data screening process, square root variable transformations to approximate or meet normality (Mertler & Vannatta, 2013) were conducted for Levels 1, 4, 5, and the All Levels variables. However, Levels 2 and 6 were variables that necessitated a logarithm transformation to also meet the normality assumption, as both of these had a substantial, positive skew (Mertler & Vannatta, 2013). Level 3 did not require a transformation, as the assumption of normality was met. These variable values were used for Research Question 1, as well as subsequent questions. In analyzing the data for Research Question 1, Levene's test was significant ($p = .027$) for Level 4; thus, homogeneity of variance was not met, so a Mann-Whitney *U* was conducted on this variable. After conducting the Mann-Whitney *U* test for Level 4, results were not significant ($M_{\text{Rank, 13orLess}} = 165.23$, $M_{\text{Rank, 14orMore}} = 161.71$, $U = 12,999$, $z = -.34$, $p = .734$). Therefore, there were no group differences between the two groups of years of teaching experience when examining Level 4. The results of *t* test analyses for all other levels are

presented in Table 2. Results indicated there were no group differences between the two groups of years of teaching experience for any of the levels and the total score of levels.

Table 2.

Transformed Data, Independent Samples *t* Tests for Research Question 1

Dependent Variable	<i>M</i> 13orLess	<i>M</i> 14orMore	<i>t</i>	<i>p</i>
Level 1	4.05	4.069	-.202	.840
Level 2	1.29	1.29	-.085	.932
Level 3	28.42	27.74	.324	.314
Level 5	4.80	4.76	.414	.679
Level 6	1.60	1.60	.451	.652
All Levels (1 – 6)	10.90	10.82	.511	.610

Note. *p* > .05 indicates no statistical significance found. Based on transformed data.

7.3. Research question 2

Independent samples *t* tests were conducted using 182 respondents; elementary teachers from Title 1 schools were *n* = 89 and non-Title 1 schools were *n* = 93. As with Research Question 1, the transformed values were used; the dependent variables were Levels 1 – 6 and All Levels. For Level 2, Levene's test was significant (*p* = .013), thus homogeneity of variance was not met, so a Mann-Whitney *U* was conducted on this variable. After conducting the Mann-Whitney *U* test for Level 2, results were not significant (*M*_{Rank, 13orLess} = 92.07, *M*_{Rank, 14orMore} = 90.96, *U* = 4,088, *z* = -.145, *p* = .885). The results of the *t* test analyses for all other levels are described in Table 3. There were no group differences between the elementary teachers with Title 1 and non-Title 1 for any of the levels and the total score of levels.

Table 3.

Transformed Data, Independent Samples *t* Tests for Research Question 2

Dependent Variable	<i>M</i> Title I	<i>M</i> non-Title I	<i>t</i>	<i>p</i>
Level 1	4.12	4.08	.468	.640
Level 3	28.15	28.33	-.200	.842
Level 4	3.63	3.63	.043	.966
Level 5	4.81	4.84	-.285	.776
Level 6	1.61	1.60	.357	.721
All Levels (1 – 6)	10.97	10.93	.147	.883

Note. *p* > .05 indicates no statistical significance found.

7.4. Research question 3

A one-way ANOVA for Research Question 3 was conducted using the complete dataset of respondents (*n*_{Elementary} = 149, *n*_{Secondary} = 130, *n*_{Auxiliary} = 48). All assumptions were met and one-way ANOVAs were conducted based on the transformed values. The transformed mean values of the three categories were in proximity to one another and there were no differences found among the three categories and professional development levels, as provided in Table 4.

Table 4.
One-Way ANOVAs for Research Question 3

Dependent Variable		Sum of Square	df	Mean Square	F	p
Level 1	Between Groups	1.609	2	.805	2.047	.131
	Within Groups	127.367	324	.393		
	Total	128.976	326			
Level 2	Between Groups	.012	2	.006	.946	.946
	Within Groups	2.011	324	.006		
	Total	2.023	326			
Level 4	Between Groups	1.493	2	.747	2.109	.123
	Within Groups	114.702	324	.354		
	Total	116.195	326			
Level 3	Between Groups	46.604	2	23.302	.633	.532
	Within Groups	11925.634	324	36.808		
	Total	11972.239	326			
Level 5	Between Groups	2.305	2	1.153	2.126	.121
	Within Groups	175.659	324	.542		
	Total	177.964	326			
Level 6	Between Groups	.070	2	.035	2.003	.137
	Within Groups	5.647	324	.017		
	Total	5.717	326			
All Levels	Between Groups	7.819	2	3.910	1.801	.167
	Within Groups	703.239	324	2.17		
	Total	711.58	326			

8. Discussion

Guskey (2000) defined process variables as the *how* of professional development. This includes not only the type and form of professional development but also the way these activities are planned, organized, supported, etc. Results of this study revealed that related to the process of professional development, 68% of teachers seemed to be aware of goals and how professional development is linked to school improvement and achievement. While this is a majority, it still leaves 32% of teachers who responded the contrary. Also, 57% of the teachers indicated they believed that professional development is related to teacher evaluation; this reflects 43% of teachers who did not know or were unsure about the connection between professional development and their evaluations. Yet, researchers (Guskey, 2000; Darling-Hammond, 2013; Elmore, 2004; Scheicher, 2016; Shakman, Zweig, Bocala, & Balley, 2016; Smylie, 2016) have indicated that the link between professional development and evaluation is a reflection of a school leader's ability to observe a teacher applying new knowledge and skills acquired from the professional development experiences.

Another interesting area related to process was the type of professional development activities or format in which teachers had participated. Many indicated their format was primarily via workshops/seminars and through classroom observation/assessment by an administrator, but the activities with the lowest percentages were the collaborative formats of professional development. Thus, teachers reported an overall lack of peer-to-peer collaboration and

mentoring opportunities for personal improvement. At the same time, 80% of the participants indicated that they received professional development by taking graduate courses through the university. This points to the importance of district-university partnerships needed to effectively support professional development opportunities.

In reference to the *what* of professional development, content characteristics are the magnitude, scope, credibility, and practicality of the change required to implement new knowledge and skills. In this study, very few teachers indicated they had input into the decision-making process for professional development. Yet, the benefits of shared decision-making efforts have been well-documented (Dana & Yendol-Hoppey, 2008). In addition, very few teachers (6%) listed training opportunities for assessment and data. This is alarming because data-based decisions can drive instruction in order to increase student achievement (Dana & Yendol-Hoppey, 2014; DuFour, DuFour, Eaker, & Karhanek, 2004; Schmoker, 2006).

In addition to process and content, the *who*, *when*, *where*, and *why* of professional development define context characteristics. The context involves the organization, system, and where the new understanding will be implemented. Guskey (2000) suggested that an important part of context may be the pressure created by a district's high expectations for the learning of all students. Unfortunately, for each of the six levels related to context, teachers' responses reflected low, negative ratings. Also, teachers did not seem to believe their time was well-spent or that they were learning practical instructional strategies. More concerning is that teachers disagreed that professional development was valued by their own building administrators. With teachers believing that their own leaders did not value professional development, it seems reasonable that teachers did not believe they had long-lasting changes, did not return to the classroom and practiced new instructional strategies. And ultimately, teachers did not believe they had professional development that was meaning meaningful or useful for impacting student achievement. These beliefs were further emphasized in the final open-ended statements, in which 48% of the comments revealed that the topics during their professional development experiences were irrelevant.

It is critical to note that none of the inferential tests were significant. Ultimately and across all levels, teachers rated their professional experiences quite poorly; overall, this removed the opportunity to find potential differences because teachers consistently and similarly evaluated their professional development experiences with low ratings. Consequently, the results of the descriptive findings and the lack of significant findings in the inferential tests for three research questions do not appear to support Guskey's (2000) theoretical model of teacher change that is guided through professional development and overseen by school leadership.

9. Conclusion

The findings in this study reveal an ongoing concern. Teachers are not participating in high-quality professional development experiences. Even more, it is critical to acknowledge that teachers did not believe professional development was valued by their school leaders. Lai (2015) indicated that leaders should be able to develop school capacity for change; she affirmed the need for leaders to foster teacher learning through the decision-making process, promote ongoing connections through participation, and help align various demands and circumstances. Our findings revealed, however, that teachers had little to no input in the decision-making process. Cranston (2016) found that the collaborative process can help create and sustain professional learning. Furthermore, teachers indicated primarily getting professional development in the format of a workshops and presentations. Certainly, *"While there is still a time and place for centralized workshops, much of the professional learning takes place at the school and is directed by the needs of educators and students"* (Cranston, 2016, p. 32). Regrettably, teachers in the current study indicated the topics offered were irrelevant. Those planning professional development should seek participant input and needs (Joyce & Calhoun, 2016).

In this study, despite a district-embedded policy to implement weekly, Wednesday early-release days for professional development by principals, results were all too grim. There continues to be a need for effective principals to build the capacity of teachers and positively impact student achievement. Leadership preparation programs can serve to fill that need. Indeed, the majority of teachers in this study identified university coursework as a format of professional development. Leadership programs can proactively address and provide opportunities to develop teacher leaders, as well support current and aspiring school leaders' needs related to effective and sustained professional development. With strengthened professional development practices as a focus in leadership preparation programs, teachers and principals can continue to enhance learning outcomes for all students.

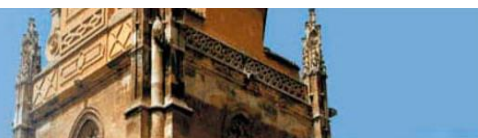
In addition, principals must work to build teacher leadership within each building. The purpose of teacher-as-leader programs, ones that are now emerging in districts to build capacity of teachers as mentors and co-teachers, needs to be a commonplace practice in schools. The principal, in such a case, serves as a member of the professional team, offering feedback to teacher ideas and providing support.

Overall, the study helps to bring out the teacher voice, one that needs to be respected if heard. A model for professional development needs to be reconsidered – one that includes teachers' voices and teachers as leaders, paired with the support of school leadership. Ultimately, professional development needs to be centered at the local level with multiples voices and levels of expertise.

10. References

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Implementing critical pedagogy in EFL contexts: closing the gap between theory and practice

Implementación de la pedagogía crítica en los contextos de EFL: cerrar la brecha entre la teoría y la práctica

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 11 de febrero de 2018

Fecha de revisión: 11 de septiembre de 2018

Fecha de aceptación: 04 de octubre de 2018

Marzi Suzani, S. (2018). Implementing critical pedagogy in EFL contexts: closing the gap between theory and practice. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 116 – 124.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

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Implementing critical pedagogy in EFL contexts: closing the gap between theory and practice

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Abstract

As a result of post-modernism in the present world, a dramatic recent shift has been the emergence of offshoots such as initiation of critical pedagogy in academic settings. Besides, there is a shift toward a critical era that defines a new relationship between teachers and theorizers, which is pushing teachers towards the world of skills, knowledge, and autonomy. Considering the increasing importance of the critical pedagogy, this paper firstly provides basic concepts and objectives of critical pedagogy and how it has emerged, then it draws on the basic tenets of this theory and offers how it can be adopted to the field of language education in EFL contexts. Finally, it gives some practical applications for implementing this theory in EFL classrooms, supporting Crooks' (2010) argument that more practical examples of critical pedagogical EFL literature need to be reported

Resumen

Como resultado de la posmodernidad en el mundo actual, un cambio dramático reciente ha sido el surgimiento de ramificaciones como el inicio de la pedagogía crítica en contextos académicos. Además, hay un cambio hacia una era crítica que define una nueva relación entre profesores y teóricos, que está empujando a los maestros hacia el mundo de las habilidades, el conocimiento y la autonomía. Teniendo en cuenta la creciente importancia de la pedagogía crítica, este documento en primer lugar proporciona conceptos básicos y objetivos de la pedagogía crítica y cómo ha surgido, luego se basa en los principios básicos de esta teoría y ofrece cómo se puede adoptar en el campo de la educación de idiomas en Contextos EFL. Por último, ofrece algunas aplicaciones prácticas para implementar esta teoría en las clases de EFL, lo que respalda el argumento de Crooks (2010) de que se deben informar más ejemplos prácticos de literatura de EFL pedagógica crítica

Keywords: Critical Pedagogy; EFL Contexts; Post-modernism

Palabras clave: Pedagogía crítica; Contextos EFL; Posmodernism

1. Introduction

Based on Kumaravadivelu (2006), the post-modern era defines a new relationship between teachers and theorizers, which helps teachers move towards the world of skills, knowledge, and autonomy. In addition, there is a dramatic shift in academic settings as a result of the emergence of offshoots of post-modernism such as initiation of critical pedagogy which is considered as a flexible, dynamic and open-ended teaching concept, and is different from any traditional approaches of language teaching in that it highlights that society, politics and education system have an important effect on language teaching.

Brazilian educator and theorist Paulo Freire's philosophy of education relates not only to the critical or radical education of earlier thinkers, but also to the modern Marxist and anti-colonialist philosophers. Freire promoted critical literacy skills among the socially oppressed Brazilian farmers, addressed ways in which minorities had been marginalized, and preached the ways in which education can give people tools to construct better lives and to participate more fully in determining their own destinies. Freire's (1970) problem-posing model of education strived for empowerment as an aim of education and he also attacked the traditional education which presumes learners as empty agents who receive knowledge from teachers.

A fundamental aspect of critical pedagogy is to overcome unfavorable life situations by raising awareness of the power relations embedded in society. As commonly argued by critical discourse analysts, the reason for minority marginalization is due to the power imbalance in society. Auerbach (1995) explains that power is unevenly and unfairly distributed in society, and the dominant classes exercise power through coercion and through consent. For these reasons the oppressor and the oppressed will always exist. As Giroux (2001) explains, critical pedagogues theorize that educational institutions are in fact a part of societies with unequal distribution of power, that they are political sites and are not neutral, and that therefore they tend to reflect and reproduce societal power imbalance.

Not only should language teachers consider the sociocultural reality that influences identity formation in the classroom, but also should separate the linguistic needs of learners from their social needs. In other words, to satisfy their pedagogic obligations, language teachers need to satisfy their social obligations, and they will be able to reconcile these seemingly competing forces if they *"achieve a deepening awareness both of the sociocultural reality that shapes their lives and of their capacity to transform that reality"* (van Manen, 1977, p. 222). On the other hand, Kumaravadivelu (2001) points out the participants' experiences have *"the potential to alter pedagogic practices in ways unintended and unexpected by policy planners, curriculum designers, or textbook producers"* (p. 543).

Accordingly, there is increasing concern of the importance of the critical pedagogy for foreign language learning, and understanding EFL teachers' mindsets and attitudes on critical pedagogy can play a crucial role in the effect of this revolution on the teaching and learning processes. However, it seems that some EFL teachers would rather mostly continue to use the old approaches and methods in the educational settings, and the critical pedagogy principles are insufficiently used. Given the significance of critical pedagogy in the current English language teaching debate, the current study aims to explicate on the concept and aims of critical pedagogy and explain basic tenets of critical pedagogy and how to implement it in EFL contexts like Iran.

2. Background

The most prominent educational theory which should be studied in order to understand the historical background of critical pedagogy is progressivism. Darling and Nordenbo (2002) summarize the five main themes of progressivism to be the following: a criticism of traditional education, a new understanding of the conception of knowledge, a new understanding of human nature, a democratic education, and the development of the whole person.

"Progressive" educators believe that knowledge should be based on the child's natural interest and curiosity, and that traditional schooling does not serve the child's needs and interests. Progressive educators see humans as natural learners. This fundamental theory is integrated by identifying a mismatch between what children actually want to learn and what the traditionalists insist that they ought to learn, with the belief that traditional schooling is unsatisfactory. Crooks (2010) explains that understanding Dewey, as a well-known figure in the evolution of progressivism, is important in order to recognize and acknowledge the historical tradition and practice of critical pedagogy. Dewey emphasized learning through activities rather than formal curricula, and he opposed authoritarian methods. His left-wing social reconstructionist theories and works are said to be responsible for the change in pedagogy that began in the United States early in the 20th century as emphasis shifted from the institution to the student (Darling and Nordenbo, 2002).

Various free schools and alternative schools were inspired by the progressive, anti-authoritarian educational theory during the mid 20th century. Among institutions to put the theory into practice was A.S. Neill's Summerhill School. Summerhill School is a pioneering, co-educational residential school which was founded in 1921 as the very first 'free school' in the world. 'Free' refers to the personal freedom of the children, as the school provides freedom, equality, and happiness after acknowledging that a child is innately wise, realistic, and capable of self-government and democracy (Neill, 1996).

In the same vein, Guijarro Ojeda and Ruiz Cecilia (2013) in their study on the perceptions of Spanish EFL trainee teachers in the classroom pursued to know how EFL teacher trainees perceive the introduction of queer issues within their teaching practices. This qualitative study was conducted at the University of Granada (Spain) with ten would-be teachers who were in their final year of university studies and had completed their school practice period. To underpin the research, they analyzed the postulates of queer theory for the pedagogical field, some of the Spanish educational foundations regarding gender, and the roles played by teachers to implement these practices. It was concluded that developing multicultural learning is not just a matter of acquiring cultural knowledge, but it rather implies changing attitudes and skills on behalf of language teachers. Concepts, procedures, and attitudes contained in queer discourses must be systematically observed, practiced, and discussed. Furthermore, teacher training should incorporate queer discourses as an integral part of their training in order to have a beneficial effect on social education and moral development.

3. Critical pedagogy in ESL context

With the understanding that society is in fact unequal and unfair, critical approaches to second language teaching focus on the relationship between language learning and social change. English as a Second Language (ESL) educators who believe in critical pedagogy find it meaningful to adapt the theory of critical pedagogy into their curriculum and syllabi especially since ESL teaching mainly deals with racial and language minorities (i.e. immigrants and foreign students). Studies on second language learner identities (i.e. Norton, 2000; MaKay and Wong, 1996; Miller, 2003) indicate that some second language learners, without social, communicative, and linguistic competencies, and often with damaged identities, face hardships living in a new country. Language teaching and learning must be linked to the goals of educating students, to understand why things are the way they are and how they got to be that way (Simon, cited in Morgan, 1998). Norton and Toohey (2004) remind second language teachers to keep in mind that language is not simply a means of expression or communication; rather, it is a practice that constructs and is constructed by the ways language learners understand themselves, their social surroundings, their histories, and their possibilities for the future. When the language classroom can be a place where students understand their own identities and their own society, language learning can be empowering. Critical ESL pedagogy is the "*pedagogy of hope*" (Freire, 1992).

4. Functions of ESL critical pedagogy

ESL critical pedagogy functions with the basic theory that materials and approaches should be relevant to the social, political, and cultural conditions of each group of students. Topics should be locally situated and should meet learner needs in the society which they live in. It is also important to find a subject matter that provides meaningful content for lessons. Discussion topics such as ecology, gender roles, changing social identity, and employment equity are often valid and appropriate topics for ESL classrooms (Morgan, 1998). It is often emphasized that critical pedagogy is about 'finding possibilities of articulation' rather than the 'medium of voice' (Pennycook, 2001). In other words, it is more important to teach students the way to claim their rights in society than to teach them how to speak and write fluently and accurately.

Problem-posing and rights analysis are considered the most crucial aspect of the syllabus. By posing problems regarding the status quo, and including social, political and local issues that concern students, they are encouraged to be aware of the society they live in. Awareness of the issues promotes the participation in society, community, and politics. Participation in communities where language and racial minorities are often marginalized will, in fact, empower ESL learners as a result.

5. Critical pedagogy in EFL context

While educators in the fields of literacy education, ESL, and English for Academic Purposes (EAP) have discussed a large number of articles and accounts of the actual implementation of critical pedagogy (e.g. Norton and Toohey, 2004; Benesch, 2001; Auerback, 1995), much less has been reported in the EFL context, as critical pedagogy has been dismissed as culturally inappropriate especially for the East Asian contexts (Crooks 2010). One of the few studies conducted in an EFL context is reported by Shin and Crooks (2005). The study investigated Korean high school students' reactions to critical dialogues and non-authoritarian interactions with teachers. The study result showed that students were not resistant to the materials containing critical topics, and that East Asian students are capable of handling critical approaches.

Perez Valverde and Ruiz Cecilia (2014) in their paper entitled "*The development of FL teachers' professional identity through the production of narratives*" presented a pioneering teacher training model based on the development of teacher identity. They examined the planning and steps carried out in the implementation of a research project financed by the Spanish Ministry of Science and Innovation (Spain). The first phase focused on the trainees' own narratives; in addition, the researchers used questionnaires, interviews, and held weekly seminars to elicit information from a multifaceted point of view. The results, having profound implications for studies of teacher training, showed agreement with theoretical predictions and matched former studies outcomes. Also, the results showed evidence in the development of participants' critical thinking and reflective capacity.

On the other hand, Ruiz Cecilia (2012) in his study aimed to prepare would-be EFL teachers to teach in culturally and linguistically diverse backgrounds. Based on the study, would-be teachers should be most aware of the importance of cultural systems as a means to understand peoples' behavior; also, a multicultural approach to education is essential to engage children of all cultures in learning and to prepare students for the diverse and global society that will be their adult world. Ruiz Cecilia (2012) concluded that developing a heightened sensitivity to and an understanding of people from various cultures and traditions is a basic goal of education for our children. Would-be teachers need to be directly trained in this issue since they play an important role in the education of children at schools. They have to fight against cultural stereotypes and teach them to look through the eyes of many children. Thus, we have to empower them to be cross-culturally minded, to critically analyze cultural misunderstandings, and to take action to solve these problems. In other words, teachers should help children to live in a diverse society and strive for common goals toward peace. All this can be a reality if we foster dialogical tools in the classroom and bring their voices into interaction with others' voices.

In Iran, Fathi, Ghaslani, and Parsa (2015) investigated the relationship between the extent to which Iranian English teachers show willingness and conformity to principles of post-method pedagogy and the degree of their reflection in their classrooms by using questionnaires. The result showed a meaningful positive relationship between the post-method mindsets of the participating teachers and their reflection in teaching. Also, based on the results, the researchers concluded that the five elements of teacher reflection can be related to the three post-method components in terms of the nature and the domain of the constructs.

One might ask if EFL learners who choose to learn an optional language, or those who can afford tertiary education, really need to be “*empowered*” so that they can “*overcome their unfavorable situation*.” EFL learners are quite different from ESL learners, as many fall into the category of future bilinguals in an elite category. Elite bilinguals, as Yamamoto (2001) explains, are generally highly educated individuals who choose to become bilingual and who seek out either formal classes or contexts in which they can acquire a foreign language. They are likely to continue to spend the greater part of their time in a society in which their first language is the majority or societal language. Yet within the EFL context, learners also come from different backgrounds of gender, sexuality, social classes, and the struggles within micro-relations of power always exist. Moreover, when the learners are indeed the elite members of the society who exercise power, critical pedagogy could serve an important role in education as the language learning could be a tool for them to understand how they came to possess societal power, how to shift that power to the less-powerful, and how to exercise their influence in a right manner to make the world a better and more equal place. EFL critical pedagogy can be the “*pedagogy of possibility*” (Simon, 1992).

Crooks (2010) strongly argues that more reports of the actual implementation of EFL critical pedagogy are needed. Increased sensitivity to diversity, to different types of oppression, is likely to make radical pedagogical initiatives more relevant in a variety of classrooms, especially in EFL contexts.

6. Application of critical pedagogy in EFL context

This section briefly lists the application of EFL critical pedagogy at a university classroom in Shiraz, Iran as an EFL context. It is noteworthy that critical pedagogy does not neglect nor replace well-developed teaching methods. Rather, it adds critical flavor to the existing textbooks and everyday instruction, often subtly. The aim is, thus, not to educate learners to be radical and anti-authoritarian, but to be aware of diversity, witness, and experience an example of power-shifting, and hopefully take these ideas outside of the classroom. In this vein, critical pedagogy is a grass-roots activity with the hopeful belief that if a teacher can change the classroom, students can change the world.

7. Negotiated syllabus and attendance policy

One way to start a new semester with an activity based on critical pedagogy is to have students decide their own class policies. When an instructor has some freedom in syllabus design and class policy making, she/he may opt for a negotiated syllabus. The negotiated model differs from other syllabi in that it allows learner participation in selection of content, mode of working, ways of working, and assessment (Clarke, 1991). In the researcher's sophomore classes that are not coordinated with other sections, the researcher of this study allowed the students to decide on their own attendance policy, depending on their previous experience and maturity. Also, this can provide a model (i.e. attendance policy from another class) and have students discuss in small groups whether or how they want to alter it. After a group discussion, they select a class discussion leader and finalize the policy. The teacher just sits in the back of the classroom, takes notes and speaks only when a direct question is raised.

The purpose of this activity is for students to take full responsibility in the policy making process and experience the traditional teacher-student power shift from the very beginning of the

semester. By-products of this process are the students' realization of their responsibility as college students and the meaning of democracy in education. Another way to accomplish the same goals is to implement self-evaluation as a part of student assessment, especially if the students are graded on a presentation or a portfolio. This ensures student participation in the grading process, sharing what is traditionally a non-negotiable authoritarian power.

8. Materials and course books selection

Materials and Course book selection immensely affects the topics to be covered and tasks to be done in the classroom. Although they are not necessarily based on the theory of critical pedagogy, many course books nowadays promote critical thinking (e.g. Active series by Sandy and Kelly, 2009) and cover controversial topics and social/ global issues (e.g. Impact Issues series by Day, Shaules, and Yamanaka, 2009: *Stimulating Conversation* by Goodmacher, 2008).

When selecting a course book, attention ought to be paid to the characters and the illustrations in the books. There should be non-native speakers of English using English, and there should be diversity of characters in terms of race, culture, gender, handicaps, age, and families such as nuclear and extended, single or divorced parents as well as childless and reconstituted families. Inclusion of rather unique and “*different*” people works against reproducing the social norms of marginalizing them.

Another way to implement critical pedagogy and be fully involved in critical dialogues with the students is to develop one's own material. Instead of using a course book for an advanced discussion course, students and teacher can select social/global issues that concern them, read articles on the topics, and discuss the societal power relations. With step-by-step explanations and multiple examples, it is possible to raise an issue, critically analyze the power relations embedded in society, discuss how that power is reflected and reproduced in the community, pose problems, and come up with at least one realistic and doable action that the student can take.

9. Providing supplemental materials

Even with traditional course books selected for four-skill-courses, the practice of critical EFL pedagogy can be included in everyday lesson plans. Teachers should ask themselves if they are not representing an inequitable society and its status quo when providing supplemental materials, visual aids and example sentences. Teachers should also pay extra attention to the quality and quantity of the kind of input that the learners are provided. For example, “*she*” can be a pilot and “*he*” can be a nurse in example sentences and flash cards. If a listening component only features a stereotypically dichotomized “*man*” and “*woman*” as defined by traditional gender roles, a teacher could switch the roles and add more variation of untraditional gender orientations where appropriate and possible. The goal is not to take up the class time with the discussion of the social issues, but to intentionally include the otherwise marginalized groups of people.

10. Conclusion

In the present post-modern world, the term “*critical pedagogy*” is more frequently mentioned in the field of EFL, and hence, there are more EFL teachers who tend to actively promote and practice critical and radical topics such as gender education, radical feminist pedagogy, global issues, and critical thinking, as seen among the members of some special interest groups (e.g., gender awareness in language education and global issues in language education). When the theory of EFL critical pedagogy becomes more widely known by like-minded teachers, this powerful theory could unite those educators as critical pedagogues. When more educators report and share their classroom ideas, materials, and syllabi as examples of practical EFL

critical pedagogy, the power of a supportive community can, as a result, empower the teachers as well.

As teachers' mentalities towards the critical pedagogy play an important role in the effect of this revolution on the teaching and learning processes, the present study aimed to probe the implementation of critical pedagogy in EFL contexts in order to bridge the gap between theory and practice. In this regard, it comes up with the conclusion that empowerment and betterment of the society should be objective goals of every classroom, especially the language classes. In the same vein, Chuck Sandy, textbook author and language teacher, commented in his interview:

"By definition, teachers are agents of change, and true education in any real, transformative sense is radical by nature. It's our job to wobble systems, to gently incite personal revolutions within our students, and to rebel against educational practices and ideologies which lessen anyone's chance at becoming more than he or she is. To say so in such terms is simply to put into words what all good teachers instinctively know and what most students instinctively recognize when they encounter such a teacher -- and I mean, here, a teacher in any field, in or out of school, foreign or not-so-foreign, with a course book or without any books at all" (ELT Journal, 2011).

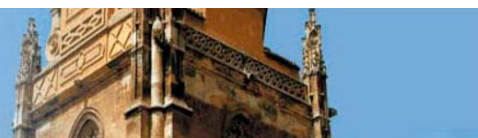
What's more, EFL critical pedagogy can be altered, appropriated and applied to classrooms of various levels and in various contents, from a fully involved critical discussion course to a coordinated four skill class with little flexibility in syllabus design, with a course book or without any books at all. When students understand social power, experience the power-shift, and learn to be sensitive and inclusive of diversity, an EFL classroom can be a learning community that leads to empowerment. The practice of EFL critical pedagogy is a grass-roots activity for the betterment of the community and the wider society. In this regard, EFL critical pedagogy can be a pedagogy of change. Accordingly, there is need to listen to teachers' voices in understanding classroom practice (Richards, 1996), and as aptly Hargreaves, (1994) and Prabhu (1992) maintained teachers' performance in class ought to be shaped by their "attitudes" and "minds". Additionally, as Crandall (2000), believed the dramatic shift from the method era to post-method era indicates "a shift from a positivist-oriented perspective to a constructivist-oriented one and a shift from transmission, product-oriented theories to process-oriented theories of learning, teaching, and teacher learning" (pp. 34-35).

Findings of research on critical pedagogy in EFL contexts can have a number of implications for theorists, policy makers, educational authorities, and teachers: Theorizers and policy makers can make sure of the positive attitudes of EFL teachers and learners towards the critical pedagogy; also, educational authorities may consider the effect of context of teaching on teacher attitudes and provide opportunities for them to try different strategies in their classroom, which is in line with teachers' autonomous decision-making proposed by post-modern pedagogy. In addition, concern with the importance of the critical concepts in pedagogy can help curriculum designers gain a better understanding of teachers' mindsets on the critical pedagogy, which can be of crucial importance not only to EFL teachers, but also to test developers and material designers to diagnose and analyze their orientation concerning barriers facing the implementation of critical pedagogy in different contexts, and to pave the way for a better future in the process of language teaching/learning.

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Young people's educational and employment profile in vocational initial programmes

Perfil educativo y de empleo de los jóvenes en programas de formación profesional inicial

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 11 de julio de 2018

Fecha de revisión: 21 de octubre de 2018

Fecha de aceptación: 24 de octubre de 2018

Olmos, P. y Mas, O. (2018). Young people's educational and employment profile in vocational initial programmes. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 125 – 137.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)
ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

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Abstract.

The transition to adulthood is a complex process especially for unskilled young people who do not have the personal resources to function effectively in the educational contexts or in the workplace. Vocational initial programmes become a second chance for them, who are looking for new opportunities to access education in order to obtain a decent job in the future. This paper shows a qualitative study focuses on describing the educational and employment profile of young people in Catalan Vocational Initial programmes from the perspective of 16 tutors, nine entrepreneurs and 228 youths enrolled in 17 vocational initial programmes in seven municipalities of Barcelona, in order to learn more about their profile and their educational and job expectations, and thus try to contribute to their understanding. The results of data analysis from interviews carried out with the participants describe a young people's initial under qualified educational and employment profile that influences their entry into these programmes and show how those also influence on these group of young people. Within the framework of these programmes, young people start it changing and find a support for returning to formal education and re-considering their choice of education and employment as well as their prospects.

Resumen

La transición a la edad adulta es un proceso complejo especialmente para aquellos jóvenes no cualificados que no disponen de recursos personales para funcionar eficazmente en contextos educativos o en el lugar de trabajo. Los programas de formación profesional inicial devienen una segunda oportunidad para ellos que buscan nuevas oportunidades de acceso a la educación con el fin de desarrollar un buen trabajo en el futuro. Este trabajo muestra un estudio de carácter cualitativo centrado en la descripción del perfil educativo y de empleo de jóvenes en programas de formación inicial catalanes desde la perspectiva de 16 tutores, nueve empresas y 228 jóvenes participantes en 17 programas en siete municipios de Barcelona, con el objetivo de aprender más sobre su perfil y sus expectativas educativas y laborales y tratar de contribuir así a su mejor comprensión. Los resultados del análisis de datos obtenidos de las entrevistas aplicada a los participantes describen un perfil educativo y laboral de jóvenes inicialmente poco cualificado que influye en su acceso a estos programas y muestran como los programas también influyen en este grupo de jóvenes. En el marco de estos programas, los jóvenes empiezan a cambiar y encuentran un apoyo para retornar a la educación formal y reconsiderar sus oportunidades educativas y laborales, así como sus expectativas.

Keywords

Vocational education and training (VET); Transition; Unskilled young people; Education return; Learning in life; Vocational initial programmes (VIP).

Palabras clave

Formación profesional; Transición; Jóvenes no cualificados; Retorno educativo; Aprendizaje en la vida; Formación profesional inicial

1. Introduction

The transition to adulthood is a complex process where young people have to take decisions that will affect the course of their lives during this transitional process, internal –e.g. physical, psychological, emotional, learning or behavioural– and external –e.g. social, economic or demographic– factors are involved and inter-related in order to reach adulthood. In other words, social variables are involved in individual choices (Casal, García, Merino & Quesada, 2004; Côté, 2005; Morris, Rutt, Kendall, Lesley & Mehta, 2007; Parrilla, Gallego & Moríña, 2010; Tagliabue, Crocetti & Lanz, 2016).

In addition, the current social and economic contexts make this transitional process more difficult. The continuous and fast social and economic changes increase the difficulties in reaching adulthood. The current job markets of the knowledge-based economy demand ever higher skill levels from an increasingly smaller workforce (Consejo de la Unión Europea, 2008). New abilities and skills, high levels of qualification, and new mediating concepts are required to cope with the demands of working effectively in different organisational settings (Cheetham & Chivers, 1998; Guile & Griffiths, 2001).

These changes in job markets demand more training and longer educational periods from young people, making unskilled young people, who drop out of school early, at risk of being excluded and of becoming a growing challenge for society (CINTERFOR/OIT, 2001; Consejo de la Unión Europea, 2008).

Unskilled young people have higher difficulties for fulfilling not only labour and social requirements but also for being and developing an adult role in the current society. The lack of personal resources prevents these young people from gaining access to social networks that can allow them to create new identities (Weller, 2009), resulting in persistent patterns of social exclusion. Some studies reveal the relationship between individual resources and social environments in forming this adult identity (Daniels & Cole, 2010; Diener & Larsen, 1993; Dooley & Prause, 1997; González-Pienda *et al.*, 2000; Hair, Moore, Ling, Mcphee-Baker & Brown, 2009; Hartas, 2016; Mcwhirter & Mcwhirter, 2008; Smith, 2009; Van Houten & Jacobs, 2005).

As we can see, at present the transitional process has become increasingly prolonged and difficult for unskilled young people, especially those who do not have the personal resources to function effectively in the educational contexts or in the workplace (Schwartz, Côté & Jensen, 2005). In this event, training is a key factor because it makes it possible to get a job that can provide young people with the natural, physical, and financial capital in order to become autonomous, independent and a full member of society (Colley, Hodgkinson & Malcolm, 2002; Hodgkinson, Biesta & James, 2007, 2008). In this way, training and employment are considered examples of the barriers and obstacles for unskilled young people in their transitional processes –their employment profile is characterised by previous work experiences that are insufficient in terms of quality and quantity (Hair *et al.*, 2009) as a consequence of their under qualified educational profile–.

In the Spanish and Catalan context –the referent context of the study presented here which is part of wider research–, the economic recession has had a negative impact on many young people between the ages of 16 and 25 who dropped out of school without achieving a minimum educational qualification that would allow their social, employment and educational participation.

At present, the Spanish employment market is open from the age of 16 and, after the economic crisis, one of the requirements of this job market is to have achieved a minimal educational certification –Compulsory Secondary Educational Certificate–. Before the economic recession, employment contexts had long led to young people dropping out early without these studies. Young people between 16 and 25 years took on low qualification jobs in response to the high demand for unskilled workers but then, the economic recession left them without work and qualifications, increasing their risk of being excluded from participating in educational, social and employment contexts (Bolívar & López, 2009; Salvà-Mut, Tomás-Vanrell & Quintana-

Murci, 2016; Vega & Aramendi, 2010). Statistics show that between 2011 (when the study was developed) and 2016 Spanish educational and employment data have evolved inversely: towards less unemployment and more dropouts –MECD (2010, 2015) listed the percentage of early dropout rate ranged between 28.4% and 21.9% and INE, of October 28, 2011 and October 22, 2015, listed on its website the percentage of unemployment rate of young people aged less than 25 ranged between 21% and 46.2% approximately–.

As the data show, a high percentage of young people are unemployed. Their low qualifications and lack of a minimum educational certificate aggravate not only their opportunities to access the employment market but also the possibility of their return to formal education.

Early school leavers need to return to formal education (Alegre, Casado, Sanz & Todeschini, 2015). It is important that these young people are aware of training and work-related learning that can provide them with resources for their educational, social and employment integration, thereby contributing positively to their transitional process towards an active and participatory adulthood.

Vocational Initial Programmes (VIP) are a second chance for these unskilled young people (Acar, 2011; CINTERFOR/OIT, 2001; Olmos & Mas, 2013; Prieto, 2015; Turcotte, Lamonde & Beaudoin, 2009). The aim of these programmes is to facilitate and to improve young people's opportunities to access education and employment for a second time so, although these training programmes are non-formal learning in VET –i.e. they are not directly affiliated to official formal qualifications (Cantero & Sancha, 2014)–, these are conceived as mechanisms for transition and educational, social and employment inclusion.

In the Spanish and Catalan context, the Vocational Initial Programmes –named Basic Training Programmes for the Spanish context and Initial Training Programmes for the Catalan context– are an example of this second educational chance. The target group of these programmes are young people aged 16-21 years old who lack a minimum formal educational certificate because they left their studies early, and are looking for new opportunities to access education in order to obtain a decent job in the future. As CINTERFOR/OIT (2001) states, having a decent job implies having a satisfactory job, of an acceptable standard, with decent wages, at least sufficient in quality and quantity. In other word, a job that is different from those they may have had thus far, characterised by being unstable jobs, with low wages, insufficient in quality and quantity; that is, jobs without training that make young people move into and out of work constantly, and require young people to be in full-time work and not in receipt of training that could lead to a higher qualification (Lawy, Quinn & Diment, 2010; Maguire & Hudlestonn, 2009; Verd & López-Andreu, 2016).

Because of these young people's lack of formal educational certificate (remember, Compulsory Secondary Educational Certificate), they cannot continue their studies in formal educational contexts. These training programmes are the only chance they have to improve their professional educational profile, and to return to formal educational contexts for continuing their professional training. For one year, young people who access to these training programmes are trained in basic skills for lifelong learning, and in specific skills for working according to different professional families. Likewise, these training programmes give young people the opportunity to develop part of their professional training in real job contexts. When they finish these programmes, they can access to the job market or they can to return to formal educational context for continuing their professional training within formal Vocational and Educational Training (VET) programmes.

For the purpose to know more about young people's educational and job expectations in Catalan Vocational Initial programmes, this paper aims to describe their educational and employment profile from the perspective of youths, tutors and employers, who are involved in these programmes, and thus try to contribute to their understanding.

2. Research method

This qualitative and descriptive research seeks to provide a description of unskilled young people's training and employment profile from different agents' perspective and obtains its results by interviewing a variety of data sources –young people, tutors and entrepreneurs– involved in Catalan VIP (in Initial Professional Qualification Programmes to be precise).

3. Participants

The participants of this study were chosen in accordance with an intentional sample technique applied according to the following criteria:

- Territorial scope. Six municipalities from the metropolitan area of Barcelona and accessible for the researcher.
- Type of training programme. Vocational Initial programmes.
- Young people. Criterion responds to predefined features within these VIP; that is, young people aged from 16 to 21 years, early school leavers and unemployed.
- Tutors and entrepreneurs. All those who are involved in these training programmes working with these group of youth. Tutors are who train young people in basic skills and they are their educational referents. Entrepreneurs are who contribute to young people's training in professional skills in the workplace.

Access to the selected VET centres required the authorisation of the management teams in order to be carried out. Ethical approval was obtained from the Ethics Board at each VET centre. The participants participated voluntarily.

The final sample was 16 academic tutors, 9 entrepreneurs and a target group of 228 young people aged from 16 to 21 years enrolled in 17 VIP in 7 municipalities of Barcelona –Hospitalet de Llobregat, Granollers, Montcada i Reixach, Pineda de Mar, Vilanova i la Geltrú, Sant Feliu de Llobregat and Sabadell–. It is highlighting one of the young people's requirements for enrolling in these programmes: only those aged 16 to 21 years who do not have a formal educational certificate and are unemployed.

4. Instruments, procedure and data analysis

Data in this paper were collected by structured interviews carried out with young people and non-structured interviews carried out with tutors and entrepreneurs.

The questions of these interviews were related to young people's educational and employment backgrounds, and expectations of study and work.

Table 1 shows the example of questions addressed to young people.

Tutors and entrepreneurs responded, among other questions that are not the concern of this paper, to one question related to both dimensions the young people's education and employment profile. The questions were *"how do you describe these young people's education and employment profile?"* and *"That is, how do you describe their educational level, academic life, education and employment prospects, and so on?"*

As we can see, the young people, tutors and entrepreneurs responded questions related to both dimensions education and employment, and lead the analysis of the results that are based on the descriptive and qualitative analysis of data.

Results were grouped in two categories in accordance with these dimensions of analysis: 1) young people's education profile, and 2) young people's employment profile.

For each one of these categories, three sub-categories were identified. For the education profile as category were identified the sub-categories “*young people’s educational level*”, “*academic life*”, and “*education interest*”. For the employment profile as category were identified the sub-categories “*young people’s job prospects*”, “*knowledge of current jobs market*”, and “*work experience*” (see Table 1).

Table 1.

Dimensions, categories and sub-categories of analysis and related questions addressed to young people

Dimension/Category	Sub-category	Questions
Education dimension/category	Young people’s educational level	What was your last year before dropping out of school?
	Young people’s academic life	
	Education interest	- Do you want to have a formal educational certificate? Why? - Do you want to continue studying after this training? Why? - What kind of studies would you like to do? - In which kind of vocational education would you like to be specialised?
Employment dimension/category	Young people’s job prospects’	- What kind of job would you like to do really? - What kind of job do you think you will get?
	knowledge of current jobs market’	- Do you agree with sentences like “ <i>the current jobs market is stable</i> ” and “ <i>it is easy to change jobs</i> ”? Why?”
	Work experience	- Have you ever worked? If you answer is “yes”, Can you describe the jobs you have done?

5. Results

The results are organised by taking into consideration the participants. Firstly, the young people’s perspective about their education and employment profile –background and expectations are described from their perspective–. Secondly, the point of view of tutors and entrepreneurs are described and are contrasted with the young people’s perspective.

5.1. Young people's perspective

Table 2.

Main results of young people's perspective by dimensions, categories and sub-categories

Category	Sub-category	Results
Education dimension	Young people's educational level	100% do not have secondary compulsory education certificate
	Young people's academic life	Last year before dropping out is third or Fourth of compulsory secondary education for 78.9% of young people of the sample
	Education interest	93.4% wanted to get a formal educational certificate: - 46% argue employment reasons - 22% argue educational reasons 95.2% want to improve their training and return to formal education to undertake any formal VET programme 51.4% would like to do professional training related to the job specialisation they are taking 12.3% are interested in studies on building professional sector 18.9% are interested in studies on mechanics professional sector 43% are interested in studies on services professional sector
Employment dimension	Young people's job prospects'	Building professional sectors (12.3%) Mechanics professional sectors (18.9%) Services professional sectors (43%)
	knowledge of current jobs market'	54.9% agree with the current jobs market is too demanding with the workforce 83.4% would like to get a job related to the professional specialisation they are taking: - 56% believe they will be able to get it
	Work experience	56% worked before undertaking the training programme - 76% temporal labour contract - 66.7% without labour contract Construction and service industries are the most representative work experience: - 23% in construction - 32.6% in service industries

The descriptive data analysis shows that 74.6% of the sample of young people are males aged between 16 and 18. In these VIP the number of males is higher than females and this is due to the fact of the job specialisation that these programmes supply and not by the number of males and females early school leavers (Cedefop, 2016).

No young people in the sample have a formal educational certificate –it was a requirement for being enrolled in these programmes– and 78.9% left their studies when they were 14-16 years old.

It is worth noting that 93.4% wanted to get a formal educational certificate. The reasons of 68% are related to either education or employment –46% are employment reasons and 22% are educational ones–. Examples of their main reasons were that having a formal educational certificate is mandatory for getting a decent job or further education, and that any job would demand this minimum certification.

Similarly, 95.2% of these young people would like to continue studying when they finish the current VIP. Getting a job is important for these young people, but they are aware that they

need to improve their training profile, so they would like to return to formal education to undertake any formal VET programme. Regarding professional specialisation, 51.4% would like to do professional training related to the job specialisation they are taking.

As regards the young people's employment backgrounds and expectations for working, 56% of them say to work before undertaking the training programme –although the majority without a labour contract–. It is worth noting the age, because the most representative group of young people who have work experience is made up of those older than 18 years (70.8% of young people aged 18-21 year-old and 51.1% of young people aged 16-18 year-old). This result agrees with the characteristics of the jobs market that gives priority to young people who have reached the age of majority.

In the main, these young people worked in the construction and service industries (23% and 32.6% respectively). The main jobs they had were cleaners, kitchen staff, waiters, hairdressing staff, shop assistants and building labourers. These jobs were characterised by being unstable and temporary (76% of the jobs were less than one year and 66.7% of young people worked without a labour contract).

The results focusing on the young people's work prospects show that hotels and restaurants, electricity, plumbing, metalwork, welding, mechanics, administration or trade sector are the most common specialties. In other words, building (12.3%), mechanics (18.9%) and services (43%) are the professional sectors of interest to young people. The interest in these professional sectors is in accordance with two variables: gender and age. The results show that the demand from women for the service sector prevails over men (72.4% as against 32.9% respectively) and demand from men for the building and mechanical sectors prevails over women (18% as against 3% respectively). Likewise, older young people (≥ 18 years old) demand more jobs in the service and mechanical sectors than younger ones (< 18 years old), who are interested in the building sector –before the economic crisis the building sector was one of the most demanded and provide workers with high wages–. Data show 52.1% older young people are interested in the service sector as against 40.6% of younger ones; 31.3% older young people are interested in the mechanisms sector as against 40.6% of younger ones; 8.3% older young people are interested in the building sector as against 14.4% of younger ones.

Getting a job is important for these young people, but they say that the current jobs market is unstable (57.7%) and it is not easy to change jobs (80.6%). In other words, they recognise that the current jobs market is too demanding with the workforce (54.9% agree with this). These results also identify differences between the young people's job prospects (*What kind of job would you like to do?*) and their work possibilities (*What kind of job do you think you will get?*). Although young people said they would like to get a job related to the professional specialisation they are taking (83.4%), only 56% believe that they will be able to get it. They are aware of their difficulties as young unskilled workers.

5.2. Perspective of tutors and entrepreneurs

As regards the *educational profile*, tutors and entrepreneurs perceive a low educational level for young people on these training programmes. Therefore, they describe the *academic life* of young people as a negative period for them, and emphasise the fact that most of them seem to be destined to fail. They consider that the difficulties that young people have in pursuing a successful academic itinerary determines their attitudes of rejection towards studies, their high absenteeism and their low motivation and interest. Nevertheless, tutors and entrepreneurs think that these VIP are positive and viable for them. For example, tutors state that these programmes improve young people's self-perception about their educational capacities and capabilities, and raise young people's *interest in continuing their formal educational process*. Specifically, these young people want to continue their training in the same occupational field they are taking. Entrepreneurs state that young people learn and develop professional skills that they did not learn and develop in compulsory schooling.

Regarding the *employment profile*, the results from tutors and entrepreneurs are quite similar to the results from the young people. It is mainly tutors who describe these *young people's work experiences*. They identify older young people (≥ 18 year olds) as those who have more work experience. The kind of jobs they did were jobs in the service sector for women and in the building sector for men. Likewise, tutors confirm that most of these young people worked without an employment contract in unstable jobs and as unskilled workers.

The perspective from tutors and entrepreneurs about the *young people's job prospects* is also quite similar to the young people's perspective. They identify as men's preferred jobs those that are related to the professional sectors of mechanics and construction, and as women's preferred jobs those related to the professional service sector. They agree that these young people's job prospects are determined by their experience in the workplace within the educational practices that the young people are developing in these VIP.

Lastly, tutors and entrepreneurs agree with the *young people's perception* that the *current jobs market* is too demanding for the workforce, but they also say that these young people are not aware of how demanding it is. Therefore, they reiterate that although these basic VET programmes are a good option for unskilled young people, these training programmes are insufficient in terms of their training and education. They have to continue their educational process and these training programmes are only the first step in their training and professional career.

6. Discussion

This work is concerned with unskilled young people who drop out of school early, becoming young people at risk of social, educational and employment exclusion. Focussing on a specific group of unskilled young people –those who are enrolled in Catalan Vocational Initial Programmes– and from different perspectives –youths, tutors and entrepreneurs– this paper aims to contribute to the learning and understanding of both young people's profiles and their educational and job expectations.

The results suggest that the young people in this study are facing difficult transitional processes. Their condition of exclusion has kept them apart from meaningful contexts of education, training and work, having a negative bearing on their transition to adulthood which is characterised by a lack of possibilities for participating in formal education and in the jobs market (Maguire & Huddleston, 2009; Salvà-Mut *et al.*, 2016; Tagliabue *et al.*, 2016; Thompson, Russell & Simmons, 2014). Training, learning and social networks –such as the tutors or entrepreneurs in this study– become key processes for supporting young people's transitions and providing them with the personal resources, skills and capacities to fulfil employment and educational requirements, whilst participating actively in educational and employment contexts (Colley *et al.*, 2002; Côté, 2002, 2005; Helve & Bynner, 2007; Iglesias, Sánchez-Romero & Castillo, 2017; Jochum, 2003; Lyngsnes & Rismark, 2011; Schwartz *et al.*, 2005; Van Houtte & Demanet, 2015; Weinert & Kluwe, 1987).

As regards these young people's educational profile, we should remember that it is characterised by failures in formal educational contexts as a consequence of negative learning processes. These young people, who are undertaking programmes like those in this paper, change their training and learning perceptions and educational prospects. In this case, these training programmes have an influence on the young people's educational profile, and most of them feel they can learn and therefore want to continue their learning process in order to gain access to qualified employment and impact on their future employability (Lucena, Álvarez & Rodríguez, 2011). These programmes are these young people's means of entry into formal VET programmes (Alegre *et al.*, 2015; Olmos, 2014; Olmos & Mas, 2013).

As regards these young people's employment profiles, we should also remember that these are characterised by being young unskilled workers as a consequence of their under qualified educational profile –their previous work experiences are insufficient in quality and quantity–.

However, these previous work experiences determine the young people's choice of professional specialisation and their job prospects (Horcas, Bernad & Martínez, 2015). As the results show, their goal is to get a job in the same professional field that they are taking. However, they are aware that the current jobs market is too demanding for workers in terms of competencies. Although they show a proactive attitude towards getting a job, they are not ready to succeed in responding to this demanding situation and getting a job because of their long periods of disconnection from education and work. They need assistance that goes well beyond finding a job, and these programmes make that possible (González-Rivera, 2014; Lyngsnes & Rismark, 2011; Di Blasi, Tosto, Marfia, Cavani & Giordano, 2016; Olmos-Rueda & Mas-Torelló, 2017).

The active participation of these youths in educational and employment contexts requires starting out with their return to educational contexts. These young people have to explore their educational and job experiences, and their educational and employment options, in order to be aware of what they lack and need to improve (Alegre, Casado, Sanz & Todeschini, 2015; Lawy *et al.*, 2010). This is possible within the framework of these VIP, as this paper shows. These programmes are the context where these young people find a support for returning in formal education and improving their process of life-project planning and transition.

It is true that young people's educational and employment profiles influence their entry into these programmes –their educational backgrounds make these young people the intended beneficiaries of these training programmes, while these are, at the same time, their second chance to return to formal education (Marhuenda-Fluixá, Salvà, Navas Saurin & Abiétar López, 2015; Olmos & Mas, 2013) and their employment backgrounds, influenced by their profile and variables like gender, as the results show, influence their choice of professional vocation in these training programmes and their expectations for work– but these programmes also influence on these group of young people because it can be shown that their experience in these VIP makes most of them re-consider their choice of education and employment as well as their prospects.

7. Limitations and future prospects

The main limitations of this study come from the selection of the sample. This study analyses the perspective of young people, tutors and entrepreneurs who are involved in Catalan Vocational Initial Programmes and are sensitive to those, but other important perspectives, such as the Administration one, are not considered. It would be interesting to incorporate the analysis of this perspective into this study because it would explain, in words of Marhuenda and colleagues (2015, 148), “*the lack of stability and permanent funding for these programmes and the tendency to consider them a side issue*” in our Spanish and Catalan context. The political perspective of these programmes is concerned with the Spanish and Catalan context. As Marhuenda and colleagues (2015) claim, the dignity in these programmes is not simply academic, it is also political, therefore the lack of policies that promote positive transitions is a cause for concern (Salvà-Mut *et al.*, 2016) and the incorporation of this political analysis from the Administration perspective in this study could contribute positively to focusing on this cause for concern. Here this line of study is opened.

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The L2 Motivational Self System and its influence on Spanish pre-service teachers' motivated behaviour

El L2 Motivational Self System y su influencia en la motivación de los futuros maestros en España

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 17 de octubre de 2018

Fecha de revisión: 29 de octubre de 2018

Fecha de aceptación: 8 de noviembre de 2018

Amengual-Pizarro, M. (2018). The L2 Motivational Self System and its influence on Spanish pre-service teachers' motivated behaviour. *Journal for Educators, Teachers and Trainers*, Vol. 9(2), pp. 138 – 148.



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Abstract

This study aims at examining the influence of Dörnyei's (2005, 2009) L2 Motivation Self System three main components, as well as integrativeness, instrumentality prevention, and intended effort, on prospective teachers' motivated behaviour. A total of 75 first-year pre-service school teachers at the University of the Balearic Islands (UIB) completed a questionnaire based on Taguchi, Magid & Papi (2009). The results confirm that student teachers show a positive disposition towards the learning of English as a foreign language. The L2 learning experience seems to play a major part in arousing students' motivation. The data also indicate that future teachers place more emphasis on integrative reasons (i.e. Ideal L2 Self and integrativeness) than on pragmatic or utilitarian motives (i.e. Instrumentality prevention and Ought to L2 Self) for learning the target language. In fact, integrativeness shows the strongest correlation with intended effort. T-test results also reveal that female participants seem to be more committed and dedicate more time and effort to learn the L2 than their male counterparts. Finally, the data show that university English majors appear to be more intrinsically motivated than non-English majors

Resumen

Este estudio examina la influencia de las tres variables principales del modelo de Dörnyei (2005, 2009), *L2 Motivation Self System*, así como la integración, la instrumentalidad preventiva y el esfuerzo previsto en la motivación de los futuros maestros. Un total de 75 futuros profesores de primaria de la Universitat de les Illes Balears cumplimentaron un cuestionario basado en Taguchi, Magid & Papi (2009). Los resultados confirman que los futuros maestros muestran una predisposición positiva hacia el aprendizaje del inglés como lengua extranjera. La experiencia de aprendizaje en la L2 parece jugar un papel fundamental en el incremento de la motivación de los estudiantes. Los datos indican que los futuros maestros otorgan más importancia a la motivación integradora (i.e. *Ideal L2 Self* and *integrativeness*) que a los aspectos más pragmáticos o utilitarios (i.e. *Instrumentality prevention* and *Ought to L2 Self*) para aprender la lengua objeto. De hecho, la integración muestra la correlación más alta con el esfuerzo previsto. Los resultados del T-test también revelan que las participantes femeninas parecen estar más comprometidas y decididas a invertir más tiempo y esfuerzo para aprender la L2 que sus compañeros masculinos. Finalmente, los datos señalan que los alumnos universitarios que desean especializarse en lengua inglesa están más intrínsecamente motivados que aquellos otros que desean especializarse en otras asignaturas

Keywords

L2 motivational Self System; Motivational variables; Teacher training; English as a foreign language; Spanish EFL students

Palabras clave

L2 motivational Self System; Variables motivacionales; Formación del profesorado; Inglés como lengua extranjera; Aprendices españoles de lenguas extranjeras

1. Introduction

Motivation has generated a large body of research since it has been acknowledged to be a critical factor influencing L2 success and achievement (Gardner, 1985; Bernaus, Masgoret, Gardner & Reyes, 2004; Cheng & Dörnyei, 2007; Kim, 2012). According to Gardner (1985), motivation refers to *“the extent to which the individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity”* (p. 10). Gardner's (1985, 2001) socio-educational model establishes a distinction between two main types of orientation: integrative vs. instrumental. Integrative orientation concerns the desire to learn the L2 in order to interact and integrate with the target language community (Gardner, 1985). Conversely, Instrumental orientation includes more pragmatic reasons for learning the target language such as career advancement, social prestige, or simply passing a required test or examination (Gardner, 1983; Saville-Troike, 2006). Gardner & Lambert (1972) also postulate that learners with integrative motivation tend to be more involved in the learning process, and achieve greater competence in the target language than those learners with instrumental motivation. In fact, Gardner (1985) considers integrative motivation, which includes attitudinal, situational and motivational variables towards L2 learning, as a major determinant of L2 achievement. However, the importance attached to the concept of integrativeness in Gardner's (1985, 2000) L2 motivational model has been questioned by many researchers for neglecting, among others, the motivational factors associated with L2 instructional settings. Indeed, integrative motivation was found to be of little relevance to L2 learners who have none or little opportunities to meet and integrate with members of the target language community (Clement, Dörnyei & Noels, 1994; Dörnyei, 1990; 2005). Furthermore, today's globalizing world and the current status of English as a lingua franca (ELF) has challenged the very identity and ownership of English (Widdowson, 1994; Lamb, 2004; Kachru & Nelson, 2006), which has led to a new reconceptualization of integrativeness in terms of a more comprehensive L2 motivational construct labelled 'The L2 Motivational Self-System' (see Dörnyei & Csizér, 2002; Dörnyei, 2005, 2009). This new theoretical model seems to be more broadly applicable across different cultural and linguistic contexts, and more congruent with current emerging formulations of social identity (Chong & Low, 2009; Papi, 2010). In fact, this L2 motivational framework has been validated and used successfully in different L2 learning contexts (Busse, 2013; Csizér & Lukács, 2010; Ryan, 2009; Taguchi, Magid & Papi, 2009; You & Dörnyei, 2016).

The L2 Motivational Self System (Dörnyei, 2005, 2009) comprises three main dimensions: The Ideal L2 Self, the Ought-to L2 Self, and the L2 Learning Experience. The Ideal L2 Self is described as the ideal image of the kind of person who speaks the L2 one would like to become (Dörnyei, 2005). A big discrepancy between the desirable self-image as an L2 speaker and his/her actual self-image might act as a powerful motivational force (You & Dörnyei, 2016). The Ideal L2 Self is a major component of the L2 motivational construct proposed by Dörnyei (2005, 2009), and has been found to significantly correlate with integrativeness in Gardner's socio-educational model (MacIntyre, Mackinnon & Clément, 2009; Ryan, 2009; Taguchi, Magid & Papi, 2009). Integrativeness is identified in this way with the Ideal L2 Self, reinforcing learners' integrative disposition to learn the L2 (Dörnyei, 2009). The Ought-to L2 Self concerns the attributes that one believes s/he ought to possess due to perceived duties, obligations and responsibilities in order to live up to the expectations of others or to avoid possible negative results (Dörnyei, 2005; You & Dörnyei, 2016). The Ought-to L2 Self is closely linked to aspects of 'preventional' instrumentality (i.e. instrumental motives to avoid negative outcomes) (Dörnyei, 2005), and seems to have a lesser impact on L2 students' motivation than the Ideal L2 Self (Taguchi, Magid & Papi, 2009). Finally, the L2 learning experience is related to specific-situation motives associated with the immediate learning environment (e.g. the L2 teacher, classroom methodology, materials, the experience of success, etc.) (Dörnyei, Csizér & Nemeth, 2006). Research suggests that this third component of the L2 Motivational Self System appears to have the largest influence on students' motivated behaviour (Taguchi, Magid & Papi, 2009).

Among the different variables related to the L2 experience, numerous studies highlight the close connection between the motivation of L2 teachers and students' motivation (Amengual-Pizarro & García Laborda, 2017; Bier, 2014; Csizér & Kormos, 2009; Bernaus & Gardner, 2008; Dörnyei, 2001; Kassabgy, Boraie & Schmidt, 2001). According to Igawa (2009), teachers'

motivation has an effect on students' motivation since "*the teacher is a keystone of what is going on in the classroom*" (p. 203). In fact, teachers' lack of motivation may negatively affect the attitudes and motivation of L2 learners (Dörnyei, 2001; Frenzel, Goetz, Lüdtke & Pekrun, 2009). Furthermore, language teachers are believed to be responsible for promoting students' motivation (Sawyer, 2007; Dörnyei, 2001) by both "*adopting motivational strategies but also by being motivated themselves*" (Biber, 2014, p. 506). Despite the increasing importance attributed to teachers' affective variables, the construct of teacher motivation has been scarcely explored in language pedagogy (Dörnyei, 2001; Igawa, 2009). However, numerous studies point to the need to enhance awareness about the contributing role of L2 teachers' motivated behaviour in the promotion of students' motivation in classroom settings (Sawyer, 2007; Bernaus & Gardner, 2008; Frenzel, Goetz, Lüdtke & Pekrun, 2009; Griffin, 2010). Indeed, research has established strong links between intrinsic motivation and teachers' effort, commitment and effectiveness (Alsup, 2005; Bakar, Mohamed, Suhid & Hamzah, 2014; Balyer & Ozcan, 2014). Conversely, it is generally assumed that extrinsically motivated teachers tend to show lower levels of enthusiasm and long-term commitment (Yong, 1995). Therefore, this study will attempt to fill this research gap by examining teachers' motivation within the broader L2 motivational construct, the L2 Motivational Self System, formulated by Dörnyei (2005, 2009).

2. Research questions

Drawing on the L2 Motivational Self System (Dörnyei, 2005, 2009), the main purpose of this study is to analyse the main attitudes and motivational factors of prospective school teachers towards the learning of English as a foreign language. Specifically, the following research questions were addressed:

1. Which motivational variables exert a stronger influence on student teachers' motivation towards the learning of English?
2. What is the relationship between the L2 Motivational Self System three main components, integrativeness, instrumentality prevention, and intended effort?
3. Is there any significant difference in student teachers' motivation as a function of gender?
4. Is there any significant difference in the type of motivation of university English majors vs. university non-English majors?

3. Method

3.1. Participants

The participants in this study were 75 first-year prospective school teachers enrolled in a compulsory English language course at the University of the Balearic Islands (UIB). The age of the participants ranged from 18 (18-24 years; n = 93.3%) to 30 (25-30 years: n = 5.4%). In terms of gender, the majority of participants were females (74.7%) versus males (25.3%).

3.2. Instrument and data collection

The primary research instrument used in conducting this study was a questionnaire which included two main sections. The first section (Section 1) asked participants to provide general demographic information (age, sex, major, native language, other L2 languages, and overseas experience). Section 2 consisted of 26 items adapted from a questionnaire devised by Taguchi, Magid & Papi (2009) in order to validate Dörnyei's (2005, 2009) L2 Motivational Self System in three different language contexts. Some of the items were also based on Dörnyei, Csizer & Nemeth's (2006) Hungarian studies (i.e. criterion measures in order to assess students' intended efforts to learn the L2), and other previous questionnaires (Dörnyei, 2001). The questionnaire was piloted among 20 freshman student teachers enrolled in a different compulsory English language course at the UIB. Some minor adjustments were made to the questionnaire before administering the final version to participants. The items were all

affirmative statements measured on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). A total of 6 motivational factors were used in this study: learners' intended efforts to learn English (i.e. criterion measures) (items 1, 4, 8, 17, and 22), Ideal L2 Self (items 2, 10, 11, 18, and 19), Ought-to L2 Self (items 3, 9, 20, 21, and 24), instrumentality prevention (items 5, 6, 16, and 26), attitudes to learning English (items 7, 12, 15, and 25), and integrativeness (items 13, 16, and 23). The data obtained were analysed with the Statistical Package for the Social Sciences (SPSS) 22.0. *Cronbach's alpha coefficients* were calculated separately for each factor to measure the internal consistency reliability of the items: 1) Criterion measures ($\alpha = 0.729$, $n = 5$ items); 2) Ideal L2 Self ($\alpha = 0.864$, $n = 5$ items); 3) Ought-to L2 Self ($\alpha = 0.743$, $n = 5$ items); 4) Instrumentality prevention ($\alpha = 0.701$, $n = 4$ items); 5) attitudes to learning English ($\alpha = 0.703$, $n = 4$ items), and 6) integrativeness ($\alpha = 0.700$; $n = 3$ items). As can be observed, the items show an acceptable or high degree of internal consistency with this specific sample (75 respondents).

The questionnaire was administered in Spanish to all student teachers during their normal class time in mid-October 2018. Participants were requested to complete the questionnaire in about 30 minutes in the presence of the researcher.

4. Results and discussion

4.1. Which motivational variables exert a stronger influence on student teachers' motivation towards the learning of English?

In order to examine the first research question, a descriptive analysis of the 6 motivational variables analysed in this study (i.e. criterion measures, Ideal L2 Self, Ought-to L2 Self, instrumentality prevention, attitudes to learning English, and integrativeness) was carried out. Table 1 presents the mean scores and standard deviations calculated for each of the six different factors. The data have been arranged in descending order of importance within each category so as to facilitate interpretation of results. The overall mean for the whole sample was 3.74 on a 6-point scale, which indicates that pre-service teachers show considerable interest in the L2 language, and appear to have a positive disposition towards English learning.

In line with previous research (Taguchi, Magid & Papi, 2009; You & Dörnyei, 2016), the findings reveal that the highest overall mean value of the 6 factors was obtained for criterion measures ($\bar{x} = 4.15$), followed next by attitudes to learning English ($\bar{x} = 4.06$). This indicates that student teachers seem to be motivated by their attitudes to the L2 learning experience (i.e. they find English to be interesting and enjoyable, items 15 and 25) and, consequently, are more willing to invest effort to learn the target language. The data also show that the Ideal L2 Self also receives considerable high scores ($\bar{x} = 3.99$) and comes next in order of importance, followed afterwards by integrativeness ($\bar{x} = 3.84$), instrumentality prevention ($\bar{x} = 3.72$), and, finally, Ought to L2 Self ($\bar{x} = 2.72$), which registered the lowest overall mean score. In fact, it is worth noting that this last motivational dimension is the only one which does not achieve the midpoint on a 6-point scale. Therefore, it seems that pragmatic utilitarian reasons (i.e. Instrumentality prevention), as well as the duties and obligations associated with the learning of English (i.e. Ought-to L2 Self), are the two motivational constructs having the least impact on students' motivated behaviour.

Table 1.
Descriptive statistics about the six motivational variables

Items: Criterion measures	N	Mean	SD
1. If an English course was offered In the future, I would like to take it.	75	4.73	1.031
8. I would like to study English even if I were not required.	75	4.41	1.311
17. I am prepared to expend a lot of effort in learning English.	75	4.25	1.152
22. I think that I am doing my best to learn English.	75	3.84	1.293
4. I am working hard at learning English.	75	3.55	1.328
Overall mean of the scale = 4.15			
Items: Ideal L2 Self	N	Mean	SD
11. I can imagine a situation where I am speaking English with foreigners.	75	4.55	1.339
18. I can imagine myself living abroad and using English effectively for communicating with the locals.	75	4.26	1.304
10. I can imagine myself living abroad and having a discussion in English.	75	4.11	1.538
19. Whenever I think of my future career, I imagine myself using English.	75	3.67	1.571
2. I can imagine myself speaking English as if I were a native speaker of English.	75	3.40	1.470
Overall mean of the scale = 3.99			
Items: Ought-to L2 Self	N	Mean	SD
20. Studying English is important to me because an educated person is supposed to be able to speak English.	75	3.48	1.349
9. Studying English is important to me because other people will respect me more if I have a knowledge of English.	75	3.03	1.488
21. Studying English is important to me in order to gain the approval of my peers/teachers/family/boss.	75	2.65	1.428
24. Learning English is necessary because people surrounding me expect me to do so.	75	2.51	1.256
3. I study English because close friends of mine think it is important.	75	1.93	1.127
Overall mean of the scale = 2.72			
Items: Instrumentality (prevention)	N	Mean	SD
26. I have to learn English because I don't want to fail the English course.	75	4.33	1.580
14. I have to learn English because without passing the English course I cannot graduate.	75	4.20	1.644
5. I have to study English; otherwise, I think I cannot be successful in my future career.	75	3.28	1.361
6. Studying English is important to me, because I would feel ashamed if I got bad grades in English.	75	3.08	1.383
Overall mean of scale = 3.72			
Items: Attitudes to learning English	N	Mean	SD
15. I find learning English really interesting.	75	4.63	1.313
25. I really enjoy learning English.	75	4.33	1.155
12. I would like to have more English lessons at school.	75	3.78	1.185
7. I always look forward to English classes.	75	3.53	1.266
Overall mean of the scale = 4.06			
Items: Integrativeness	N	Mean	SD
16. I like English.	75	4.55	1.407
13. Learning English is important to me in order to learn more about the culture and art of its speakers.	75	4.36	1.204
23. I would like to become similar to the people who speak English.	75	2.61	1.567
OVERALL MEAN OF THE SCALE= 3.84			

4.2. What is the relationship between the L2 Motivational Self System three main components, integrativeness, instrumentality prevention, and intended effort?

Pearson correlation analyses were conducted (Table 2) to examine the relationship between the three main dimensions of the L2 Motivational Self System and the other motivational variables examined in this study: integrativeness, instrumentality prevention, and intended effort (i.e. criterion measure).

Table 2.
Correlations between the motivational variables

	Criterion measure	Ideal L2 Self	Ought-to L2 Self	Instrumentality prevention	Attitudes to English	Integrativeness
Criterion measure	1	.350**	.371**	.185	.428**	.480**
Ideal L2 Self	.350**	1	.381**	-.058	.560**	.562**
Ought-to L2 Self	.371**	.381**	1	.512**	.269*	.324**
Instrumentality prevention	.185	-.058	.512**	1	-.150	-.003
Attitudes to English	.428**	.560**	.269*	-.150	1	.636**
	.480**	.562**	.324**	-.003	.636**	1

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.005 level

As can be observed, although most of the motivational variables correlated with the criterion measure, most coefficient values were moderate. The highest association was between intended effort and integrativeness (.480), followed next by attitudes to learning of English (.428). This indicates that students' integrative disposition to learn the L2, and to get closer to members of the target language community, as well as their attitudes towards the learning context, have both a clear impact on their desire to devote time and effort to learn the English language. In fact, these two latter motivational constructs (i.e. integrativeness and attitudes to learning English) are strongly correlated (.636). The Ideal L2 Self also shows the highest correlation with integrativeness (.562), which is indicative of the similarity of these two concepts. However, and contrary to previous findings (Taguchi, Magid & Papi, 2009; Papi, 2010), the Ideal L2 Self correlates only moderately with intended effort (.350). Overall, these results point to the relevance of integrativeness in an autonomous community such as the Balearic Islands, one of the most popular Spanish tourist destinations, where the English-speaking community represents an important market for the economy of the islands. Interestingly, the attitudes to learning English are also strongly related to the Ideal L2 Self (.560), indicating that the participants' ideal image of the kind of L2 speaker they would like to become is clearly associated with the classroom environment and the L2 learning experience. Indeed, learning experiences have been found to be related to intrinsic categories (Papi, 2010). These results highlight the importance of classroom factors on the promotion of students' motivated behaviour. Finally, the Ought-to L2 Self shows strong significant correlations with instrumentality prevention (.512). That is, the responsibilities and obligations student teachers feel they have towards the learning of English are significantly associated with the avoidance of obtaining negative results. In fact, instrumentality prevention correlates negatively with both the Ideal L2 Self (-.058) and integrativeness (-.003), which indicates that the values on these two groups of variables (instrumentality prevention, on the one hand, and Ideal L2 Self and integrativeness, on the other hand) move in opposite directions. In other words, as the values of utilitarian academic and professional reasons related to the learning of English increase (i.e. instrumentality prevention), the values of more integrative reasons for learning the language decrease (i.e. Ideal L2 Self and integrativeness).

4.3. Is there any significant difference in student teachers' motivation as a function of gender?

Similar to previous research findings (You & Dörnyei, 2016), the initial descriptive statistics calculated revealed that all motivational variables received higher ratings by females (74.7%) than by males (25.3%), except for the Ideal L2 Self, which was scored more highly by male participants ($\bar{x} = 20.58$ vs. 19.69). This latter finding indicates that male participants seem to have a more positive self-image of the kind of English user they aspire to be in the future than their female counterparts.

Interestingly, independent samples *t*-tests results only reveal statistically significant differences between both groups of students in criterion measures ($t = -3.014$; $p = .004 < 0.05$) as a function of gender. This result indicates that males show less willingness to devote time and effort to learn the L2 than females ($\bar{x} = 18.24$ vs. 21.55). In other words, females seem to be more engaged and committed, and are more willing to put more effort in learning English than males. Nevertheless, these results should be interpreted with caution due to the relatively small samples sizes.

4.4. Is there any significant difference in the type of motivation of university English majors' students vs. university non-English majors' students?

Independent samples *t*-tests were also run to compare data across participants who have chosen English as a major and those who are specialising in other subjects (e.g. Physical Education teachers, Arts and Music Education teachers, etc.). As predicted, descriptive statistics show that the university English majors' subgroup scored higher in integrativeness ($\bar{x} = 12.20$ vs. 11.43), Ideal L2 Self ($\bar{x} = 24.40$ vs. 19.39), attitudes to learning English ($\bar{x} = 18.70$ vs. 15.90), and criterion measure ($\bar{x} = 21.50$ vs. 20.72). This indicates that English majors tend to be more driven by intrinsic reasons for learning the L2 and have a more positive image of the kind of L2 speaker they would like to become (Dörnyei, 2005). They also appear to show a more favourable disposition towards the L2 learning experience, and intend to put more effort into the learning tasks.

In fact, *t*-test results reveal statistically significant differences between both groups of participants as regards attitudes to learning English ($t = 2.353$; $p = .021 < 0.05$), and Ideal L2 Self ($t = 2.628$; $p = .011 < 0.05$). These findings reveal that students who have chosen English as their main university degree subject are clearly more intrinsically motivated than those by whom English is only considered to be a degree requirement. Indeed, although no statistically significant differences were found between both groups, it is worth mentioning that the non-English majors' subgroup only registered higher ratings on the more external motivational variables: Ought to L2 Self ($\bar{x} = 13.69$ vs. 13.40), and Instrumentality prevention ($\bar{x} = 15.21$ vs. 13.00). This shows that student teachers specialising in subjects other than English (i.e. non-English majors) tend to be more extrinsically motivated, and appear to be more concerned about academic failure and the need to avoid negative outcomes than their English majors counterparts.

5. Conclusion

The main aim of this study was to explore the influence of Dörnyei's (2005, 2009) L2 Motivation Self System three main dimensions, as well as integrativeness, instrumentality prevention, and intended effort, on student teachers' motivated behaviour. In line with other research findings (Moran, Kilpatrick, Abbott, Dallat & McClune, 2001; Sinclair, 2008; Topkaya & Uztosun, 2012; Amengual-Pizarro & García-Laborda, 2017), the results of this study confirm that student teachers show a positive disposition towards the learning of English as a foreign language. Indeed, descriptive statistics (Table 1) reveal that prospective teachers are clearly engaged and committed learners. The L2 learning experience or classroom environment seems to play a decisive role in determining students' disposition towards the target language (see Csizér & Kormos, 2009; Ryan, 2009; Taguchi, Magid & Papi, 2009; Papi, 2010). The data also indicate

that future teachers show a high degree of intrinsic motivation (Moran, Kilpatrick, Abbott, Dallat & McClune, 2001; Topkaya & Uztosun, 2012; Amengual-Pizarro & García-Laborda, 2015, 2017), granting high scores to the Ideal L2 Self and integrativeness variables. On the contrary, more pragmatic utilitarian reasons for learning the L2, such as perceived duties, responsibilities, or fear of failing in tests (i.e. Instrumentality prevention and Ought to L2 Self) are regarded as the least important motivational variables associated with the learning of the target language. This is an encouraging result since research suggests that intrinsically motivated teachers show higher levels of enthusiasm and involvement, and perform their tasks more efficiently (Bakar, Mohamed, Suhid & Hamzah, 2014; Balyer & Ozcan, 2014).

Nevertheless, Pearson correlation analysis indicate only moderate correlations between intended effort (i.e. criterion measure) and most of the analysed motivational variables (integrativeness, attitudes to learning English, Ought-to L2 Self, and Ideal L2 Self). It is, however, worth mentioning that integrativeness shows the strongest correlation with intended effort (see Gardner, 1985). This means that prospective teachers' positive attitude towards the L2 and the target language community represents a powerful motivating factor, which encourages future teachers to invest time and effort to learn the language. The fact of having an important English-speaking community in the Balearic Islands, which students can easily join or get closer to, may have been a decisive contributing factor to the interpretation of these results. It is also interesting to note that the Ideal L2 Self and integrativeness are highly correlated, pointing to the similarity of both concepts. The L2 learning experience, which has been found to be related to intrinsic categories (Papi, 2010), seems to be the second most important motivational aspect associated with intended effort, highlighting the impact of the classroom environment on students' motivated behaviour (Taguchi, Magid & Papi, 2009; Papi, 2010). Correlation results also reveal a negative association between instrumentality prevention and both the Ideal L2 Self and integrativeness, which indicates that as the values of pragmatic academic and professional reasons related to the study of English increase (i.e. instrumentality prevention), the values of integrative reasons for learning the L2 decrease (i.e. Ideal L2 Self and integrativeness).

The data also suggest that, although females tend to score higher than males on most of the motivational variables (see You & Dörnyei, 2016), there seem to be no systematic gender differences regarding L2 motivation between both groups. The only significant difference was related to intended effort, where results indicate that female participants seem to be more committed, and show a stronger desire to devote time and effort to learn English than their male counterparts. In spite of this, males appear to have a clearer positive image of the kind of L2 user they would like to become in the future (i.e. Ideal L2 Self, see Dörnyei, 2005) than females, although this latter difference is not statistically significant.

Finally, t-test results reveal statistically significant differences in relation to attitudes to learning English, and Ideal L2 Self (You & Dörnyei, 2016) between student teachers who have chosen English as their main university degree subject, and students by whom English is only considered a degree requirement. Thus, the university English majors' subgroup appears to be more intrinsically motivated than the non-English majors' subgroup, which only registered higher scores on extrinsic or external motivational reasons to learn the L2 (i.e. Ought-to L2 Self and Instrumentality prevention).

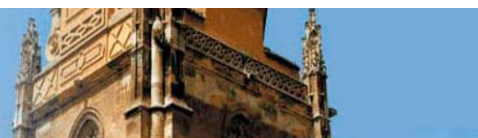
On the basis of these results, and given the importance attached to integrative motivational variables, and to the attitudes to the L2 learning experience, it is thought that greater efforts should be directed towards the creation of more enriching and supportive learning environments, which aimed to arouse student teachers' integrative motivation towards the learning of English and to encourage the promotion of more effective L2 instructional practices.

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¿Quiénes son y dónde están? Investigación biográfico-narrativa en el contexto colombiano

Who are they and where are they? Biographical-narrative research in the Colombian context

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Fecha de recepción: 18 de enero de 2018

Fecha de revisión: 15 de mayo de 2018

Fecha de aceptación: 29 de octubre de 2018

Barón Velandia, B. (2018). ¿Quiénes son y dónde están? Investigación biográfico-narrativa en el contexto colombiano. *Journal for Educators, Teachers and Trainers*, Vol. 9(1), 149 – 163.



¿Quiénes son y dónde están? investigación biográfico-narrativa en el contexto colombiano¹

Who are they and where are they?: Biographical-narrative research in the Colombian context

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Resumen

El artículo presenta una radiografía sobre el estado actual de la investigación biográfico-narrativa en la formación docente en la universidad colombiana, reconociendo los nichos de ubicación en los que se encuentran los principales escenarios de trabajo, sus máximos exponentes y los eventos en los que se ha congregado. Lo anterior, posibilita el encuentro y generación de elementos de análisis que pueden servir tanto para el desarrollo de futuros estudios, trabajos de investigación interinstitucional, conformación de redes de trabajo, creación de nuevos escenarios de visibilización de los resultados, procesos formativos que garanticen la continuidad en la apropiación de la investigación biográfico-narrativa en el contexto colombiano. El texto finaliza con una propuesta flexible y abierta de una red que permita la interacción de los diversos escenarios y actores que trabajan en Colombia este tipo de investigación para proponer una estrategia en red y brindarle un horizonte de posibilidades trascendente que nutra no sólo a Colombia hacia adentro, sino que también otros nichos de trabajo se vean beneficiados por los avances investigativos

Abstract

This paper presents the results of a research study on the current state of biographical-narrative research in teacher training in universities in Colombia, making an analysis of the places in which the main work scenarios are located, their maximum exponents and the events in which it has congregated. It allows the finding of results and the generation of initial elements that contribute to the development of future studies, inter-institutional research work, creation of work networks, creation of new scenarios to show the results, training processes that guarantee that a continuity appropriates biographical-narrative research in the Colombian context. The text ends with conclusions that allow grouping some key points in the configuration of biographical-narrative research in Colombia, projecting it and benefiting other roles of work are benefited by the research advances

Palabras clave: Investigación biográfico-narrativa; Formación docente; Educación superior en Colombia

Keywords: Biographical-narrative research; Teacher training; Higher education in Colombia

¹ Artículo derivado de la investigación "Prácticas vitales en el escenario docente "DE LIEU DE VIE"", Tesis Doctoral.

1. Introducción

Comprender los avances de la investigación biográfico-narrativa en el contexto colombiano, es una tarea compleja en la medida en que es necesario identificar los nichos de ubicación desde donde se han realizado los grandes avances y tejerlos en una red, que permita dicha comprensión y proyección. Lo anterior nos exige rastrear el concepto en los autores-investigadores representativos, en los diversos productos culturales y científicos que constituyen el acervo de la investigación.

Esta manera de hacer investigación se ha diversificado a través de los múltiples lugares donde se ha logrado desarrollar. Así mismo, ha logrado permear nuevos entendidos, concepciones y formas de manifestarse, sobre los cuales hoy día gira y se proyecta.

Estos procesos de reconstrucción dan cuenta de los cambios cualitativos que han generado tanto el concepto como la manera de hacer investigación biográfico-narrativa en el contexto colombiano. Ahora bien, en Colombia, existen cuatro grandes nichos de desarrollo en los que se ha concentrado y consolidado líneas de investigación matizadas por la tendencia.

El primero de esos grandes nichos lo constituye la Universidad de Antioquia (UDEA), y allí, surge la voz del profesor Gabriel Jaime Murillo Arango, quien ha posicionado la IBN en Colombia, desde la consolidación de propuestas de cursos en posgrado, hasta la elaboración y desarrollo de eventos de visibilización que le han permitido tomar nuevos tintes a la línea de investigación.

El segundo nicho, lo constituye la Universidad de La Salle, en el que las voces de José Luis Meza Rueda, Fernando Vázquez Rodríguez, Milton Molano Camargo y Pedro Baquero Másmela, se han concentrado en la tutoría, acompañamiento de trabajos de maestría y eventos de visibilización inspirados en la IBN, propenden por los procesos de reflexión y transformación de esas prácticas pedagógicas en el aula, trascendiendo lo institucional.

El tercer nicho, está ubicado en la Universidad Francisco José de Caldas desde donde Jairo Hernando Gómez Esteban (2015), en el marco de la Maestría en Investigación Social Interdisciplinaria, ha planteado que narrar la propia vida se vuelve una manera de expresar la individualidad, y esta acción a su vez se constituye en un objeto social con nombre propio, resultado del conjunto de prácticas institucionalizadas exigentes del reconocimiento de la autoridad que tiene la primera persona, con un relato de sí.

El cuarto nicho, se encuentra en la Corporación Universitaria Minuto de Dios-Uniminuto en donde la voz de Benjamín Barón Velandia ha ido tejiendo y transformando una serie de procesos de formación docente, que para nada estaban distantes, primero de la praxeología pedagógica del año 2011 y segundo, de la investigación biográfico-narrativa.

En este escenario, Uniminuto, que estaba concebida en el 2012, como una institución centrada en la docencia, que realiza investigación y proyección social, decide evolucionar en una visión de institución universitaria centrada en la docencia que concibe la investigación como el vínculo entre teoría y práctica, generando conocimiento transformador del entorno Social (Uniminuto, 2012).

Ahora bien, el presente artículo expone las diferentes formas y usos de la investigación biográfico-narrativa en el contexto colombiano, movilizándose por un mapa geográfico-humano de los diversos autores que lo han desarrollado desde sus nichos, con el fin de hacerlos más visibles y como fin último, proponer una estrategia en red que brinde horizontes de posibilidades trascendentes que nutra no solo a Colombia, también otros nichos de trabajo se vean beneficiados por los avances investigativos locales.

2. Metodología

2.1. Tipo de investigación

En la realización de esta investigación se utilizó un diseño cualitativo-interpretativo, tipo documental, a través del cual se establecieron los procedimientos de selección, acceso y registro de la muestra documental que se tomó.

3. Unidades de estudio

Reconociendo la diversidad y el volumen de la información que allí surgiría, resultó fundamental apoyarnos en las tecnologías de la información y las comunicaciones “TIC” particularmente en la G-Suite (Google Drive), en la que se organizaron los 450 registros de diverso tipo: libros, capítulos de libros, tesis (grado y posgrado), revistas científicas, memorias de congresos, talleres, cursos, seminarios, semilleros, entre otros.

El acervo de la información se realizó a través de un formulario de Google, que además de facilitar y permitir que la información se diligenciara de acuerdo con las categorías, también garantiza su cuidado. Posterior a este proceso, se elaboró la muestra de trabajo usando las fórmulas de condicionales anidados en el Excel de Google, de esta manera, automáticamente se fueron filtrando los registros hasta quedar la muestra consolidada en una matriz para su respectivo análisis, según tabla 1 y gráfica 1.

Tabla 1.
Recolección de información

Libros	Capítulos de libros	Tesis Pregrado	Tesis posgrado	Revistas científicas	Memorias de congresos	Talleres	Instituciones
20	15	10	30	40	10	15	4

Fuente: Elaboración propia

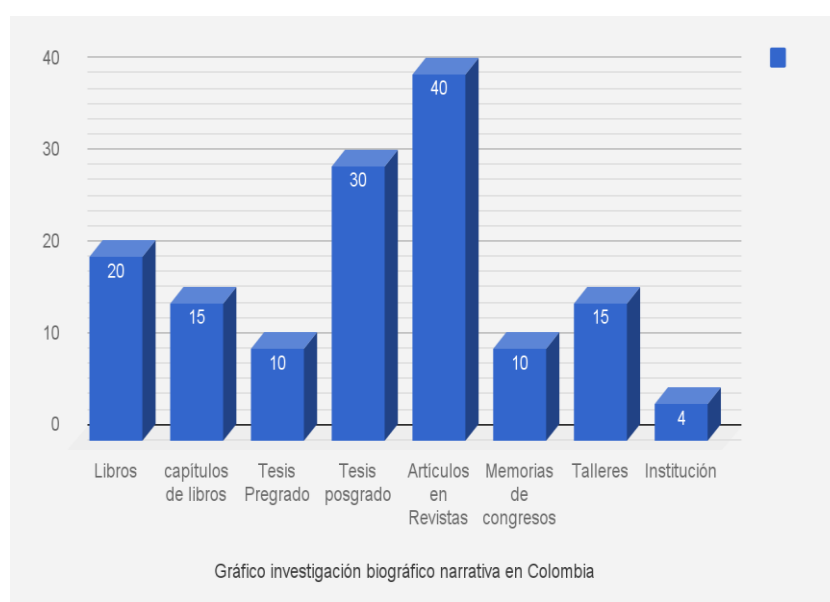


Gráfico 1. Representativa de los datos
Fuente: Elaboración propia

Como se evidencia en la gráfica, el mayor de los procesos de visibilización de los nichos se da en el orden de las revistas científicas con cuarenta (40) en las que se circulan los avances y resultados de las investigaciones, seguida de las tesis de posgrado, con treinta (30) desde donde emergen los procesos de singularización de las perspectivas dadas las condiciones de cada territorio y la relación entre expectativas y necesidades. Y no muy lejos con veinte (20) publicaciones de libros en los que se caracterizan los hallazgos más descriptivos de las simbiosis teorías-prácticas-contextos y procesos de transformación de los mismos.

4. Instrumentos

Es fundamental reconocer las bondades que genera la G-Suite (Google Drive), ya que todos los procesos procedimientos, información y los programas que se necesitaron durante el proceso investigativo se consignaron allí, evitando pérdida, duplicación de la información y optimizando tanto los tiempos como los demás recursos escasos y por ende valiosos en investigación.

Formulario de recolección (Fr): instrumento para recolectar la información que se elaboró para evitar que la información estuviera mal categorizada y optimizar la confiabilidad de la misma. (Es necesaria la imagen)

Matriz bibliográfica (Mb): esta es una de las bondades de los procesos de incorporación de la G Suite, ya que esta matriz se crea, una vez se diligencia el primer registro y de ahí en adelante puede empezar a elaborar las estadísticas en la medida en que la información se va ingresando a través del formulario.

Matriz de análisis (Ma): una vez se fijó una fecha final para la recolección de la información, se formuló con condicionales anidados que estaban entre MB y MA, para que la información que tuviera los criterios de selección de la muestra, se fuera reorganizando en el instrumento que luego permitiría reseñar y analizar.

Mapa con los nichos de investigación biográfico-narrativa en el contexto colombiano (MIBN): una vez se obtuvieron los resultados de los trabajos, y productos de investigación, se identificaron y geo-referenciaron los lugares en los que más se ha trabajado la IBN en Colombia, para el desarrollo de este aspecto, se empleó el servidor de aplicaciones de Alphabet. Inc. Google Maps, el cual es gratuito.

5. Procedimiento

Una vez se contó con la muestra, se marcaron e identificaron los textos para leerlos, revisarlos y establecer las comprensiones de cada uno de ellos en la MA de la información solicitada por las categorías de análisis. El diseño de la investigación se fundamentó en la pesquisa de las categorías de análisis establecidas que permitieran el abordaje de la unidad de estudio.

De la misma manera, fueron mapeados los que contaban con más cantidad y diversificación de procesos, productos y acciones investigativas conducentes al desarrollo de la IBN el contexto colombiano.

Para la realización de los procesos de análisis y de mapeo de la información, fueron necesarios tres momentos: primero una lectura de carácter lineal que permitió revisar de manera sistémica la información copiada de las diversas fuentes; la segunda, una lectura de corte transversal para comparar las diversas fuentes, en el que el lente de observación eran las categorías aplicadas, que reconocían los factores comunes por medio de las seriaciones, repeticiones, confirmaciones, ausencias, entre otros; y para terminar, una vez se fueron depurando los datos a través de las dos lecturas, la información se iba organizando a través del GMap.

Durante este proceso complejo de investigación fueron surgiendo hallazgos, conclusiones, resultados y propuestas, que poco a poco se confirmaban o se falseaban por el camino. Para el momento de la recolección parcial de los datos no era posible dar su total validez, estos se almacenaron en un (GDocs) documento compartido, que posteriormente se constituyeron en fragmentos de los productos de investigación (Bolívar, Domingo y Fernández, 1999).

Como proceso de investigación, el análisis documental trasciende el mero hecho de operacionalizar de manera mecánica los documentos (entrada, análisis y salida o difusión) para entenderse de manera interdependiente y simultánea a la recolección de la información, es así

como se a su vez se realiza el (entrada, análisis y salida o difusión) con sub procesos (Catalogación, clasificación, indización y resúmenes).

Las categorías de análisis, son los lentes a través de los cuales se realizan las acciones analíticas, permitiendo la consecución total de los objetivos propuestas en la investigación, que, por lo general en este tipo de estudios, se busca claridad, distinción y la rigurosidad de la información que posteriormente se divulgará como aporte al escenario de comprensiones del tema en cuestión.

El proceso investigativo escogió las siguientes categorías: definición de Investigación Biográfico Narrativa; concepciones y teorías; representantes; propósitos, objetivos y fines de la investigación biográfico narrativa; y método: técnicas, herramientas y estrategias.

Los momentos que se llevaron a cabo para la consecución del objetivo principal, estuvieron alineados con los pasos del proceso investigativo, a saber:

1. Selección del tema específico que diera cuenta de los procesos de investigación biográfico-narrativa en el contexto colombiano.
2. Identificación de categorías para orientar las búsquedas en las bases de datos.
3. Búsquedas de -investigaciones, centrando la atención en: Tesis (grado y posgrado), Revistas Científicas, Bases de Datos Electrónicas y Memorias de Congresos.
4. Basándonos en la MR, leímos y los textos seleccionados y ajustamos el marco teórico.
5. Se sintetizó los entendidos de las investigaciones en una matriz de análisis y con ella se elaboran los productos de divulgación e informes de investigación.

6. Resultados

De los resultados obtenidos a través del análisis de las categorías que se constituyeron en el insumo del diseño metodológico cualitativo-interpretativo de corte documental implementado, es posible plantear los siguientes nichos, entendidos estos como los lugares espacio-temporales que son construidos por los sujetos que comparten situaciones, contingencias, vivencias, vidas, dificultades, en otras palabras, que trasciende el lugar geográfico, que lo trasgrede.

Así, se resaltan figuras notables que han marcado la continuidad de IBN en Colombia proveyéndole nuevos elementos que, sin perder sus raíces, sus orígenes, le permitan nuevas originalidades, nuevas emergencias desde sus nichos. El orden de aparición de los nichos identifica el nivel de profundización y trabajos en torno a nuestra temática planteada en el artículo.

6.1. El primer nicho

La línea de investigación en biográfico-narrativa se ha consolidado en la Universidad de Antioquia (UDEA), gracias a las dinámicas investigativas realizadas principalmente por el doctor Gabriel Jaime Murillo Arango, quien ha posicionado la IBN en escenarios formativos y de divulgación. Entre los cuales, resulta fundamental destacar los de mayor impacto, que permiten generar procesos de transformación en las condiciones de vida de quienes los han llevado a cabo.

Por un lado, en relación con los procesos formativos, esta línea de investigación ha establecido sistemas de relación entre lo que se entiende por IBN y procesos de acoplamiento propios del contexto colombiano, sobre los cuales se escribe la historia de la formación y transformación de la cultura que propende por reconocer el punto más alto de esa mezcla que constituye la cultura que caracteriza este presente y por lo que se reconfigura la subjetividad colombiana, desde donde se recupera *“el registro de la voz en primera persona, equivalente al testimonio de una experiencia que concierne por igual a una vida individual como colectiva”* (Murillo, 2016, p.11).

Algunos de estos elementos se evidencian en la figura 1:

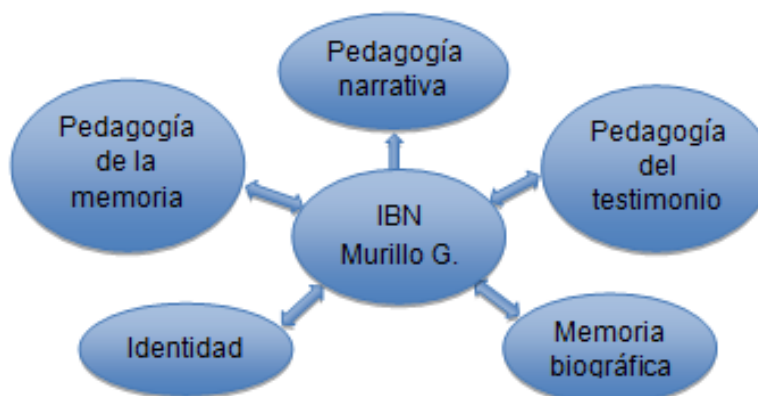


Figura 1. Elementos de subjetividad.

Fuente: Murillo (2016)

Las simbiosis establecidas entre estos elementos posibilitan hablar de una permeabilidad de la IBN en Colombia, pero también reconocer las distinciones que se hacen necesarias cuando una teoría se ha logrado comprender lo suficiente como para permitir el surgimiento de nuevas características que le son propias no solo del territorio, sino también de los sistemas de relaciones que se dan en unas condiciones temporales y culturales, entre otras.

Además de lo anterior, los procesos sociales que ha vivido Colombia han encontrado en esta simbiosis nuevas maneras de reconocer el conflicto armado, de esta manera nos ha costado dar el paso de una memoria individual, singular, de cada quien, por la comprensión de una memoria colectiva, de lo público, como lo plantea Murillo (2016):

Ciertamente en Colombia hoy pervive una memoria de la violencia, aun cuando no están dadas todavía las condiciones necesarias que permitan hablar de una política pública socialmente aceptada de construcción de una memoria colectiva con carácter “ejemplar” (p. 98).

En este horizonte de la realidad colombiana, en esta maraña de realidades, es importante reconocer que la voz viva del otro, de ese otro que fue y sigue siendo silenciada por las violencias, por esos grupos al margen de la ley que en lo cotidiano existen y que se permiten ser develadas por diversos medios, dentro de los cuales es vital identificar los grandes aportes y que nos ofrece la autobiografía, ya que es desde allí desde donde emerge el sujeto complejo, un sujeto que se hace carne y que le permite a otros vivir lo que no han podido vivir, para construir la memoria colectiva, presente y singular-colectiva que sea capaz de superar la comprensión del olvido como un borrar de la memoria y hacer de cuenta que no ha pasado, por el contrario, asumiendo el olvido como aquella capacidad que generan los sujetos para superar las dificultades traídas por las violencias, superando el resentimiento y la venganza, subjetivando la realidad, una realidad en permanente mutabilidad, donde la cultura del encuentro y del desencuentro cohabitan.

El escenario desde donde se generan procesos de transformaciones culturales y sociales es el aula, aunque no se desconocen otros escenarios de construcción de identidades y memorias, para este caso se tendrán como referentes las aulas de clases, que, en palabras de Murillo (2016):

El aula de clase es el lugar privilegiado donde el alumno está en capacidad de vivir la experiencia que ha de ser transmitida por un maestro dotado de un saber de

experiencia. Un transmitir adherido a una voz, vox –entendida en su sentido más amplio-, cuya raíz se prolonga en vocatio-onis, vocación, un sustantivo que designa la competencia de aquel que hace entrega de una ofrenda, lo que es dado como respuesta a la llamada del otro, a la demanda de aquel que desea aprender (p.8).

Es así como el reconocimiento incondicional y de la responsabilidad que ese maestro tiene en el escenario de lo educativo en la transformación de la memoria individual a la colectiva, sin detrimento de las condiciones autónoma de los sujetos que allí acuden para recibir aprendizajes con sentido.

Es allí, en ese proceso de formación de maestros donde Gabriel Jaime ha logrado impactar e irradiar con múltiples apuestas tales como: elaboración y ejecución de 2 (dos) cursos de corta duración creados y dictados, uno en nivel de maestría y uno en doctorado de manera permanente.

Como una de las tantas formas de divulgar y dar a conocer los avances investigativos propios y de los estudiantes, Gabriel Jaime ha tenido la oportunidad de dirigir/tutoriar tesis de pregrado, maestría y doctorado, 35 participaciones en eventos científicos, dentro de los cuales ocupó el rol de organizador en 18, como asistente 4 y como ponente 11, y en calidad de ponente magistral en 2.

También resulta vital reconocer la manera de extender esta diáspora, la que ha planteado desde las redes que ha tenido la posibilidad, por un lado de crear y por el otro de hacer parte fundamental entre las cuales se destacan The International Auto/Biography Association, Narrativas pedagógicas y redes de educadorxs, entre otras; y por otro, su producción escritural entre las cuales se reconocen por su impacto Public Memory and Public Mourning in Contemporary Colombia, La apuesta narrativa en las prácticas de formación de maestros, entre otros.

En este escenario de IBN en Colombia, resulta importante redefinir qué es la investigación biográfico-narrativa en el contexto colombiano desde la construcción epistemológica, didáctica y pedagógica que realiza Murillo (2016), quien dice que:

En el campo de la investigación biográfico-narrativa en educación, sin perjuicio de reconocer distintas filiaciones conceptuales, se han venido puliendo conceptos básicos con los cuales abordar el análisis de la condición biográfica en el mundo contemporáneo. En el tiempo actual de “modernidad avanzada” caracterizada por cambios profundos que han afectado los modelos de existencia y estilos de vida, así como la exaltación de un “imperativo biográfico” según el cual los individuos son conminados a responder por sus propias historias de vida, por la (auto) realización personal, a este tiempo corresponde la expresión de formas plurales de narrativa del individuo-proyecto (p. 8-9).

Resulta interesante reconocer cómo para Murillo, es vital el reconocimiento del contexto para la construcción de una definición que enmarca las relaciones entre el trabajo, la política, la economía, las poblaciones, la profesión docente entre otros, para así enmarcar los procesos de biografización en el entramado cultural que permite dar razón de las historias de vida, como tejido de realidades socioculturales, donde esta resulta de las multivocidades que resuenan al unísono desde la multiplicidad de realidades, para develar momentos coyunturales de la existencia de los grupos humanos, que eventualmente la única distancia que existe es la geográfica, porque de otra parte están conectados en el contexto, que lo trasciende y lo influencia por otras redes de relaciones existentes.

De esta manera, en Colombia los vestigios que permiten reconocer los influjos del enfoque biográfico narrativo, posibilitan nuevas lecturas desde la localidad, desde ese entramado de realidades particulares que necesariamente se religan cuando las historias de vida se dejan de ver de manera lineal y se empiezan a ver en curvas abiertas, en cortes transversales que

reencuentran nuevos nodos, nuevas miradas diagonales, superando las dicotomías, los dualismos establecidos. Para Murillo (2016):

La tendencia biográfico-narrativa en el escenario de la educación colombiana, un proceso que se remonta treinta años atrás al momento de emergencia del movimiento pedagógico, inscrito como en muchos otros países de América Latina y de otros continentes en los cambios vertiginosos que afectan el conjunto de las relaciones de trabajo, las políticas de Estado frente a la gestión de las poblaciones, el orden económico mundial, el estatuto profesional de la enseñanza y aún más los propios estilos de vida de los ciudadanos (p. 131).

6.2. El segundo nicho

En el año 2009, la Universidad de La Salle realizaría entre el 3 y 4 de junio el Primer Foro Pedagógico “La narrativa en la investigación educativa” en el marco de la Maestría en Docencia, bajo la dirección del profesor Fernando Vásquez Rodríguez. Evento que centró sus objetivos en familiarizar a los participantes con los temas, problemas y metodologías de la investigación biográfica-narrativa. Durante estos dos días se presentaron ponencias que devienen de los trabajos de maestría realizados desde la perspectiva de la investigación narrativa (Pinzón, 2013).

Posteriormente, surgen las voces de José Luis Meza Rueda, Milton Molano Camargo y Pedro Baquero Masmela, quienes establecen sus apuestas epistemológicas, metodológicas, didácticas y científicas en las tutorías y acompañamientos de trabajos de maestría y eventos de visibilización inspirados en la IBN, estas nuevas perspectivas investigativas en la academia colombiana motivan los diversos modos de hacer investigación en ciencias sociales, no solo por los métodos, sino por los procesos de escritura y visibilización del enfoque, atenuando la reflexión y transformación de las prácticas pedagógicas en el aula, trascendiendo la institucionalidad y ubicando al docente como un participante de investigación y no como un mero observador externo a la realidad. Para Molano y Baquero (2009),

La investigación narrativa permite pensar en distintas posibilidades de escritura de informes de investigación y de socialización de resultados. De tal manera que el conocimiento generado tenga espacios de difusión para todo tipo de público. Este camino permitiría a los científicos sociales y a quienes hacen investigación en educación, salir de esas torres de marfil y explorar formas cotidianas de compartir las reflexiones que en ocasiones parecen destinadas sólo para una élite intelectual: las nuevas “burguesías” de la academia (p. 133).

Las nuevas perspectivas entre las que contemplamos la IBN, procuran redescubrir horizontes de posibilidades que detraigan los esquemas tradicionales impuestos y en la diversidad, allí en ese nuevo ambiente, los sujetos participantes de las investigaciones recobran las singularidades permitiéndose ser en y para los procesos de transformación social y de comunidades. Se trata, aquí de reconocer otras maneras de hacer ciencia y de divulgarla, por ejemplo, en las narrativas de carácter escritural y en las presentaciones, las lecturas a dos voces, en las que los participantes, ponentes leen un texto remarcando la triangulación de las voces que allí convergen “los participantes, los investigadores, y los referentes teóricos” actuando en un concierto armónico que no impone sino, que entra en dialógica para apoyar y complementar la lectura de la realidad.

Molano & Baquero (2009) plantean en este orden de ideas que una de las consideraciones a tener en cuenta en la IBN es que su diseño metodológico no se separa mucho de otros tipos de diseños cualitativos. El cuidado especial en relación con lo teórico resulta importante, toda vez que el rescate de la singularidad no implica que no exista rigurosidad en la construcción teórica y epistemológica, ligadas a la metodológica. Dicen que:

El hecho de que el compromiso de la narrativa esté en el rescate de las voces particulares de los sujetos no suspende la responsabilidad de la rigurosidad en la

revisión de literatura y los procedimientos. Este fue, tal vez, el punto más álgido de todo el proceso de investigación a lo largo de la maestría y en él confluyen diferentes situaciones: Debilidades en la formación inicial, el hecho de que algunos vengan de otros ámbitos profesionales y el discurso pedagógico sea algo ajeno a sus intereses, vacíos conceptuales de orden filosófico o histórico que no permiten estructurar con suficiencia un campo discursivo inicial. Por estas razones, el proceso de lectura y escritura sobre los referentes teóricos no termina en ningún momento de la investigación (p. 132).

Los elementos constitutivos de una metodología rigurosa, no se pueden convertir en la rigidez de la misma, toda vez que se perderían las oportunidades de flexibilidad y adaptabilidad a las circunstancias que se encuentra en la investigación. De esta manera, el intento por mantener en equilibrio tanto los referentes teóricos como los contextuales, los de los participantes y las voces de los investigadores, resulta un enorme desafío que la metodología IBN se propone, porque aquí no pueden yacer unos por darle el protagonismo a uno solo, es decir, se complementan en las conversaciones en las que se reconoce la importancia de las singularidades.

Para Molano & Baquero (2009), otro de los desafíos que subyacen a esta metodología es la escritura de los relatos, ya que esta aparte de ser una actividad que jamás se termina de perfeccionar, sino que está en continuo perfeccionamiento, cuenta que en la maestría en docencia los aspirantes a magister son de diferentes ramas del conocimiento y algunas muy distantes de la historia, de la filosofía y en general de las ciencias sociales lo que los pone en dificultades para la escritura descriptiva y luego los vínculos que se establecen con los referentes teórico, y lo que más resulta incomprensible, el asumirse dentro de la investigación, es decir, que son parte fundamental de las narraciones y que sus vidas no pueden escapar de ese escenario de construcción.

Ello resulta complejo de entender, ya que siempre se habló de una objetividad, entendida esta, como la distancia existente entre el sujeto (quien investiga) y el objeto (el investigado) cuanto más distancia, mayor será la objetividad de la investigación y por ende de sus resultados.

Agregando a lo anterior, la implicación de la primera persona en los textos científicos (Ponencias, artículos, capítulos y libros) resignifica la objetividad dándole un nuevo entendido, ya no es la distancia proporcional a la objetividad, por el contrario, cuanto menos distancia mayor será el grado de comprensión de la realidad que se aborda. Además, se vuelve un acto transformador, no solo para el investigador sino también para el participante, porque ya no se denominará más objeto, ahora es un participante de la investigación, quien aporta desde sus condiciones particulares de vida, un testimonio que nutre un proceso. Así, la aparición del “Yo, siento, pienso, creo...” en los textos, deja de ser un criterio descalificante, para proveerle a los investigadores un hálito de confianza y de reconocimiento de quienes están allí narrándose.

6.3. El tercer nicho

En la Universidad Francisco José de Caldas desde la Maestría en Investigación Social Interdisciplinaria, Jairo Hernando Gómez Esteban plantea que:

Narrar la propia vida es una manera de expresarse como individuo, y esta acción a su vez se constituye en un objeto social con nombre propio, resultado del conjunto de prácticas institucionalizadas que exigen reconocimiento de la autoridad que tiene la primera persona, con un relato de sí (Gómez, 2015).

En este sentido, relatar la propia vida infiere un ejercicio de introspección, de transformación individual, pero que, a su vez, genera procesos de co-transformación de los contextos inmediatos en los que se realiza dicha acción. Hacerse consciente de los actores, lugares, momentos, entre otros que no nos delimitan, pero si nos condicionan, es decir nos proveen condiciones, características que nos permiten tomar decisiones y realizar acciones

conducentes a la reconstrucción de la vida misma, identificando nuevos nodos, nuevas tramas narrativas.

Dice Gómez (2015) que,

Cuando los seres humanos son inducidos a una construcción reflexiva de su propia existencia, a relatar su biografía -entendida como la representación que los actores hacen de su propia vida y no necesariamente como el curso efectivo de lo que realmente ocurrió, se produce un proceso de biografización entendido como la interpretación cultural que se hace de los trayectos de vida resultante de los proyectos biográficos y su puesta en acción (p.1).

En este sentido, el papel de la sociedad como construcción de subjetividades, abandona su estado de pasividad, para convertirse en un actor fundamental a la hora de configurar las biografías, los procesos de personalización de los individuos en la sociedad le generan matices condicionantes a cada una de las sociedades que se dibuja con las organizaciones y reestructuraciones en los territorios, son las acciones las que permiten comprender las delgadas líneas que reconfiguran las biografías-culturales en situaciones espacio temporales no lineales sino radiales, espirales o en vórtices.

Es claro hasta aquí que, para Gómez (2015), el papel de la biografía es clave, en la medida en que es posible hacer tejidos en términos de singularización, posicionando a personas, develando acontecimientos que se postulan como ejemplos, como modelos culturalmente contruidos a través de tradiciones orales que con el pasar del tiempo se hacen más fuertes, al punto de no ser tan importante la verificación, sino el grado de significatividad que logró impregnar la sociedad o las sociedades a las que trascendió:

Narrativas canónicas o paradigmáticas de líderes o héroes políticos o artísticos para auto-exaltarse o auto-promoverse, y dotar de esa manera a su propia historia de un significado simbólico general, como es el caso de algunos políticos norteamericanos que habitualmente utilizan la "trama" de la vida de Abraham Lincoln, un hombre sencillo que, gracias al trabajo duro y a educarse a sí mismo, alcanza el cargo más alto de su país y lo guía en tiempos de crisis (p.1).

Los aportes de Gómez (2015) nos llevan a replantearnos el asunto de la vida desde la construcción de la biografía, un proceso que se hace carne en la introspección, en el pensarnos no solo desde los resultados últimos, sino de esos devenires, de esos cambios desde las transitoriedades, como él mismo lo plantea "solo somos lo que hacemos sino lo que nos hubiera gustado hacer, y también, lo que dejamos de hacer" (p.1).

Ello nos permite reconocer nuestras decisiones, indecisiones, nuestra imaginación, nuestros sueños, el reconocimiento de nuestras ucronías, de aquello que no fue contado por no pertenecer a ciertos acontecimientos culturales o sociales, pero que, para nosotros, son tan importantes por las contingencias que les permitieron nacer y recrearse en lo cotidiano.

En este orden de ideas, para Gómez (2015) y Pinzón (2013), existe una equivalencia entre los dos tipos de acontecimientos, los imaginados y los vivenciados, ya que es posible que para el sujeto que los construye tienen la misma significatividad y valor, ya que tanto el uno como el otro se constituyen en detonantes que cambian el rumbo de vida no solo del sujeto, sino que en muchas oportunidades, la de las sociedades completas, porque se adhiere a las relaciones y ejercicios de poder que tiene quien las comunica y transfiere.

Este acontecimiento no está desprovisto de emociones, o de neutralismos, es precisamente un ejercicio político transformador el que se hace presente "al fin y al cabo, los dos cumplen la misma función en la vida: producir metamorfosis, rupturas, revelaciones inéditas, emprender nuevas empresas, apostarles a otros sueños" (p.2).

6.4. El cuarto nicho

Este nicho, se encuentra en la Corporación Universitaria Minuto de Dios-Uniminuto, en donde la voz de Benjamín Barón Velandia ha ido tejiendo y transformando una serie de procesos de formación docente, que para nada estaban distantes, primero de la praxeología pedagógica y segundo, de la investigación biográfico-narrativa. En este escenario Uniminuto, que estaba concebida como una institución centrada en la docencia, que realiza investigación y proyección social, decide evolucionar en una visión de institución universitaria centrada en la docencia que concibe la investigación como el vínculo entre teoría y práctica, generando conocimiento transformador del entorno social, para concebirse como una institución de educación superior que concibe la investigación como la médula a través de la cual la docencia, la proyección social y la internacionalización se realimentan de manera permanente, interdependiente y simultánea (Uniminuto, 2012).

En este sentido, la investigación que subyace desde los procesos formativos, encuentra morada en los procesos de transformación tanto de las prácticas pedagógicas, como de las prácticas de investigación. Así, desde los resultados de las investigaciones el corpus de conocimientos, las estructuras curriculares, los materiales de trabajo y las actividades que se comparten en lo cotidiano de las clases contienen un alto componente de aportes emanados de dichos procesos investigativos que devienen de las diversas convocatorias de proyectos internos (disciplinares e interdisciplinares) y externos (gubernaciones y Colciencias, principalmente).

Los temas principales que emergen de este nicho en relación con IBN han girado en torno a los procesos de caracterización y cualificación de prácticas pedagógicas e investigativas. El núcleo fundacional de este trabajo radica en los procesos de investigación praxeológica, realizados por el Padre Carlos Germán Juliao Vargas, quien ha desarrollado este concepto y ha bebido tanto del enfoque narrativo como de lo biográfico, para comprender el sentido de la reflexión docente y su papel en la transformación de la sociedad a partir de la educación social en el Minuto de Dios (Juliao, 2017) y (Pujadas, 1992).

La reflexión sobre la propia práctica, en este caso aplicada a la docencia, descansa sobre el supuesto de que el maestro actúa como tal usando un conocimiento implícito, formado por esquemas mentales, principios, creencias o teorías, que se vuelve, debido a su invisibilidad, bastante reacio al cambio. Dicho saber práctico puede ser revisado y reconstruido mediante la Autorreflexión. Una estrategia o dispositivo poco utilizado, pero muy valioso, es la narración autobiográfica (Murillo, 2016, p.135).

Es en la acción en la que el sujeto es capaz de internalizarse y aprehender las acciones que debe tomar para la transformación de sus actos, ya que estos eventualmente no son tan evidentes como pensamos. Aquí es posible que la interlocución con otros, sean estos docentes compañeros, estudiantes, coordinadores, entre otros, los que le permitirán verse en perspectiva individual-colectiva, aportándose mutuamente datos precisos sobre los sujetos en su acción, irremediablemente modifican y son modificados por el contexto que rodea a los demás y actúan como agentes transformativos de los cambios sociales.

Es en este escenario en el que el profesor Benjamín Barón Velandia, haciendo varios procesos de investigación, construye una línea de investigación en formación profesoral que se alimenta de la IBN para lograr la simbiosis entre praxeología pedagógica (campo de reflexión sobre las prácticas) y la IBN como enfoque metodológico para ampliar el campo de acción investigativo, que posibilite la comprensión del ser humano y de su vida, en relación con sus prácticas pedagógicas (Fernández, 1995).

En otras palabras, que se comprenda la multidimensionalidad de los sujetos que se dedican a compartir sus conocimientos para transformar las comunidades, sociedades y las culturas, que se visibilicen los procesos de cualificación docente más allá de los entendidos de cualificación profesional (especialización en las didácticas, epistemologías o pedagogías de las disciplinas)

dándole paso a procesos complejos que permitan la creación de escenarios para el ocio, el cuidado de sí mismos, de sus familias, de sus relaciones sociales, entre otros.

Para Barón (2017), la toma de decisiones que se da en este entendido, lo lleva a plantear a modo de conclusión una de las “vías para salir de la crisis, esos cambios cualitativos de las realidades docentes”

Vía de cuidado personal en las múltiples dimensiones de las personas, como sujetos complejos que nos auto-observamos y redescubrimos que además de lo académico, existen otras motivaciones que nos generan apasionamiento; hay momentos de ocio, de aprendizajes que cultivan el espíritu y llenan de nuevos sentidos la vida personal y la de quienes nos rodean (p. 98).

La relación establecida entre los diferentes actores y escenarios en los que se dan los procesos de cualificación docente posibilitan un mejoramiento de las prácticas pedagógicas, porque resulta fundamental identificar al docente como un ser complejo que necesita y aspira un desarrollo multidimensional, en el que no solo se ponga de manifiesto su nivel cognitivo y su capacidad para promover transformaciones individuales y colectivas, sino que también requiere de procesos personales que le generen nuevas condiciones personales.

De esta manera, el docente y la institución se benefician en términos generales, toda vez que se reduce la mirada determinística sobre el docente y se amplifica la comprensión del mismo, pasar de un aspecto que en la teoría se ha teorizado mucho, pero en la práctica no se da y es su condición humana.

7. Conclusiones

El artículo tuvo como orientación fundamental el reconocimiento de la investigación biográfico-narrativa en el contexto colombiano centrando principalmente la mirada en los procesos de formación docente. Las condiciones particulares que permitieron asir el universo de información en menor medida, fue relevado al reconocer la importancia de establecer procesos de cualificación docente que trasciendan lo estrictamente académico y hallen morada en el goce, el ocio y el crecimiento personal, en el que lo cognitivo es una dimensión, pero no la única. Sin embargo, los hallazgos de la investigación, demuestran todo lo contrario, poniendo en evidencia la existencia de un problema que parece afectar cada vez más al docente de universitario “la crisis de sus prácticas de vida en la acción docente”.

Resulta fundamental resaltar que en el campo de la investigación biográfico-narrativa en el contexto colombiano existen cuatro grandes nichos en los cuales se ha trabajado diversas manifestaciones y/o escenarios en la formación docente. Cada una con una distinción, pero centradas en el reconocimiento de las condiciones de las prácticas docentes a través de procesos de introspección, narrativas, memoria y biografización.

Vital el eje de trabajo de una gran mayoría de los trabajos tanto de investigación como monográficos que gira en torno al mejoramiento de condiciones laborales y de vida de docentes, la búsqueda de calidad de vida, por encima de condiciones económicas. Así, se pone de manifiesto la co-responsabilidad, el encuentro de los intereses, necesidades y expectativas de los docentes y de las instituciones a las cuales pertenecen para crecer juntos y no sentir un desarraigo por la institución, donde no existen vínculos afectivos, sino relaciones entre empleado y empleador.

La investigación Biográfico-narrativa más allá de ser un enfoque metodológico de investigación cualitativo se consolidó en Colombia como una manera de abordar la vida de los docentes a partir de los años 80. Desde cada nicho se desarrolló una forma de comprender y transformar las prácticas cotidianas de los docentes. Pasando por estadios tales como, el reconocimiento de las huellas en los cuerpos de los sujetos que desarrollan la profesión docente “la memoria”; la identificación de prácticas tradicionales que han hecho carrera en la docencia, sin existir una

comprensión de su importancia e impacto en los procesos formativos; la caracterización de perfiles, estilos, maneras de enseñar y aprender entre otros que se ponen de manifiesto al realizar este proceso de investigación; entre otros.

De acuerdo con lo anterior, la multiplicidad de maneras de abordar e implementar la investigación biográfico-narrativa en educación, las categorías que posibilitan un acercamiento y asirla, es una consecuencia de su creciente uso, posicionándose como una forma de subjetivación de la realidad (Barón y Cancino, 2014), que es plástica ante las situaciones de la investigación, es decir, que tiene una utilidad; que es práctica; que cuenta con rigurosidad, y ante todo que se constituye en antecedente para futuras investigaciones en el campo educativo.

Su utilidad se reconoce porque su objetivo se concentra en la descripción y comprensión de la realidad docente, como metodología la investigación biográfico-narrativa brinda estrategias, técnicas, herramientas y métodos para la consecución de cada uno de estos propósitos. Esto la hace flexible a las expectativas y/o necesidades de los investigadores, participantes, contextos, entre otros, dividiendo los desafíos del proceso investigativo.

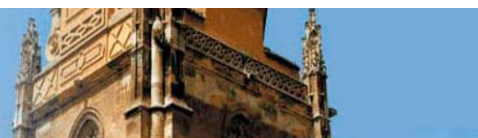
Su practicidad, al contar con flexibilidad metodológica, sus dinámicas adquieren un carácter diferente a la rigidez, sin perder la rigurosidad, pero reconociendo que lo importante supera los resultados y se enmarcan en los procesos de los aprendizajes que se dan en las dinámicas de investigación, por ello, tanto técnicas, como instrumentos y estrategias se van adaptando a las necesidades que emergen de los sistemas de relaciones que allí se dan.

En cuanto a la rigurosidad, técnicas, herramientas, métodos, estrategias, entre otros, de orden cualitativo, sin desconocer los grados aportes que brinda el tipo cuantitativo, obedecen a criterios de selección, sistematización, interpretación y análisis, los cuales son previamente consensuados, evitando el sesgo y la pérdida de la objetividad. El investigador será valorado de manera compleja, es decir, por sus resultados, por la lógica de sus procesos y por las decisiones metodológicas que implemente durante la investigación.

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Analysis of student's challenges and performances in solving integral's problems

Análisis de desafíos y desempeños de los estudiantes para resolver problemas integrales

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Date of reception: 5 May 2018

Date of revision: 11 November 2018

Date of acceptance: 29 December 2018

Darvishzadeh, M., Shahvarani-Semnani, A., Alamolhodaei, H. & Behzadi, M. (2018). Analysis of student's challenges and performances in solving integral's problems. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 164 – 177.

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)
ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

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Abstract: Integral is the base of pure and applied mathematics for all students of science, especially engineering, which some of their lessons are dependent to it directly or indirectly. In fact, Integral is an indisputable concept for solve practical and executive problems of students, so it is important to pay attention to it. On the other hand, experiences of teaching Integral have indicated that most students have weakness in solve Integral problems. Through case study, an exam has been conducted in the form of six problems on six good experienced students in order to study the students' behaviors in coping with the integral problems and also to reach a proposed method for teaching the integral concept, in which each question has in turn two parts. The analysis of their responses and discussion with them have led some light on more details about the integral, how to teach it and also the problems as a result of the teaching method and the problems to which they would encounter, so that by their citation, an appropriate teaching method could be presented in order to maximally conceptualize the integral in students. On the other hand, these studies reveal that in order to solve the integral-related problems, most students first refer to the initial function approach and try to solve the problem by the direct method rather than spending their time learning conceptually and meaningfully. But those students who have used Riemann concept and infinite collection in solve Integral problems were successful in compare to others

Resumen: Integral es la base de las matemáticas puras y aplicadas para todos los estudiantes de ciencias, especialmente de ingeniería, de las cuales algunas de sus lecciones dependen directa o indirectamente. De hecho, Integral es un concepto indiscutible para resolver problemas prácticos y ejecutivos de los estudiantes, por lo que es importante prestarle atención. Por otro lado, las experiencias de enseñanza de Integral han indicado que la mayoría de los estudiantes tienen debilidad para resolver problemas de Integral. A través del estudio de caso, se realizó un examen en forma de seis problemas en seis estudiantes con buena experiencia para estudiar las conductas de los estudiantes para enfrentar los problemas integrales y también para alcanzar un método propuesto para enseñar el concepto integral, en el que cada uno La pregunta tiene a su vez dos partes. El análisis de sus respuestas y la discusión con ellos han dado luz sobre más detalles sobre la integral, cómo enseñarla y también sobre los problemas como resultado del método de enseñanza y los problemas con los que se encontrarían, por lo que, según su cita, Se podría presentar un método de enseñanza apropiado para conceptualizar al máximo la integral en los estudiantes. Por otro lado, estos estudios revelan que para resolver los problemas relacionados con la integralidad, la mayoría de los estudiantes primero se refieren al enfoque de la función inicial y tratan de resolver el problema por el método directo, en lugar de pasar el tiempo aprendiendo de manera conceptual y significativa. Pero aquellos estudiantes que han utilizado el concepto de Riemann y la colección infinita para resolver problemas integrales tuvieron éxito en comparación con otros

Palabras clave: Integral concept; Initial function concept; Riemann concept; Teaching; Challenge; Performance

Keywords: Concepto Integral; Concepto De Función Inicial; Concepto De Riemann; Enseñanza; Desafío; Desempeño

1. Introduction

The mathematical concepts, according to Dane et al. (2016), have complex, abstract, and hierarchical levels. In formal education, as Çetin, et al. (2012) indicated, we face the increase in these aforementioned levels of mathematical concepts and also the class level. The concepts of integral, continuity, derivative, and limit, employed in related departments of science; education and engineering faculties, for example, have very hierarchical and abstract forms. We use the concepts, such as accumulation point, neighborhood, etc. to describe the concept of limit, which is considered as the base for other concepts, located at the beginning of the sequence. On the other hand, the research review in this area revealed the learning difficulties of the students in the concepts of integral, continuity, limit, and derivative (Özkaya et al., 2014; Biber & Argün, 2015; Kula & Bukova Güzel 2015; Baki & Çekmez, 2012).

For all students and especially university students, the integral and its related concepts are one of the important, fundamental and necessary topics in learning basic mathematics. Integral is indeed the basics of calculus. Therefore, it may be said that if they sufficiently dominate the integral, it means that they have learned its previous topics, including limit and differential well. On the one hand, it is an Irrefutable tool in solving applied problems for university students, especially in the majors of basic sciences and engineering (Dancis, 2001). On the other hand, it may be declared that integral is the entrance to the advanced mathematics which is made based on limit. In fact, other meaning layers of limit are differential and integral (Jones, 2013). Integral is a topic for other higher-level and advanced mathematical subjects for university students. Therefore, to pay careful attention to it is necessary. How it is taught to students and university students, is important, however, it has been not discussed as it should have been. A little research on the first-grade students show the fact that most of them hate integral and know it as somehow their mathematics nightmare in Iran as developing country, but really why? Which factors have led to this problem?

We can mention the following points in answer to this question which has drawn from different experiences of teaching over long years in Iran: a) Lack of dominance on the pre-requisite integral subjects in coping with it (weakness in basic and calculation-related subjects), b) Learners' lack of sufficient motivation to learn, c) Ineffective teaching of integral, Incorrect educational system, d) Lack of an applied viewpoint in teachers in teaching integral, e) Changing students and university students' preferences in relation to living principles (Ubuz, 2011).

According to the above issues, in recent decades, math-oriented subjects have been especially under attention on the basic mathematics level and relatively many research works have been presented in this regard, especially about limit, differential and – more or less- integral throughout the world -unfortunately except Iran (we know that these three subjects are completely inter-related). Therefore, since in addition to the concept of function, limit, differential and integral concepts are the basics of the basic mathematics of the B.S. degree, they have been especially under attention in recent decades in the world and how students perceive these concepts, has been studied in order to obtain applied results. But to what extent are these results applied, is in turn discussable (Orton, 1983; Thomas & Hong, 1996; Allen, 2001). Remember that students aged around 14-15 become introduced to the concepts of limit and integral, while this age is about 15-16 for entering the integral subject (Orton, 1983).

In fact, at the ages 14 to 16, the fundamentals of the student basic mathematics are formed. Of course, after the completion of this course which lasts about two years, some students are able to solve the integral-related problems. Dane et al. (2016) explored on the hierarchical structure of mathematics to check if it had emerged in the minds of the university students or not, with regard to the concepts of derivative, continuity, limit, and integral from the students' viewpoint in the department of mathematics in the faculty of science and letters, and the department of secondary school mathematics teacher training. The findings of his study revealed the inability of the participants in theoretical learning of the integral, continuity, limit, and derivative concepts and their inability to comprehend the hierarchical structures that rest among these concepts.

According to these results, we find it necessary to place more activities that lay emphasis on the relationships among the concepts in the actual teaching of the concepts. The fragmentation of the students' thinking structure had been shown by Adi Wibawa et al. (2017) in solving the problems of the application of the definite integral in area. The term "*Fragmentation*" is used for the storage section in the computers, which is highly correlated with the theoretical structures that occur in the memory section of the human brain. Nearly all the students hold different ways in constructing a problem. Finding the students' thinking process is very interesting. There were two findings in every case of this study, including the fragmentation of the construction pseudo, and the fragmentation of the whole construction. The data in this study was gathered from the in-depth exploration and the full description of the students that their field of study was mathematics education since high school that they studied in the courses on area and the integral.

In the Iranian high schools and the first grade at university, integral is presented with approximately three main approaches- initial function, Riemann and infinite rectangles summation (periphery and area)- each of which somehow responds their needs in solving various problems. Of course, each of them has in turn some details paying attention to which is very important. But is it possible to declare that students and university students' understanding of integral is only dependent upon one of the above factors or includes all three? In other words, the main problem is whether the integral may be taught and conceptualized merely with one approach without considering the other two approaches or all three approaches are necessary and inter-related. Of course, this subject is somehow dependent on the teaching purpose too, i.e. as teachers, what we finally expect from students and university students. For instance, if a student learned the integral by the initial function approach, he/she could calculate $\int_0^2 x \, dx$ easily. However, is he/she able to describe $\lim_{n \rightarrow \infty} \sum_{i=1}^n f(x_i) \Delta x_i$, where $f(x_i) = x_i$? Is it possible to declare that he/she has learned the integral (Jones, 2013)?

In integral conceptualization, each of the above-mentioned approaches has in turn interrogative patterns that must be addressed and conceptualized in a layer-by-layer manner. Now we aim to see if the main approaches of integral teaching have to be learned simultaneously and inter-related or they can be taught separately and merely by concentrating on a single approach. In fact, this study presents the following questions: To what degree have the Iranian students perceived the integral concepts after completing the related lessons? What is the appropriate method of teaching integral on the B.S. level? and Can integral be taught merely with a single approach?

2. Methodology

Since this research follows the responses of the numbers of students in solving integral's problems process and in order to precisely study the above-mentioned subjects, we based our research on the observation and case study of 6 students of who are currently studying the major. Then we have proposed a exam with ten problems at first phase. At second phase, ten problems are studied in terms of content validity by five professors of pure mathematics and mathematics education in the Islamic Azad University of Mashhad. Regard to views and content validity indexes, six questions are accepted finally (see Appendix). Also, all problems have taken from Apostol (1967). The reliability of all six problems are proved on the same samples of students then its reliability is determined that was more than 0.70.

Participants were asked to present their responses along with the complete explanation of their responses' details (on the board, in written and oral manners and by declaring whatever passed their minds). It is important to mention that the problems were proposed such that we could differentiate between the computational and the conceptual understanding of students about integral. In addition, all of them were proposed in the form of three approaches presented to the students about integral so that each group could discuss them according to its higher skill in solving a specific type of integral. In addition, we tried to propose problems that would be understandable for all three groups of students. In fact, after being certain that the students had

understood them, they were asked to solve and discuss them. The exam was conducted from each group on one day and the next group was postponed to another day. In fact, one session of interview (via the reviewer (one of the authors)) and one exam during three hours on a day for each group executed, of course with regards to time of rest and recovery.

Interview has done through questions that proposed by one of the authors about solving integral's problem. First, each group read first problem then interacted and talked together and gave the appropriate answer as much as possible, then were interviewed and began to solve the next question. Each group answered a problem at first and then the interview was conducted about its response, after that they proceeded to the next problem. The time considered for each question was about 30 minutes. All session (almost two months- two sessions for each week) with every group were recorded during the exam and the interview, so they are re-analyzable.

The interview was purposeful, i.e. the interviewer presented questions according to their possible responses to get nearer to the purpose of the interview. Composition of the groups is such that they could interact with each other and that problem solving for both groups should be satisfactory.

Each session held in presence of 4 students that 2 of them are students participating in the exam and interviews and one interviewer (one of the authors) who are experienced and successful faculty members in the department of mathematics, science and research branch, Islamic Azad University of Tehran.

It is important to mention that the students' oral responses to the problems were much longer than what would come, but we tried to convey their meaning as much as possible. All dialogs are recorded by camera. Then discussion and results are analyzed in terms of videos.

3. Participants

Students participating in this research have selected from 40 engineering students who study at Islamic Azad University of Mashhad, such that at first, these students were trained for two semesters in pre- university mathematics and general Math I and II, their training in these lessons based on the proposed exam include all details and preparations.

All have participated in two midterm and final exam for each lesson, and after reviewing the results of these exams, and examining their high school education records, 6 students were selected who received score higher than 17 in these exams (Scores in Iran's universities are calculated from 20). Secondly, every 6 students have good education records in high school. Thirdly, because of the importance of experience in solving the Integral problems, these 6 students have sufficient experience in field of Integral so that their weakness in solve Integral problems cannot be related to their inexperience. These 6 students were divided into three groups, each consisting of two students. For the understanding their responses, researchers have recognized them with names; their names were Negar (NEG), Mahshid (MAH), Negin (NEGG), Mahshad (MAHH), Hooman (HO) and Hiran (HI).

4. Results

Dialogs and results of students' solving are rescored and analyzed by researchers such as; Negar and Mahshid behaved in response the first question: We know that the first question is about the anti-derivative (initial function) and solving the integral with this method is routine with a normal and organized process. When Negar and Mahshid were asked to solve the first question, first they transformed the first integral into two parts, i.e. $\int_2^4 x dx$ and $\int_2^4 \frac{2}{x^2} dx$. When they were asked about the reason, by moving her hand over the whole function under the integral and emphasizing on dx , Negar said that since $(x - \frac{2}{x^2})$ is a differential of x , and by

using the differential feature which is broken on summation and subtraction, this is possible to do. She pointed to the lack of parentheses for $x - \frac{2}{x^2}$ and said that this function (while pointing to $x - \frac{2}{x^2}$) is a differential of another function. Mahshid said that this integral somehow indicates the initial function and reminds us of it. By pointing to dx , she said that this initial function is definitely computable via differentiation. But it remains to be seen that relative to which the differentiation should be applied. Mahshid wrote the function $x^2/2 + 2/x$ with the help of Negar. She said that the function in front of the integral may be obtained by differentiation. While Negar and Mahshid were talking, the interviewer noticed that both of them had conducted the whole steps without considering the number 2 and 4 (the integral extremes) and they had referred to them after obtaining the initial function. Negar said that now the integral value may be computed (see figure 1):

$$\begin{aligned} \int_2^4 x - \frac{2}{x^2} dx &= \int_2^4 \left(x - \frac{2}{x^2} \right) dx \\ &= \int_2^4 x dx - \int_2^4 \frac{2}{x^2} dx \\ &= \frac{x^2}{2} \Big|_2^4 + \frac{2}{x} \Big|_2^4 \\ &= \left(\frac{16}{2} - \frac{4}{2} \right) + \left(\frac{2}{4} - \frac{2}{2} \right) \\ &= 6 + \left(-\frac{1}{2} \right) = \frac{11}{2} \end{aligned}$$

Handwritten mathematical work for problem 1. The work shows the integral $\int_2^4 x - \frac{2}{x^2} dx$ being split into $\int_2^4 x dx - \int_2^4 \frac{2}{x^2} dx$. The first part is evaluated as $\frac{x^2}{2} \Big|_2^4 = \frac{16}{2} - \frac{4}{2} = 6$. The second part is evaluated as $\frac{2}{x} \Big|_2^4 = \frac{2}{4} - \frac{2}{2} = -\frac{1}{2}$. The final result is $6 + (-\frac{1}{2}) = \frac{11}{2}$. A red arrow points to the integral sign with the text 'that's the point'.

Figure 1. A sample of handwriting for problem 1

For the second integral, they immediately said that the function $\sin x$ may be written for it (without considering the number 2), the integral extremes must be arranged bottom-up (by pointing the integral sign by hand) from low to high values and the positions of $\frac{\pi}{2}$ and 0 must be exchanged and put behind the negative integral. When the interviewer asked about the reason, Mahshid referred to the concept of integral as an area and said that if the positions of 0 and $\frac{\pi}{2}$ are not changed, the result value will be negative in which case, there is a paradox. When we asked Negar about the reason of not considering the number 2, she answered that since $\cos x$ is a differential of another function, a constant number does not affect it.

Also, for the second problem, the interviewer asked Negar and Mahshid and we omitted dx in the first integral of this question in order to have more discussions. Negar introduced the function $e^x + C$ for the first integral in this part. When we asked them for an explanation about, Mahshid said that $e^x + C$ refers to a set of functions and it somehow points to a special function too which is omitted by differentiation. Negar said that the main function may have a constant. She described the integral as an action for finding the anti-derivative of equilibrium. What should be differentiated is within the integral. Mahshid added a dx to the end of the integral. In answering why, she had done that, she said that $\int e^x$ is meaningless in itself and in fact it cannot be considered as a differential or alike. In order to solve dx , it is necessary to reach the same initial function derivative. She emphasized that dx helps us understand how the initial function has been transformed into an integral. Mahshid states that if Δx does not exist, then this relationship can not be understood and acquired by the initial function. On the other hand, since derivatives are taught in the course before integral, the integral may be taught as an anti-derivative action. The students' conclusion of integral should not have a separate/united concept, but it should be learned as a reverse action (Anti - derivative). All six students do easily this inference. In solving every problem, they address using this inference of integral, especially for items I_{22} and I_{23} that require integral solution skills. Since both integrals are limitless, they choose to use this method (see figure 2):

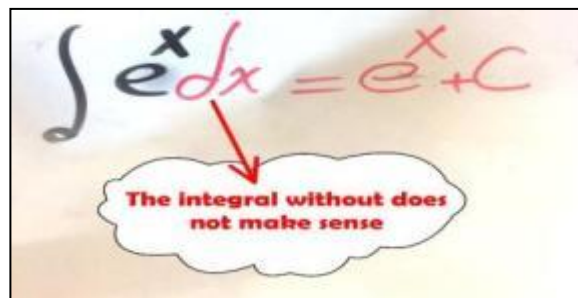


Figure 2. A sample of handwriting for problem 2

In fact, they did not offer a persuasive answer to the question why they did not refer to other methods to solve these two integrals. They just said that this is the best and the easiest method. Now, the interviewer follows the interview based on students' way of thinking and their perceptions from different problems: "how do you infer the integral's extremes when you conceptualize the integral as an initial function?" The interviewer asked Negar and Mahshid to explain these extremes for I_{11} and I_{12} .

Negar: By emphasizing the point that the solution of the integral I_{21} is finished by using $e^x + C$, for I_{12} and I_{22} , we obtain the difference between them in the main function (by moving her hand over the integral sign itself). Even in I_{12} , $\frac{\pi}{2}$ has to be substituted with 0. In fact, it may be declared that they just aim to solve the problem, without completely considering its concept. With this inference, there is no complete and precise conceptualization in their minds, while they just learn a complete skill for learning the integral. For instance, we noticed only in Hiran's discussions that he does not look at the number 2 and 4 merely as numbers in I_{12} , but he considers them as the values of the main function in 2 and 4 and he obtains their difference simultaneously. When The interviewer asked Hiran and Hooman to discuss with me about how to solve I_{11} without using the initial function.

Hooman: the integral function may be divided into f and g functions, where $f(x) = x$ and $g(x) = \frac{2}{x^2}$, i.e. each of $\int_2^4 x dx$ and $\int_2^4 \frac{2}{x^2} dx$ gives of an area in the range of 2 and 4, when they are subtracted, the targeted value in the integral may be obtained (he referred to the area between both hypothetical functions drawn by him). Indeed, it may be declared that teaching integral as area has taught them the concept that the integral may be considered as a limited area between these two functions. In fact, we can have this concept the subtraction sign in the problem definition has helped Hiran and Hooman in their explanations, but what would be their answers if the cause was summation? We conduct the discussion about the next problems with Negin and Mahshad.

For problem three I_{31} , Negin immediately wrote the $S + C$ function on the board and explained that; Negin: When there is nothing in front of the integral, it means that the function under the integral is 1, therefore we may say that the answer is only the S function whose derivative equals 1. It is clear that again, the first solution that came to her mind was to use the initial function in solving the integral. So we are content that she has not used x in the answer. By seeing the definition of the problem, Mahshad declared the answer $x + c$ loudly at the very beginning. So we can conclude that he has made an inadvertent mistake, not a conceptual one. For I_{32} , I talked to Mahshad and he answered: Since there is dq in the integral, it means that our initial function must be based q on, therefore I do not consider p and even I put it out of the integral. Now the answer is like the previous integral (I_{31}) and it is done. In fact, again they both solved the integral with the initial function method and just looked at the answer as a general solution, although some layers of thinking about the area may be seen in their comments and they might have answered this question with a combination of both (see figure 3):

$$\int P dq = P \int dq$$

$$= Pq + C$$

Detection of no connection between q & p

Figure 3. A sample of handwriting for problem 3

When we turned to the fourth question, discussion with Mahshad and Negin was continued.

Mahshad: According to the inference of integral as area, it may be easily said that I_{41} and I_{42} give us areas, but since f is a negative function, i.e. it is under the x axis, this area is under the x axis and since the f function is defined over the D area, it may be assumed that D is from a to b on the x axis, i.e. the area considered in I_{41} is the segment limited to the f function and the x axis from a to b under the x axis (he drew a picture for this with details on the board). It is found, according to Mahshad and Negar's explanations, that they were able to differentiate the integral determination with the initial function and the area. In this case by showing a and b on the x axis, they refer to the point that when there is an extreme in the integral, these values merely determine a physical boundary for a specific area on a plane, not just two mathematical numbers. In fact, this integral in turn determines the figure drawn by Mahshad. This area is only computable via integral. Mahshad's emphasis on dx and its relationship with the x axis to draw a figure requires more attention. He said he found that the area under consideration must be limited on the x axis. In his discussion, he said that if f is any optional function, then its value may be calculated by using the initial functions (see figure 4):

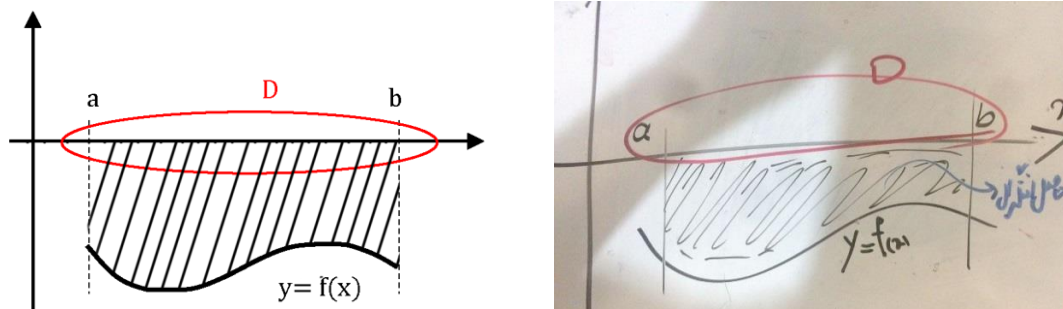


Figure 4. A sample of handwriting for problem 4

He just used two integral inference methods simultaneously in order to obtain the integral that is very interesting. When Negar was asked about I_{42} , after several minutes of hesitation, Mahshad said that it may be declared that I_{42} is the same as I_{41} , except that it has the $\frac{1}{2}$ index added. Since I_{41} give us an area, this the $\frac{1}{2}$ index causes that I_{42} makes half of it. Mahshad's answer with Negar's sympathy was a simple, but complete one. When I asked them about their private discussion, Negar said that $\frac{1}{2}$ may be considered as the $f(x)$ index and I_{42} may be assumed as $\int_D \frac{1}{2} f(x) dx$. In this case, it may be said that the area under consideration is halved, since $f(x)$, i.e. its width is halved, while dx is constant, i.e. x is still from a to b . This viewpoint may be explained such that Negar proposed a more complete conceptualization of integral as an area compared to Mahshad which would considerably help her in solving more advanced problems. Negar considered $\frac{1}{2}$ and $\int_D f(x) dx$ as two separate and unrelated terms and after calculating the latter, she multiplied them, while Mahshad did not consider them separately and considered the integral as a whole. He considered $\frac{1}{2}$ as a part of the f function (see figure 5), experience in

teaching mathematics has showed that many university students consider $\int_D dx$ as content for $\int_a^b dx$. For example, they consider $\int_D f(x)dx$ as a short form of $\int_a^b f(x)dx$.

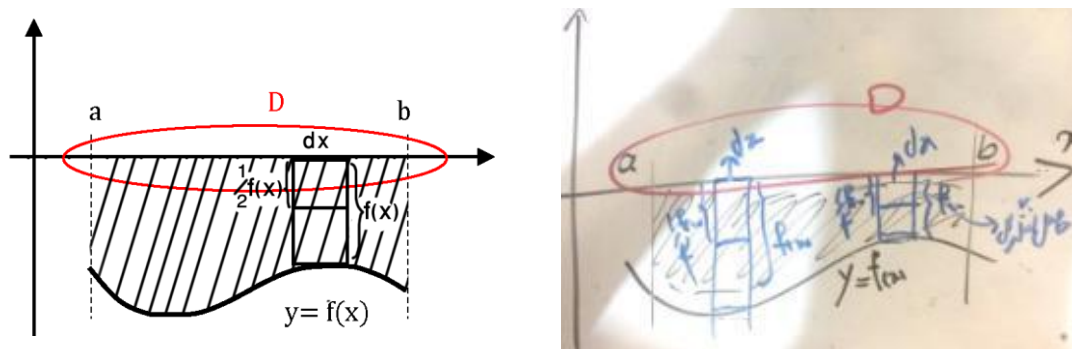


Figure 5. A sample of handwriting for problem 4

For the fifth problem, we had a discussion with Hooman and Hiran, the two students who had more experience and knowledge about integral. Hiran, according to the figure and that it is similar to no geometrical shape, an integral must be used here (the geometrical inference of integral with area). The vase may be considered as lying on the plane. Now the bottom of the vase that are smooth, are named as a and b . its left and right parts are names as $f(x)$ and $g(x)$, respectively. Therefore $\int_a^b [(f(x) - g(x))]dx$ may be solved to obtain the desired value. Hiran said that we divide this area into smaller rectangles and then add them up (simultaneously he moved his hand from left to right over the hashed part). We subtract the summation of the big rectangles from the small ones and in this way obtain the solution. Hiran pointed to the fact that since there is no rule about f and g , the area must be divided into smaller rectangles and then subtract the summation of each of them. Therefore it may be said that they both have completely understood the integral by area determination, i.e. the summation of infinite rectangles and used them in solving problems.

Hooman: in fact, we have cut the hashed segment into smaller rectangles whose width and length are $f - g$ and Δx , respectively and add them up. During this, however, we lose some parts of the hashed area. Therefore we make Δx increasingly smaller until there is no part remained. Hooman used this rectangle to convey the solution and presented his whole comments based on its width and length. Even they pointed to the fact for the beginning and the end of the integral that the bottom of the vase is the initial dividing point of the area, while its top is the end point of the hashed part into smaller rectangles. In fact, the integral extremes show where to start and finish the summation. While the question is solved by both students, we found that they had noticed that they had to consider Δx as a very tiny part (they used the term "thin and thinner" rectangle) to obtain the precise value of the area. They filled the existing gaps by making the rectangles increasingly thinner to reach the precise solution. Their inference of integral is related to the area and periphery viewpoint which is different from Riemann summation, although two of the students solved it with Riemann summation (see figure 6):

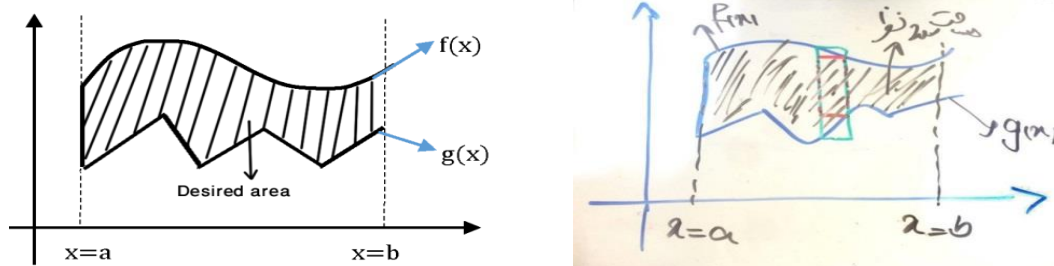


Figure 6. A sample of handwriting for problem 5

For the sixth problem, we refer to my discussion with Hooman and Hirad. They answered the first part easily with a discussion between them and said that $\int_0^2 (2x - x^2) dx$ is the solution.

- Hirad: since the hashed area is the area limited to the graph $y = 2x - x^2$ and the x axis in the range of $x = 0$ to $x = 2$, in order to obtain it, it is sufficient to reach $\int_0^2 (2x - x^2) dx$. In order to obtain this integral, too, the function conformity form is used to find the solution.

I noticed, by behavioral analysis of Hirad on the board, that during his discussion with Hooman, he emphasized that since it is not similar to any geometrical shape, we must only use the integral to solve it. In fact, here the integral inference as a limited area plays the main role in the students' thought, although then he emphasized the integral solution obtained by the inference of the initial function. he combination of both inferences leads to the integral solution (see figure 7):

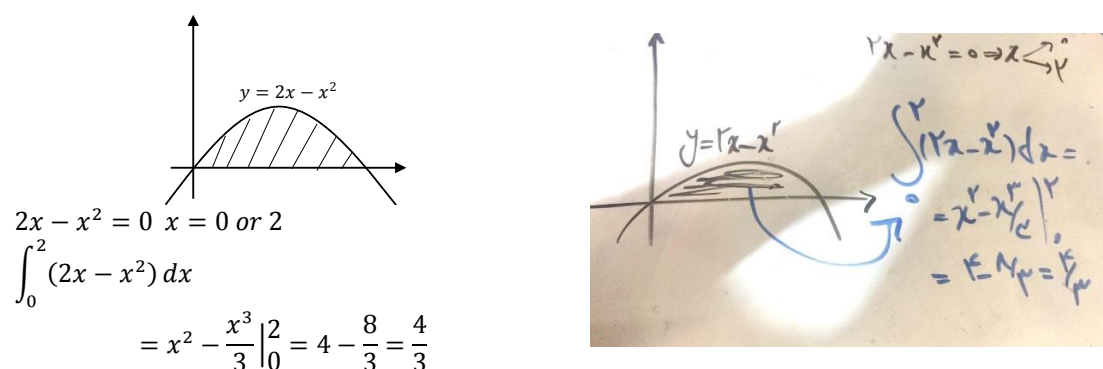


Figure 7. A sample of handwriting for problem 6

However in solving the last question, i.e. second part, even Hirad and Hooman who are more capable than other students, are not able to answer the question in a correct manner. In fact they cannot present a clear answer for this question. They used for solution of $\int_0^{5\frac{1}{x}} dx$.

Hooman: according to the previous question, it may be said that here just the function has been changed and to obtain the answer, it is sufficient to enter $\int_0^{5\frac{1}{x}} dx$.

- Interviewer said that is it possible to solve this question with previous problem solving method? Hooman: Of course, only the function has been changed.
- Hirad: He paused a little and confirms Hooman's answer with suspicion.
- Interviewer: The lower bound that I used for this integral is zero, which the function $y = 1/x$ not defined on it. They discussed with each other and had no compelling answer to this, and after determined the initial function, they realized their mistake and won't find any answer to it with mutual discussion.

We notice, by analyzing their answers, that although they had solved problems according to their science in solving routine questions, they make errors for relatively more complicated ones. Of course, these errors were extremely interrogative and so have to be prevented. It may be said that it was not completely and precisely conceptualized in their minds.

5. Conclusion

Calculus is as basic science for almost courses in university. Almost content of calculus in particular, deviation and integral consider as concepts in mathematics of various engineering

scopes. Regard to this, researchers have tried that studied challenges and performance of university students in solving integral after teaching, then their responses are analyzed through videos and discourses. During this study, the students were divided into groups of two.

By giving enough time, they were asked to answer the problem and discuss their solution to reach an appropriate strategy of problem solving. In addition, choosing the examples and their order must be exactly done so that the conception of integral would be completed in the students' minds layer by layer with more details. The analysis of the students' answers to the questions includes: In solving integral questions, especially applied ones, most of them use more than one inference of integral during the solution of an integral problem. Since all of the problems are of the mere mathematical type, most of these students emphasize the utilization of the integral inference as an initial function and a combination of it with the integral inference as periphery and area. In order to the subject with more details, it seems necessary to design and implement a test that includes both mathematics and physics (for the applied aspect of integral) so that we could investigate if there would be any change in the type of the students' approaches in solving applied problems compared to mere ones in using the integral inference. The students who emphasized the Riemann inference or somehow infinite summations in solving problems, had fewer problems in inferring the integrals and presented a more meaningful rational for them. However those who focused more on the inference of integral as an initial function and periphery and area, had more problems. However, definitely the second group would more easily and quickly be able to compute the integral in the implementation stage (the integral computation stage).

In fact, the Riemann inference plays the fundamental role in the integral inference, while it is the inference of the initial function and periphery and area in the computation of integral). In some answers of students, the whole three inference approaches of integral may be observed, but choosing the appropriate one in solving problems is different. Students' problems in solving the integral-related problems could not be often related to the lack of sufficient knowledge and science. Sometimes they have fundamental problems in using their data during the solution of a problem. In fact, it is very important to help them choose the appropriate method. In most Iranian universities, some math books are introduced to teach integral that initiate the integral with its geometrical approach, i.e. its inference with periphery and area and then present the inference of the initial function for solving the integrals obtained with this method and just mention some simple examples about the Riemann integral. In fact, they emphasized the solution and calculation of integral rather than its complete and precise conceptualization. While it may be said that the most fundamental and important inference of integral which leads to its complete conceptualization, is Riemann and of course, the details of how to reach it.

Therefore, the necessity of a book with this approach toward integral is found, in fact, a book that presents all three integral approaches together as complementary approaches and would not merely focus on a specific approach of it, since these three inferences of integral are inter-related in the conceptualization of integral. In answering how the integral may be taught and how students can learn it, it may be said that: the fundamental and basic concepts, especially limit and derivative must be recalled about integral and then we have to address the integral concept after ascertaining the students' understanding of these basic concepts. In fact, before teaching the integral in a subjective manner, teachers have to develop its related preliminary and basic concepts and then look for presenting the main subject. In addition, in presenting the integral course, pointing and graph drawing are very useful and solve the interrogative difficulties of students. In fact, visual explanations help integral conceptualization significantly.

However entering the subject of integral may be different, but the general belief is that first it is necessary to present the initial function and discuss about the indefinite integral completely and to be sure to present problems which would not be merely solvable with the initial function approach so that the students would have to conceptualize in order to solve the integral rather than formulation. Recommendations are introduced such as; Emphasis on teaching an integral approach such as the initial function leads to the limitation of using integral in this case. In addition, students' understanding of integral could not be completed with a single approach, but the whole three approaches are complementary. Since only six students participated in this test,

it may not be declared with certainty that the results are being able general to all students. In addition, it is important to mention that all of those six participants were among good students with high scores, therefore it remains to be seen to what extent could these results be generalized to students with similar profiles, but not all students. It may be said, however, that the main/general viewpoint about integral is obtained.

Finally it may be said that these results help teachers provide the appropriate conditions to facilitate the understanding and conceptualization of students by due planning with a complete knowledge about the class. Analysis of answers show that nearly all participants, even those with a higher experience, have a fundamental difficulty with answering the second part of the sixth problem which refers to their weakness in the conceptualization of integral and the fact that they cannot understand that this question is both related to basic subjects including limit and somehow the concept of integral itself. There are also fundamental problems for the fifth question that have to be derived, since there is a serious weakness in students in coping with applied problems. By Experience and analyzing the students' performance in coping with the integral problems shows that, students tend to formulate and learn Integral based on method of teaching mathematics in school and universities of Iran as well as the way of their evaluation. In other words, they want to learn superficially rather than to understand it correctly. In fact, we can say that they have weakness in solving practical problems, while solve routine Integral easily. Much research is still remaining to be conducted about the integral teaching method to reach the desirable result so that students move from the integral interpretation stage to its solution one. Considering other effective items on training, especially teaching integral is very important, e.g. age, sexuality, educational history, family and social conditions, motivation, etc.

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Appendix

Integral's Problems

1. Solve the following integrals:

$$I_{11}) \int_2^4 x - 2/x^2 dx \quad I_{12}) \int_{\pi/2}^0 2 \cos x dx$$

2. Look, solve and write the meaning:

$$I_{21}) \int e^x I_{22}) \int x^2 \cdot e^x dx I_{23}) \int x e^x dx$$

3. Explain the following integrals:

$$I_{31}) \int ds \quad I_{32}) \int \rho dq$$

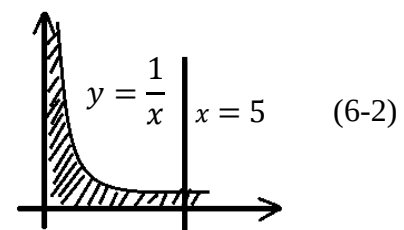
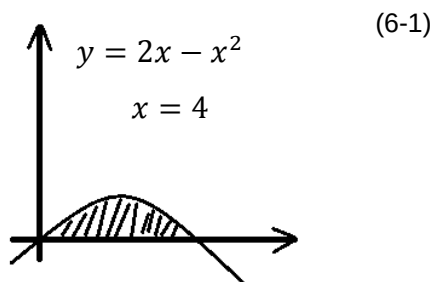
4. Suppose that f is a negative function over the limited domain D . Describe the following integrals:

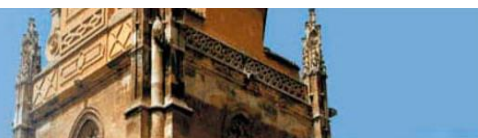
$$I_{41}) \int_D f(x) dx \quad I_{42}) \frac{1}{2} \int_D f(x) dx$$

5. Calculate the area of the following vase.



6. Can you calculate the area of the hashed part? If yes, how? If no, explain the reason.





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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Date of de reception: 3 August 2018

Date of revision: 28 October 2018

Date of acceptance: 21 January 2019

Thi Ngoc Le, D. (2018). Translation studies - An analysis from stakeholders' perspectives in Vietnam Universities. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 178 – 192.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

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Études de traduction - Ane analyse des perspectives des parties prenantes dans les Universités du Vietnam

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Abstract

Building up a training/ education program recognizably and responsibly with expectations of the stakeholders should be extremely done in tertiary education and the stakeholder feedback is one of the precious sources of information to obtain that purpose. "*Translation studies*" is not only a compulsory course but also a very important subject in the B.A program of the universities in Vietnam. To gain a holistic perception and understand the deeper standpoints of the stakeholder of the translation discipline, this study is done for that objective. The method used in this study is based on the two sources of data: primary and secondary information. The results will be a useful reference with recommendations formulated to help universities/colleges find out and enhance their own effective teaching methods in translation studies

Abstrait

La construction d'un programme de formation avec les attentes des parties responsables devrait être extrêmement accomplie dans l'enseignement supérieur et la rétroaction de ces parties est l'une des précieuses sources d'information pour atteindre cet objectif. "*Les études de traduction*" est non seulement un cours obligatoire mais aussi une matière très importante dans le programme de B.A. des universités au Vietnam. Pour acquérir une perception holistique et pour comprendre les points de vue plus profonds de ces parties de la discipline de la traduction, cette étude est faite pour ce but. La méthode utilisée dans cette étude est basée sur les deux sources de données: l'information primaire et secondaire. Les résultats seront une référence utile avec des recommandations formulées pour aider les universités/collèges à trouver et améliorer leurs propres méthodes d'enseignement efficaces dans les études de traduction

Keywords

Perceptions; Stakeholder(s); Student (learner)-centered teaching method; Translation studies; Vietnam

Mots clés

Perceptions; Parties prenantes; Méthode d'enseignement centrée sur l'étudiant (apprenant); Etudes de traduction; Vietnam.

1. Introduction

The translation activity gains a long-standing tradition and has been widely practiced throughout history. With our present rapidly changing world, translation plays a crucial role in interlingual communication by accessing to the sharing of knowledge and culture between different languages. As it is reviewed under with many purposes in the scientific, medical, technological, commercial, legal, cultural or literary issue, human communication depends heavily on translation and, consequently, interest in the field is also growing. Also, Cronin (2013) argues it is considered as a form of globalization. More of that, with the explosion of digital content and the maturing participatory online culture of Web 2.0 technologies, traditional human translation simply cannot keep up the pace with the translation needs of the future. English is considered as language of the world^{1 2}. Translation is an arduous but creative job of which consists of comparative, contrasting, incomprehensive living capital, knowledge, etc...are used to convert the source language into a target language accurately, honestly. Therefore, translation is considered as a highly scientific work, a special communication behavior as well as an important subject for learners of language acquisition in general and in English study in particular. From many English translated versions, countries are able to have mutual understandings and English translation makes people understand each other more in the process of diplomatic relations and economic cooperation and other fields. As a result, English translation has gradually become an inevitable issue in the society.

According to Christie (2005), to adapt with present rapid changes of economic globalization, both "*restructuring*" and "*reculturing*" should be implemented in the education system of Vietnam. Restructuring means expanding and verifying training forms, renovating governing mechanism and redesigning curricula, and reculturing means changing the way teachers teach and the way students learn. Therefore, teaching and learning at Vietnamese education institutions must also renovate. Besides, Vietnam is presently one of many international organization members such as World Trade Organization, ASEAN, APEC, so it is necessary for Vietnamese students of English to have expert translation skill in order to meet the demand of integration into the world economy and exchange of culture with other countries. As a result, learning translation skill is undoubtedly an advantage for Vietnamese students' ideal future jobs. In reality, Vietnamese-English translation skill is not easy for Vietnamese students to master, and teaching and learning qualities must be enhanced to adapt with the practical requirements. In addition, building up the training/ education program recognizably and responsibly with stakeholder expectations should be extremely done in tertiary education. This study aims to present stakeholder expectations through results of the surveys, semi-questionnaire and interviews with stakeholders of which those results will be a useful reference with recommendations formulated to help universities/colleges enhance their own effective teaching and learning methods in translation studies.

2. Literature review

2.1. Translation and translation studies

Translation is variously defined, and each definition reflects the theoretical approach underpinning it. Bell (1991) starts with an informal definition of translation as the transformation of a text originally in one language into an equivalent text in a different language retaining, as far as possible, the content of the message and the formal features and functional roles of the original text. Later, Koller (1995) defines translation as "the result of a text processing activity, by means of which a source language text is transposed into a target-language text. Between the resultant text in L2 (the target-language text) and the source text in L1 (the source language text) there exists a relationship, which can be designated as a translational, or equivalence relation". Also, according to Bao & Thu (1999), translation is rendering a written text into another language in the way that the author intended the text:

¹ <http://englishharmony.com/english-is-the-world-language/>

² <https://www.babbel.com/en/magazine/the-10-most-spoken-languages-in-the-world>

“Translation is a kind of communicative, socio-cultural act which involves a network of relations between agents, groups, and individuals and will make the role of the translator like that of a mediator. In this communicative act the translator has the responsibility for selecting the appropriate language, eliminating, modulating, adding, etc.”

Manfredi (2008) points out a definition of translation in a general dictionary described as (1) the process of translating words or text from one language into another, and (2) the written or spoken rendering of the meaning of a word, speech, book or other text, in an-other language [...] (The New Oxford Dictionary of English 1998) and in the dictionary of translation studies by Shuttleworth & Cowie (1997), the phenomenon of translation is explained as

“an incredibly broad notion which can be understood in many different ways. For example, one may talk of translation as a process or a product, and identify such sub-types as literary translation, technical translation, subtitling and machine translation; moreover, while more typically it just refers to the transfer of written texts, the term sometimes also includes interpreting [...] furthermore, many writers also extend its reference to take in related activities which most would not recognize as translation as such” (Malmkjaer, 2005; House, 2006a,b, 2008).

With the above definition, Manfredi (2008) determines two main perspectives as a ‘process’ or a ‘product’. As defined by Shuttleworth & Cowie (1997), translation presently includes other forms of communication, like audiovisual translation, through subtitles and dubbing.

Halliday (1992) states translation is referred as the total process and relationship of equivalence between two languages; it is distinguished, within translation, between “*translating*” (written text) and “*interpreting*” (spoken text). Therefore, Halliday (1992) proposes distinguishing the activity of “*translation*” (as a process) from the product(s) of “*translating*”, including both “*translation*” (concerning written text) and “*interpretation*” (regarding spoken text). Interpretation and translation are two closely related linguistic disciplines. The key difference between translation and interpretation lies within the choice of communication channel. Translation deals with written communication, while interpretation is all about the spoken word³. Hence, in this study, translation is usually employed to mean both translation and interpretation. As Nord’s definition, “*translation is the production of a functional target text maintaining a relationship with a given source text that is specified according to the intended or demanding function of the target text (translation skopos)*” (Nord, 1991). According to House (2001), translation is thought of as a text which is a “*representation*” or “*reproduction*” of an original one produced in an-other language (Lewis, 2009). Hatim & Munday (2004) point out as a ‘process’, translation must be analyzed from two different perspectives. The first is referred as the activity of turning a source text into a target text in another language, and the second is as a ‘product’, i.e., the translated text.

In Vietnamese-into-English translation, the Vietnamese is the source language and the English is the target language. The translation process has existed for millennia. Translation was initially studied as a linguistic phenomenon, as a process of meaning transferring via linguistic transcoding, and consequently, translation studies was named and conceived as a linguistic discipline (Lefevere, 1978). Lefevere (1978) defines the goal of translation studies as producing a comprehensive theory which can also be used as a guideline for the production of translations, and whilst some may question the specificity of this statement. This is clear with his intention to link theory with practice indisputably. Also, Hatim (2013) has the same definition for translation studies. The translation practice without a theoretical background tends toward a purely subjective exercise and one of Halliday’s main contributions to linguistics is to build bridges between linguistic theory and professional practice (Yallop, 1987). As Chesterman (in Chesterman & Wagner, 2002), translation theory is not only for academic purposes but also for the practice of a professional translator, and they are also indissolubly linked and are not in conflict. Understanding of the processes can only help in the production, and a theory of

³ http://www.translationcentral.com/translation_vs_interpretation.php

translation without a link to practice is simply an abstraction. Moreover, Bassnett (2005) points out a wide field of translation studies with four general areas of interest and each with degree of overlap. Two are product-oriented, in that the emphasis is on the functional aspect of the target language texts in relation to the source language text, and two of them are process-oriented, in that the emphasis is on analyzing what actually takes place during translation. According to Snell-Hornby (2006), [...] translation studies opens up new perspectives from which other disciplines – or more especially the world around – might well benefit. It is concerned, not with languages, objects, or cultures as such, but with communication across cultures, which does not merely consist of the sum of all factors involved. And what is not yet adequately recognized is how translation (studies) could help us communicate better – a deficit that sometimes has disastrous results.

2.2. Stakeholders and their requirements/ expectations in education

In the scientific literature, two terms have been found– stakeholders and stakeholder groups which both of those concepts are used as synonyms. In this study, the term “*stakeholders*” will be used. Scholars have contributed greatly with the practical interpretation of this concept, but to date, most of them to still certainly support the first stakeholder definition of Freeman (1984) – “*any group or individual who can affect or is affected by the achievement of the organization's objectives*”. Later, many different definitions are made with similar meanings. However, the Freeman's definition (1984) could be considered as one of the best, which concisely and accurately identifies the relationships between the organization and stakeholders. Stakeholders are considered as those organizations, networks and private people who are able to influence the objectives and activities of the organization (Freeman, 1984; Freeman & Evan, 1990; Alves Jose, Karina, 2012). Stakeholders can be divided into 2 groups: Internal and External Stakeholders.

The identification and classification of stakeholders are prerequisites for the operation development and the quality improvement in stakeholder relationships and stakeholders are not in the same position.

- Internal stakeholders are those who work within the school system on a daily basis and who largely control what goes on there. They include school staff, district staff, and, to some extent, school boards.
- External stakeholders are those outside the day-to-day work of the schools who have a strong interest in school outcomes but who do not directly determine what goes into producing those outcomes.

In this study, the stakeholders are lecturers who are teaching or managing the translation-related courses and discipline; graduates from B.A university training program; professional translators and interpreters; and the business managers/ owners.

The justification and existence of a tertiary institution can be analysed via its stakeholder relations. Many internal and external stakeholders play important roles and contribute the strategic and other objectives, the quality of teaching and other activities, and the processes of stakeholder relationships (Juha, 2015). However, Juha (2015) describes the success of the higher education institution depends on its ability in the respective management approaches and stakeholder roles are crucial in strategic plans, quality assurance systems and process descriptions. Stakeholder communication and relationships are crucial from the standpoint of quality assurance and success because of their interests in collaboration with higher education institutions. It is widely acknowledged that the stakeholders' views are taken into account in the quality assurance system (Srikanthan & Dalrymple, 2003; Lagrosen, Seyyed & Leitner, 2004; Juha, 2015). Tertiary institutions collect feedback from their partners and customers and conversely, their feedback will be made to stakeholders in reciprocal interaction, because the expectations of stakeholders in quality assurance pertain to higher education institutions. According to Birnbaum (1988), “*learning how colleges and universities work requires seeing them as organizations, as systems and inventions.*” Another way of learning how colleges and

universities work requires the knowledge of stakeholders. Understanding the nature and roles of the stakeholders can greatly assist higher education administrators in understanding and operating their job and the institution. When stakeholders' requirements change, the tertiary institutions make feedback evaluation, define its objectives and improve their processes to meet their needs towards more market-oriented and responsible to a wider range of stakeholders (Bryson, 2004; Becket & Brookes, 2006).

2.3. Student-centered teaching method and student feedback usefulness

The theory and practice of student-centered instruction (or learner-centered teaching) is by no means new. According to research of Bowen (1980), there is a profound influence on pedagogy from writings of Jean-Jacques Rousseau, who put forth a fundamentally different vision of education in the recent history. The term student-centered teaching is a term almost ubiquitous in global debates in education, creating a dynamic change from a traditional *"teacher-centered"* to a more democratic and open environment in the classroom. Brewer & Daane (2002) points out that *"social interaction is necessary for knowledge construction and active learning"* and Lampert (2004) suggests an emphasis upon student-centered learning. Cuban (2001) describes student-centered instruction as including equal or more talking on the part of students than teacher, students asking questions and engaging in discussion more than the teacher, the use of small groups, more flexibility for students in terms of movement around the classroom and method that lessons are learned, and a more flexible use of work space. According to Collins & O'Brien (2003), student-centered instruction is defined as *"an instructional approach in which students influence the content, activities, materials, and pace of learning"*. Besides, there are many various definitions of student-centered learning (and teaching) as constructivist or learner-centered teaching, problem-based learning and case-based learning (Gibbs, 1992; Loyens & Rikers, 2011). It is named because it seems important to clearly indicate the characteristics of the teaching method (Loyens & Rikers, 2011). Student-centered teaching is as a process by which students are given greater autonomy and control over the choice of subject matter, the pace of learning, and the learning methods used (Gibbs, 1992), a type for tertiary education reform (West, 1998), and a broad approach to teaching that ultimately holds the student responsible for their own educational advances (Nanney, no date). As in studies of Elen Clarebout, Leonard & Lowyck (2007) and Loyens & Rikers (2011), student-centered teaching method is considered as 'constructivist' teaching methods because the student's active role is emphasised in the learning process. The student-centered teaching methods are characterised by three features as follows:

- an active student participation to construct knowledge for themselves (Kirschner, Sweller & Clark, 2006; Struyven, Dochy, Janssens & Gielen, 2008) by selecting, interpreting and applying information in order to solve assignments (Struyven et al., 2008),
- a coaching (Motschnig-Pitrik & Holzinger, 2002) and facilitating (Beijaard, Verloop & Vermunt, 2000) teacher, who is present to help students out with questions or problems and safeguards their learning process (Struyven, Dochy & Janssens, 2010),
- the use of authentic assignments such as practical cases and complex vocational problems (Kirschner et al., 2006; Elen et al., 2007; Loyens, Rikers & Schmidt, 2007a,b; Struyven et al., 2008).

Additionally, feedback plays a critical role in enhancing and supporting the learning process (Van Houten, 1980; Gibbs, 1999; Race, 2001; Yorke, 2003). As Cross (1996) notes *"One of the basic principles of learning is that learners need feedback. They need to know what they are trying to accomplish, and then they need to know how close they are coming to the goal"*. Without feedback, it is challenging for students to assess how they are doing and frustrating when they struggle to achieve the standard they desire (Yorke, 2003). Feedback in these

settings is helpful when comparing current versus desired levels of performance and goals (Clynes & Raftery, 2008). This is also agreed by Irish Universities Association⁴ as

“students have a major contribution to make in ensuring the quality of higher education and training provided in Irish universities. Regular and structured student feedback on their engagement (with their studies and with broader university life) and on the quality and relevance of teaching, learning and other services, is important in contributing to this process. Students can also play an important role in influencing the design of curricula, and in reviewing and providing feedback on the use of these curricula. Student representatives sit on the quality enhancement committees in each university. Useful information regarding the importance of student involvement in quality assurance processes and to provide information to students about quality assurance...”

Also, according to Macquarie University, Australia, student feedback is a rich and valuable source of information for both formative and summative purposes, and it is considered as the potential and valuable information about the teaching. Besides, student evaluation can also inform curriculum development. Student evaluation is important for ensuring that students enjoy high quality learning experience, continual teacher's improvement, the continual improvement of the unit and program of study that is being offered, and ensuring that the institution is achieving the desired standard of quality in students' learning experiences⁵. In Warwick University of The United Kingdom, student feedback is collected by all tertiary education institutions with a view to enhancing teaching and learning and assuring quality requirements. Collected data can be used to evaluate local and national practice and to inform research and feedback can be collected from peers, or more commonly from students⁶.

3. Methodology

Methodology of this study employs from the two sources: the secondary and the primary. Later, the data is processed with the statistical technique.

Secondary data is gained with the systematic and content analyses through published papers collected in database of Scopus, Science Direct, Google scholar... and websites of universities focusing on programs and syllabuses of Bachelor of Arts majored in English Language (as abbreviated hereinafter by B.A) to generate the theoretical foundations of the study and to gain deeper review and understanding with the current translation studies' teaching in universities in Vietnam.

Primary data is from the following sources.

- Online questionnaire/ survey with 97 graduates (as survey sample) who hold the four-year university graduate degree from B.A program since they are familiar with both training and market practices. Additionally, this is to gain their perceptions and education/ training experiences in the learning at the university. 10 questions are included in the questionnaire. The questions are focused on issues as overall perceptions of the whole B.A training program, the usefulness and helpfulness of the translation courses/ subjects, course's time allocation, perceptions on lecturers and their assistance after graduation, teaching supplement course and the course content and especially for the comments on the curriculum targeted to market needs and their professional employment.
- Semi-structured questionnaire and direct interviews with 8 professional translators/ interpreters who also own a B.A degree and are presently working in trading

⁴ <http://www.iua.ie/students-graduates/student-support/student-feedback/>

⁵ https://staff.mq.edu.au/teaching/evaluation/evaluation_methods/student_feedback/

⁶ <http://www2.warwick.ac.uk/services/ldc/resource/evaluation/tools/feedback>

organization, non-government organizations and public organizations. This is done to gain their shares of perceptions and observations regarding to professional knowledge of the new graduates, market requirements, and proposals on what should be taught and included in the teaching curriculum and program towards the real world.

- Face-to-face meetings and phone talks with 15 managers/ owners of the businesses to find out the employment need and prospects of the translation in the future. Also, the understanding of their practical requirements and evaluation on the new graduates employing in the translation field or in the discipline relating to translation.
- Phone interviews with 4 lecturers/ head (administrators) who are direct teaching or are discipline heads / administrators in the universities to gain deeper understanding on their standpoints of the teaching such as their concepts on time allocation, content of the course, material teaching and overall student pre-course evaluation, etc. For the interviews, all are noted and transcribed.

4. Findings and discussions

4.1. Overview of the current translation teaching in universities in Vietnam

In the territory of Vietnam, the B.A training program is on the 4-year based program. Almost the universities in Vietnam has the B.A training program with many different disciplines such as pedagogy, translation and interpretation, linguistics, etc. and about 80% of their graduates are employing in the profession related (or at least related) with translation. Thus, in the language acquisition, translation is always attractive and important discipline and also meets the high practical value to all the learners. More of that, translation is a compulsory course in the B.A training program (Ho, 2016a).

As in most of the B.A program, the time allocation for translation courses (subjects) is very limited (Nhat, 2016), specially, the translation related courses are allocated averagely from 4 to 10 credits of the total 130 to 141 credits of the four-year program in which it is divided into 2 courses: translation theory and practical translation. The translation theory course is captured from 2 to 3 credits and the practical translation courses are occupied from 6 to 7 credits (by author's sources). Many teachers are favor of theoretical training and offer few practical activities training contents often revolves around the familiar/ old issues, slow innovation and not keep up with demand in the market (Ho, 2016b; Ngoc, Thu & Anh, 2016). As reviewed and observed in syllabuses of universities in 2 years, teaching contents and subjects which will be taught is old and un-updatable. So far, in most of universities, a standard and official textbook is not prevailed or they are composed by lecturers and for private (internal) use purpose (Ngoc et al., 2016). Teaching methods are still general; only solve a few minor aspects which lead learners/students feel ambiguous, difficult to understand (Ngoc et al., 2016). Besides, by many factors influenced, students are limited in native language, cultural context and knowledge of mother tongue (Ho & Phu, 2013; Ho, 2015). Also, most of the teachers have not received intensive training course in translation studies or they are not professional translator.

4.2. Results of the survey

4.2.1. Results from the survey with B.A graduates

According to survey result, 11,7% and 18,3% of the respondents agreed that the academic training had prepared them *extremely well* and *fairly well* for their professional employment. 18,3% is for basic preparation. In total, the majority of the respondents (48,3%) had a positive opinion of their training. However, 51,7% of respondents had negative perception on the academic training in response to their professional employment (see table 1).

Table 1.
Results from the survey with B.A graduates

Extremely well	11,7%
Fairly well	18,3%
On the basic preparation	18,3%
Badly	35%
Very badly	16,7%

On translation studies-focused questions, 45% of them showed their likes to the translation studies and 55% said they did not like to study. In addition, a deep-explored question “*Are the translation studies courses as translation theory and practice helpful and useful to your professional employment*” gained 70% negative result in comparison with 30% positive result. These results were made up from many reasons such as time allocation, teaching method and subjects (contents), teaching materials, etc.

In term of teaching time allocating for this subject (courses), it was really limited. With their responses, in general, 30% of the respondents agreed that the teaching time was long enough in which 3,3%, 5% and 21,7% represent for *very long*, *rather long* and *long enough* respectively. In contrast, 70% of the respondents said that the time for this module was short, while 25% for *rather short* and 45% for *very short*. In addition, there existed a reason from lecturers. With question “*How is your lecturer who instructs or teaches you the translation?*”, the result shows 36,7% totally satisfied with the lecturers (11,7% for *very good*, 10% for *rather good* and 15% for *satisfied*) and 63,3% felt bad with lecturers (30% for *bad* and 33% for *very bad*). In term of question if graduates have their contacts with or get helps/ supports from lecturers after graduation to have better services, problem solving, and so on in their professional employment, they responded at 23,3% of them who have contacts or get help from their lecturers after graduation. The others had opposite viewpoints. They also provided causes for this issue as their dislikes with this subject, lecturers’ teaching methods, etc. In relation with teaching materials such as official textbook, documents, PC, media tools available for students’ learning, 25% of the respondents agreed/ satisfied while 75% disagreed. This showed that, upon to them, this issue was at a very low quality and did not meet their requirements. Besides, they commented that, with the development of technology, the machine translation is presently developing much in the market, but in the universities, this issue seemed to be forgotten in the curriculum. They also provided some remarkable information that they used the Internet for information mining and keeping up-to-date with the latest developments in translation, and sometimes, the communication technologies used to keep contacts with customers. According to them, there were four purposes in use of technology in translation: 1) to type the translation product by simply using word-processing tools 2) to seek information, 3) to remain up-to-date on both development and progress in the translation world and 4) to communicate and exchange information with customers and colleagues. Additionally, they complained that the technology-related knowledge was limited to the knowledge of their lecturers, and they had to study and paid all their individual efforts by themselves to acquire this knowledge.

In term of the content of the courses, 31,7% of the respondents agreed that the teaching contents & subjects were interesting, updatable, and applicable to the real world. Meanwhile, 68,3% who disagreed on this matter thought the topics and terminologies outdated in the real world. However, 83% agreed that to be better with their professional and practical employment, some extra/ supplement courses should be added in the training program such as economics, management, tourism, and politics.

Last but not least, a ready-made list of curriculum components were built up and graduates were requested to fill out to rate the components. This is important for university teaching and for their professional work. The results are presented in following table.

Table 2.
Results of curriculum components

Components	Very important	Rather important	Important	Rarely important	Not important
Translation practice	73%	17%	7%	3%	0%
Time allocation	65%	12%	12%	5%	7%
Specific field knowledge	63%	17%	17%	2%	2%
Terminology management	60%	17%	12%	5%	7%
Research techniques	50%	25%	12%	8%	5%
Topics in teaching contents	50%	17%	13%	10%	10%
Teaching materials	47%	20%	17%	8%	8%
Lecturers' teaching method	45%	18%	20%	12%	5%
Translation technology	43%	30%	17%	5%	5%
Discourse analysis & pragmatics	33%	33%	13%	12%	8%
Knowledge of linguistics	32%	25%	27%	8%	8%
Text analysis	30%	43%	13%	7%	7%
Translation theory	22%	28%	17%	17%	17%

4.2.2. Results from the survey with professional translators and business managers/owners

Some of professional translators are also the owner of the translation companies. Therefore, some of perceptions of professional translators are also similar to perceptions of managers/owners of other industry businesses. This is done to gain their shares of perceptions and observations regarding to professional knowledge of the new graduates, market requirements, and proposals on what should be taught and included in the teaching curriculum and program towards the real world.

According to survey result, 85% to 90% of new B.A graduates who apply to employ in the translation discipline cannot meet the requirements. Translation from Vietnamese into English constitutes over half of their total translation work. To be recruited as a new translator in the translation companies, normally, a sample test of translation will be taken and the majority of the applicants fail at this stage because they cannot meet the criteria in terms of form, content (poor-quality grammar and language competence), cultural issues in translation and speed. As of their viewpoints, translation speed is one of the most concerns. As known, with the competitive market and high pressured working environment, it is required to produce a high-quality work within a certain period of time to survive in the market. This happened because the graduates were normally working with lower motivation, tended to underestimate the translation profession, and saw it as a temporary job opportunity to earn extra money or to finance their Master's. Besides, professional translators complained about the patience of the graduates. As for them, in the simplest terms, graduates needed to have developed the patience and the discipline to complete a project by the deadline. In addition, the most important requirements of

the translation discipline and market are quality and speed. In order to be qualified translators, B.A graduates must gain experiences about 5 years in the discipline and also they need to improve their language including grammar and vocabulary and translation practice skills, and then develop mastery of computer and other technology skills. For adaptable with the real world, technological knowledge and skills should be added and taught in the training program (curriculum).

As per the survey result, about 90% of the companies agreed that they would not employ a professional translator who only worked in 100% workload in the translation discipline in their businesses. This was because of the main different reasons such as competence and performance of the BA graduates unreachable to their real requirements, the financial issue and not-much workload for professional translators, available English-speaking employees in their businesses. On the problem of the competence and performance of the BA graduates, they lacked patience, language skills (grammar; real world words - lexicons, even with the mother tongue as Vietnamese), computing skills and especially with cultural issues. The cultures of Vietnam and other countries are different and diversified, so a translator must have this kind of knowledge.

4.2.3. Results from the survey with lecturers and discipline head (administrator)

90% of the respondents said that the curriculum revision was upon lecturers. In term of revision or change of teaching content or curriculum, it seems that the curriculum has usually been not revised for years. There are some reasons with this issue: The first is the change of lecturer in charge. With lecturers who used to teach translation courses for years, they could decide what should or should not be in the program, but they normally don't want to change. That is by time-consumption and complicated procedures. With new lecturers, they only follow up the designed curriculum. As concerned, to change or revise the content of curriculum, it requires complex procedures and consumes a lot of time to be approved. The revision is carefully discussed by Scientific Committee and the University Senate for final endorsement. In term of experiences of lecturers, about 80% of the lecturers have worked in the teaching profession, without the practical world. Therefore, the teaching quality and its adaption with the real world were also problems that were really limited in the interaction with translation companies and professional translators. However, 80% of respondents agreed that their interaction with professional translators for teaching assistance, curriculum revision could benefit them a lot. In contrast, 80% of respondents complained on the language skills and competence of the students. As for them, students' language skills and competence were low and they did not spend time enough reading books and self-learning. This led the low qualities of teaching and learning. Finally, 90% of respondents gave negative ideas about teaching materials. The textbooks for this discipline were normally from the foreign publishers and the price was too high. Thus, the universities have very limited versions for references.

5. Recommendations

From the result of the study, some recommendations are formulated as follows:

First, that is the teaching content. It can be used as a reference source for the universities or administrators of the discipline to revise the curriculum which is linked with the real world. One of the most important issue which should be considered as a part of teaching content is the translation technology. At present, translation technology becomes one of the most popular topics in translation research due to its increasing importance in translation profession. Moreover, it is seen as a translation competence (Kelly 2005; PACTE 2005, 2008; Tan, 2008; EMT 2009). Biau Gil & Pym (2006) said that technology was a necessity in translation practice and there were three main effects of technology on translation: on communication (how translators communicate with clients), on memory (how much and how fast information is stored), and on text production (word processing). According to Thelen (2011), translators needed technical resources for basic IT activities (i.e. operating systems, word processing tools, presentation tools, tools for calculating, internet tools, file formats and file converting tools,

communication tools, and scanning tools), for translation activities (i.e. TM tools, MT tools, speech recognition tools, subtitling tools, and terminology management tools), and for administrative activities such as bookkeeping and workflow management. And Mossop (2003a,b) argued that students needed basic skills to use Windows, Internet, email and Word, and that they could learn the rest later.

The interactions among stakeholders: the interactions among stakeholders are really important and helpful to develop a training program and curriculum. According to Gumus (2013) and Kemble (2006), there were three types of interaction as human interaction, material interaction and professional interaction.

- ✓ Human interaction is in terms of the employment of professional translators as full-time members of academic staff.
- ✓ Material interaction refers essentially to the use of authentic translated text for purposes of teaching/learning and assessment.
- ✓ Professional interaction means collaboration with professional translators on projects.

6. Conclusions

Translation studies is not only a compulsory course but also a very important subject in the B.A program of the university. As from the literature review and result of the study, under the student-centered teaching approach, the feedbacks from the stakeholders is really a valuable source of information to have qualified teaching and learning not only for the translation studies but also for other subjects in the B.A training program. To gain much development, some above mentioned recommendations should be applied as guidelines.

All studies will have the limitations and this is not exceptional. The first limitation is with the sample. They were collected by the convenience method and at the small size. Respondents are not distinguished between groups of graduates (new graduates or old graduates); or ages such as the young and the elderly; the major in B.A program as BA in linguistics or BA in translation studies, which have different experiences, opinions and can lead to different results. In addition, the snowball technique is used to collect the questionnaire - a technique that does not allow controlled sampling. As a consequence, the results cannot be generalized to the entire population. Also, the data have been collected through self-report instruments, i.e. surveys and interviews. Although self-reporting is a simple, easy and direct way of data collection, the risk of collecting inaccurate information can occur due to various limitations including memory, self-deception and biases. Moreover, this study can be a root for many further researches as the same study conducting with other subjects, study on how to revise the curriculum based on the stakeholder feedback, study on how to apply the students-centered teaching method into the translation study.

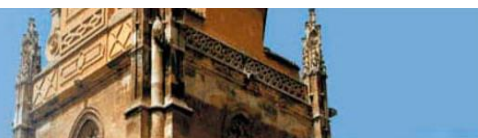
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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Date of reception: 7 September 2017

Date of revision: 3 August 2018

Date of acceptance: 24 December 2018

Abreus, A. (2018). Using *MyEnglishLab* platform to develop grammatical accuracy in speaking skills. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 193 – 207.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

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Abstract

Speaking skills development in English has been a focus of attention in the teaching of foreign languages for years. Despite its importance, many teachers still do not find the appropriate ways to introduce, provide practice, and assess the communicative functions in the teaching-learning process of English Language Teaching (ELT). The main purpose of this paper is to reflect upon the development of grammatical accuracy in speaking skills through the use of MyEnglishLab platform, taking as context the teaching learning process of English-as-a-Foreign-Language (EFL) at the Metropolitan Language School in Quito, Ecuador. It presents the main stages and criteria determined for the elaboration and assessment of a Didactic Framework for grammatical accuracy development in speaking skills. The main results of the research conducted state that there is a factual progress in the development of grammatical accuracy in students, regardless the fact that EFL teachers still have to correct the students' works in relation to the development of speaking skills

Resumen

El desarrollo de la expresión oral en inglés ha sido el centro de atención de la enseñanza de lenguas extranjeras por años. A pesar de su importancia, algunos profesores continúan sin encontrar las formas apropiadas para introducir, proporcionar práctica y evaluar las funciones comunicativas en la enseñanza-aprendizaje del inglés como lengua extranjera. El objetivo principal de este artículo es reflexionar en torno al desarrollo de la precisión gramatical en la expresión oral en mediante el empleo de la plataforma online MyEnglishLab, tomando como contexto el proceso de enseñanza-aprendizaje del inglés como lengua extranjera en la Metropolitan Language School de Quito, Ecuador. Además presenta las etapas y criterios que sirvieron de base para la elaboración y evaluación de un Modelo Didáctico para el desarrollo de la precisión gramatical en la expresión oral. Los resultados fundamentales de la investigación demuestran que existe un avance palpable en el desarrollo de la precisión gramatical en los estudiantes, a pesar del hecho de que los profesores continúan calificando sus trabajos en la relación con el desarrollo de la expresión oral

Keywords

Speaking skills; Grammatical accuracy; MEL platform; English as a Foreign Language

Palabras clave

Expresión oral; Precisión gramatical; Plataforma MEL; Inglés como lengua extranjera

1. Introduction

The importance of learning a foreign language, as part of an intercultural education, has been highlighted by UNESCO since the forty eighth International Conference on Education (Koskinen, 2013). Thus, a wide variety of programs and syllabuses for the teaching of both mother tongue and foreign languages have been elaborated, focusing mainly in the communicative approach for language teaching that arose in the 1970s.

For years, foreign language teachers have reviewed articles in which it is affirmed that speaking skills have certainly been paid more attention in language instruction than other language skills. This has led to neglecting listening comprehension, reading comprehension, and writing as language skills. Furthermore, the development of researches in the field of foreign languages teaching has focused more on speaking and writing than in listening and reading, which shows an imbalance in the equal treatment of skills in the classroom in both educational practices and research (Abreus, 2015).

Some syllabi have been edited to provide practice in all four skills with a special focus on oral skills (speaking and listening). Most of them are based on the idea that communication is not simply an end product of language study, but rather a process through which a new language is acquired. They involve students in the communication process by providing them with useful, natural English along with opportunities to discuss topics of personal interest and to communicate their own thoughts, feelings, and ideas.

It is, therefore, important for teachers of English as a Foreign Language (EFL) to enhance the application of communicative functions in the school classroom and outside the school context. Thus, students can accurately make use of the grammar and vocabulary in conditions that are similar to real life situations.

As previously stated, speaking skills in English have been taken into account not only as an area of instruction, but also as a research area. Most theorists define oral communication narrowly, focusing on speaking and listening skills separately. However, traditionally, when people describe speaking skills, they do so in a context of public speaking.

Definitions of speaking have been expanded in the second half of the 20th century (Brown & Yule, 1983). One trend has been to focus on communication activities that reflect a variety of settings: one-to-many, small group, one-to-one, and mass media. Another approach has been to focus on using communication to achieve specific purposes: to inform, to persuade, and to solve problems. A third trend has been to focus on basic competencies needed for everyday life -- for example, giving directions, asking for information, or providing basic information in an emergency situation (Mead & Rubin, 1985).

For Spratt, Pulverness, and Williams (2011), speaking skills is a productive skill that involves using speech to express meaning to other people. When people speak, they usually pronounce words, answer questions, use intonation, ask for clarification and/or explanation, correct themselves, take part in discussions, greet people, ask for and give information, respond appropriately, persuade, tell stories, use fully accurate grammar and vocabulary, use tenses, and take part in conversations (Spratt, Pulverness & Williams, 2011 p. 34).

Accordingly, foreign languages teachers can develop learner's speaking skills by focusing regularly on specific aspects, such as fluency-pronunciation, body language, and grammatical accuracy, which is the particular aspect the author of the article emphasized on throughout the development of the research.

Although close related in terminology and use by teachers, accuracy and fluency in speaking differ in meaning. For Spratt, Pulverness, and Williams (2011), accuracy refers to the use of correct forms of grammar, vocabulary and pronunciation, while fluency is understood as the ability to speak at a normal speed, without repetition or self-correction, and with smooth use of connected speech.

Furthermore, Rishi (2014) argues that accuracy refers to the ability of the learner to produce sentences that are grammatically correct. That is, language learners should know the correct grammatical rules of the language so that they can be able to speak and write accurately. Fluency, on the other hand, refers to a level of proficiency in communication. It is the ability to produce written and spoken sentences with ease, efficiency, without pauses, hesitation, or a breakdown of communication.

Language teaching in general focuses more on fluency development than in accuracy development, without noticing that a student who does not accurately know the grammar of a language cannot properly convey the ideas in a fluent way. Thus, this paper intends to highlight the role of grammatical accuracy in speaking, so that language learners can be both fluent and accurate in language usage. For the purpose of this research the author agrees with the definitions stated by Spratt, Pulverness, and Williams (2011), and Rishi (2014) about fluency and accuracy, and pays special attention to accuracy development in speaking, summarizing its characteristics as:

- The correct use of grammar rules in the foreign language
- The correct pronunciation of vowel and consonant sounds in English while speaking
- The correct use of vocabulary and language in context

2. Literature review

Developing speaking skills in the classroom involves the implication of the students in the facets of language development for oral communication. Thus, they should practice the communicative functions studied in class through controlled practice, semi-controlled practice, and free practice in the EFL classroom. According to the online TESOL Glossary, controlled practice is used to describe exercises that are designed to re-enforce a specific language point and require a particular answer such as crossword puzzles, word searches and gap-fill worksheets. On the other hand, free practice describes the activities which provide the learner with the possibility of practicing the language unrestrictedly, and usually including the application of prior learnt language. Free practice includes activities such as class debates, role plays, and class surveys, among others.

An intermediate point between controlled and free practice is the semi-controlled practice, where teachers give some freedom to the students for them to practice the language, but still control the topics, and language they should use. The main characteristics of speaking skills development at these stages are:

During the controlled practice:

- The students practice the language in a limited form
- The students should pronounce correctly
- Corroborate the correct comprehension of the language presented; this is the time where the students should correct important mistakes, either in meaning or pronunciation
- Retain linguistic forms

During the semi-controlled practice:

- The students should exchange information at a minimum communication level
- There is necessary information gap related to real life situations the students should become familiar with
- Students have certain freedom for choosing what they want to say and how they want to say it
- The information provided by one of the speakers confirms the answer to the other, - feedback
- The exchange has a goal, a communicative aim, not only the formal practice of the linguistic aspect

During this stage, the most common activities to be developed are contests, questionnaires, and the find someone who... activity.

During the *free practice* stage, on the other hand, the students test their capacity to use the linguistic resources that they have practiced in the exchange and negotiation of information. This is the time where communicative interaction plays a significant role in language acquisition. In order to accomplish speaking skills objectives at this level the teacher should elaborate activities that engage the students in language learning, such as: role-play, interviews, stories dramatizations, problem solving, simulations, and message writing, among others.

The ability to speak fluently and using accurate grammar demands full practice of the foreign language, following different models that can help the students produce the language. In order to meet these demands, teachers should select appropriate teaching aids, so that students can practice the language in a more motivating environment, with a more meaningful purpose.

2.1. Teaching aids and the teaching-learning process

Teaching aids are different images and representations of objects and phenomena that are specially elaborated for the teaching process. They are defined, according to Đurđanović (2015), as didactically shaped objects, products of human work, which are used in the teaching process as sources of cognition or learning. Additionally, they have a systematic character, and their representations and instruments help attaining the main objective of the activities (Hernández, 2004).

Teaching aids also provide the possibility of creating materials in order to accomplish the scientific demands of the contemporary world in the teaching-learning process. Using teaching aids in the classroom allows the teacher develop mechanisms that facilitate a better process of knowledge since they not only enrich the sensorial perception of objects, phenomena and processes of study, but also stimulate motivation and interest for learning. Consequently, they save time and effort in the classroom during the pedagogical process. A well-balanced selection of teaching aids in the classroom creates the conditions for the students to retain the contents presented.

Through the application of teaching aids, teachers can present a greater quantity of information in a short period of time, and they usually motivate the students towards learning. As well, they activate intellectual functions that facilitate the acquisition of knowledge by the student. Thus, teaching aids provides the teaching process with an active characteristic that makes the learning process more effective.

Teaching aids can be divided into different groups, some of them include:

- Natural and industrial objects: these aids could be presented in their normal way or in sections if they are to be used partially, - realia.
- Printed objects: they are made in plane formats, such as pictures, books, booklets, etc.
- Sound projection aids: Audio-visual aids (film, video-tape, etc) and audio means, such as CD players, tape recorders, computers, Over Head Projectors (OHP).
- Materials for programmed and controlled teaching.

The constant innovations on the telecommunication fields and audiovisual means have brought about new modalities of use for teaching aids, which have also had an increasing effect on knowledge expansion. García (2002) defined audiovisual aids as technical resources that are applied in the teaching-learning process which combine image and sound in a total harmony so that the language presented is clear and stimulating in order to invite the students to learn.

The main objective of the application of audiovisual aids in the teaching-learning process is to significantly contribute to the permanent education of the people, in order to improve their cultural and educational levels.

Audiovisual aids include the use of Television, Media, Videos, Software, online platforms, among others. The current research is based on the use of MyEnglishLab platform for the development of speaking skills, which helps the students develop grammatical accuracy at a higher level.

Foreign language teaching has been influenced by the application of different models and theories regarding the teaching-learning process in the classroom through all times. The use of Information and Communication Technologies (ICTs) in order to develop the teaching-learning process had its bases in the creation of computers, which has allowed the teachers have access to different areas of the social life through the presentation of several contents in a technological way.

There are lots of teachers who recognize the importance of the application of computers in the teaching-learning process. Nowadays, the comparison between the use of computers and the application of other teaching aids in the classroom, like video sequences or radio, has been taken into consideration by researchers; and a lot of investigation has been addressed to find out new ways to apply all these technologies in the classroom.

Using computers allows the students have direct contact with the foreign language through interaction activities. This advantage provides the students the possibility to use images and sounds all combined as a high educative capacity means, which turns the use of computers into a recognized pedagogical tool.

One of the barriers that teachers encounter when using computers in the classroom has been the lack of practice they have in terms of technology use. Sometimes this happens because teachers do not want to feel replaced by technologies. In spite of this reason, computer usage in the classroom has been expanded very fast in the educational system, either as an object of study, or a way of teaching and working instrument. In any of the three ways, it is important that the teacher analyses how, when, and in what specific moment of the teaching process the use of computers is more convenient.

In terms of language teaching, the teaching learning process based on the use of the ICT - in which we can find the use of computers - has been very popular worldwide since the last two decades. The use of computers and online/offline platforms in the classroom provides the students with the possibility to have access to more than 94 per cent of the information presented through the audio-visual channel.

2.2. Using MyEnglishLab (MEL) platform in the EFL classroom

Among the platforms for foreign language teaching and learning, *My ELT*, and *MyEnglishLab* can be found. Both platforms offer a variety of activities, language focuses, and practice that help students develop language learning at different levels, and at their own pace. *MyEnglishLab* platform provides complete access to practicing listening comprehension, reading comprehension, and writing skills in a freer way, so that students can use it both in the school context and outside the school context. However, even when the platform has speaking sections devoted to the development of this skills, the correction is still developed by the teacher, and therefore, the time saved while developing the rest of the skills is yet wasted by the teacher while correcting speaking tasks his/her students have recorded into the platform.

A previous study conducted by the author of this paper at the Metropolitan Language School (MLS) in Quito in 2016 showed that:

- The students who used MyEnglishLab platform to practice speaking skills made a lot of grammar mistakes in contents that had already been taught in the same or prior levels
- The students were fluent in speaking as they felt more comfortable while recording themselves in the speaking tasks at home (but grammar mistakes persisted)

- Most of the students used the platform to practice the language outside the school context
- Students who needed more help while learning the language were far behind the average students in their speaking practice platform tasks

These findings made the language teachers at MLS consider necessary to create a framework for grammatical accuracy development to improve speaking skills through the use of *MyEnglishLab* platform. This framework is based on the three pedagogical stages for Task-Based Learning (TBL). That is, pre-task, task cycle, and language focus (post task).

The reason why the TBL methodology was selected has to do mainly with the fact that the application of tasks for language learning is based on the process rather than the product of communication. Through TBL students learn by interacting communicatively. Students may, as well, encounter situations that are similar to real life settings while practicing the language in the classroom.

During the pre-task stage, teachers should ask the students to pay attention to the main grammatical aspects covered in the classroom, so that they recycle the language they need to complete the speaking tasks. The activities selected by teachers at this stage are focused on the grammar the students need to complete the tasks in the next stage of the methodology. These activities should motivate the students, activate their prior knowledge about the grammar and topic of the speaking tasks, and prepare them for the task completion.

The task cycle stage is intended for the students to develop the speaking tasks themselves. It is during this part of the process that students complete language tasks where they have to actually use the grammar recycled in the previous stage. Speaking tasks can be organized by the teacher as to be developed by students individually, in pairs or small groups, or as part of class discussions with more advanced classes.

The speaking tasks for this cycle may include the activities that have been already defined in MEL platform in order to give the students practice in the specific grammatical contents covered in each unit. However, the teacher may find useful to use some class-prepare tasks where students have to actually use the language in other situations. These tasks include some that have been previously stated in this article, such as: role-play, interviews, stories dramatizations, problem solving, simulations, and message writing.

Other speaking tasks teachers can use are: discussions, information gap, brainstorming, storytelling, story completion, reporting, picture narrating, and picture describing, etc (Kayi, 2006). Most of these task types can be adapted easily, so that the teacher can determine what the best task is according to his/her students' level.

Finally, during the language focus, teachers should have students reflect upon the use of grammar during the task. This reflection can be based on specific grammar issues students still encounter after completing the task or on relevant aspects about positive use of the grammar in the communicative speaking task developed.

The didactic framework (DF) for the teaching of grammatical accuracy in speaking skills based on online resources can be described as follows:

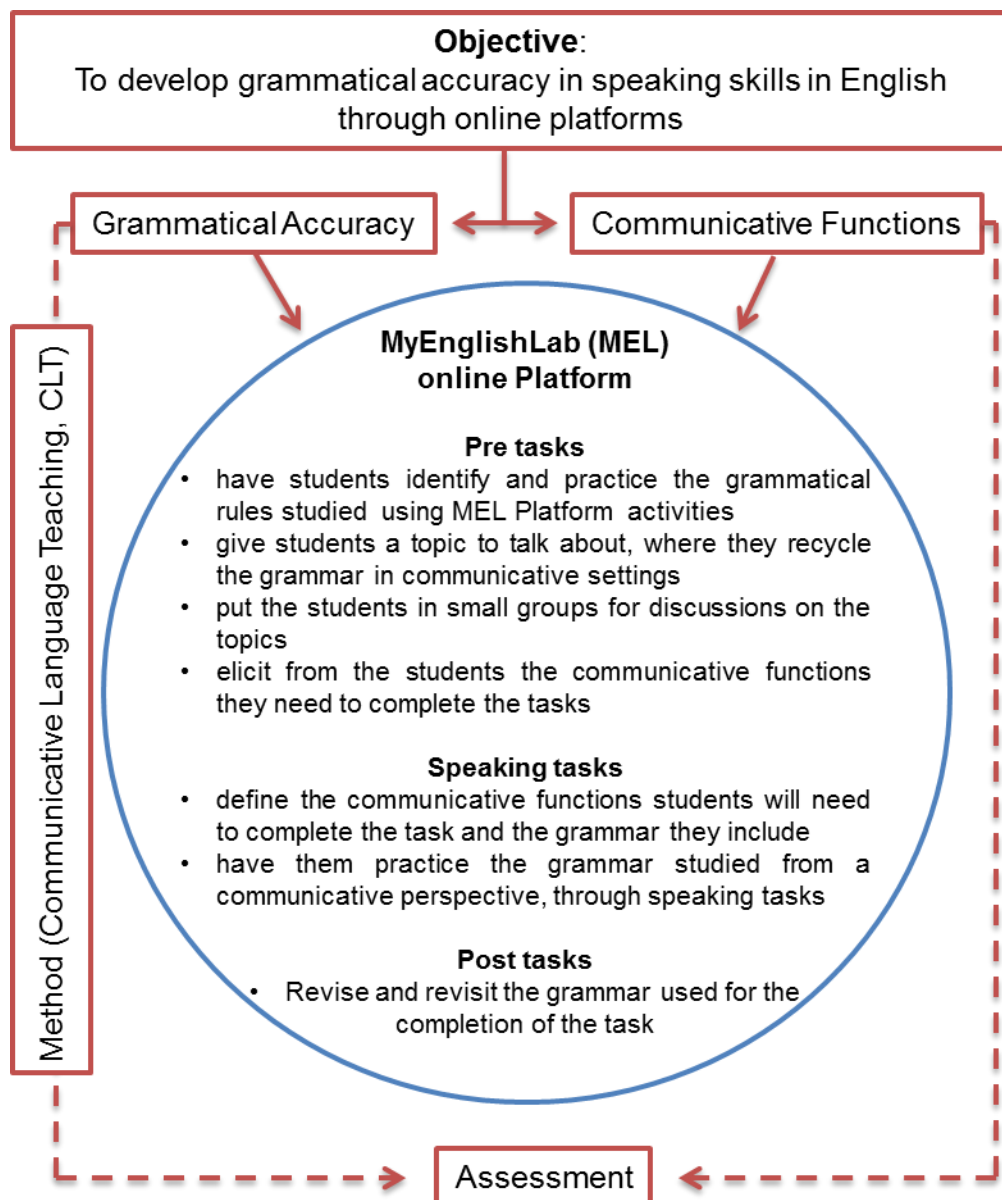


Figure 1. Didactic Framework for the teaching of grammatical accuracy in speaking skills.
Designed by the author

3. Methodology

A qualitative methodology was used to conduct the research, essentially based on the possibilities the interpretative approach provides researchers with during the study of phenomena in its context of development. Furthermore, percentage analysis was used to analyze the data collected, and contrast the qualitative findings of the study.

Grammatical accuracy development in speaking skills as a research scope was analyzed in the context of the application of MEL platform. Thus, reality was studied and interpreted as it took place. The interpretative approach allowed the researcher to collect information through observation as the main method. As stated by Bevir and Kedar (2008), interpretive methodologies incorporate an orientation that sees human action as meaningful and historically

dependent, so the subjects participating in this study are located within particular linguistic, historical, and values standpoints that make the development of the research possible.

3.1. Research questions

In order to conduct the study about grammatical accuracy in speaking skills through the use of MEL platform, three specific research questions were determined:

- 1) How could students benefit from using MEL online platform to develop speaking skills in English?
- 2) What language tasks can be used to foster grammatical accuracy in speaking skills using online resources?
- 3) What is the teachers' role in assessing students' speaking tasks in an online platform environment?

3.2. Participants and material

The participants in the study were 104 students from the Metropolitan Languages School in Quito who were enrolled in levels 1, 2, 3 and 6 at the time of the pedagogical intervention. They all used MEL platform through the courses designed by the professors according to the levels they were in.

All syllabi have their own MEL platform courses, depending on the level and coursebook used. Thus, students from level 1 are taught using as main coursebook the series Top Notch Fundamentals A, level 2 uses Top Notch Fundamentals B, level 3 students are taught the contents of Top Notch 1-A, and level 6 students use Top Notch 3. In all coursebooks, speaking skills development is intended to provide students with practice on the communicative functions defined in each unit.

Furthermore, there are pronunciation and conversation strategies sections that support the development of speaking by the students, and which they can use to complete the work assigned to them in MEL platform. Around 63 % of the participants were from level 1, and had had slight contact with the foreign language before enrolling at the Metropolitan Languages School. Accordingly, their level of understanding and use of the communicative functions was rather limited.

On the other hand, only 29.8 % of the students taking part on the research had being learning English for at least 6 months, which consequently made possible for them to interact more freely in the classroom. The level 6 students, however, had been studying English at the school for over a year and a half at the moment of the study, and this gave them more confidence in completing the tasks assigned.

The amount of participants taking part on the study was distributed as follows:

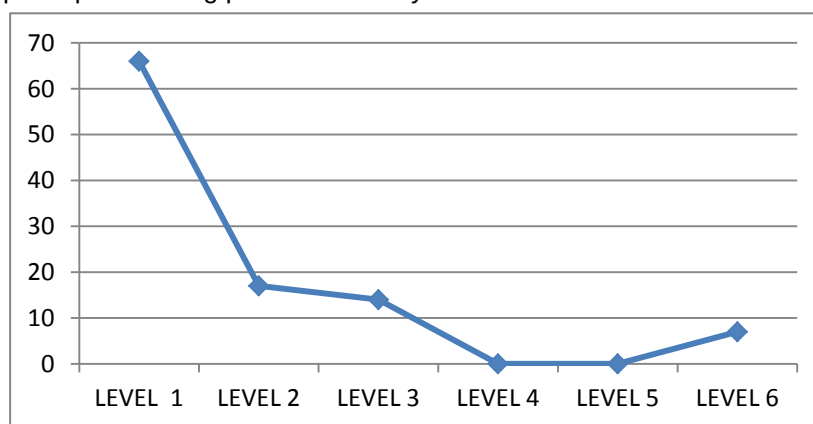


Figure 2. Total amount of participants per level

In order to conduct the study, the researcher had the students develop a set of tasks that were to be completed on MEL online platform, using a variety of activities in which the students had to recall the grammar studied first, and then practice those features of grammar in different communicative functions before using them in a speaking task. Thus, once the students had completed the first stage of the didactic framework elaborated, they moved into defining the communicative functions they needed to complete the task, and recorded their performance onto the platform to complete the exercises assigned.

The criteria used to assess the development of grammatical accuracy in speaking skills are related to the stages of the didactic framework elaborated. In all cases they were associated to the use of MEL online platform. These criteria follow the actions defined for the pre-task stage, speaking stage and post-task stage, and were determined as follows:

- Appropriate recall of the grammatical aspects treated in the units of the coursebooks selected (ARG),
- Appropriate selection of the communicative functions in which the grammatical aspects can be used (ASCF),
- Definition of the communicative functions to be used in the speaking task assigned (DCF),
- Accurate use of the grammatical aspects in the speaking task (AG), and
- Appropriate revision and revisit of the grammar used for the completion of the task (ARRG).

4. Results

Tables 1 and 2 were elaborated to present the data collection related to the students' performance while developing grammatical accuracy in speaking skills through the use of MEL platform.

Table 1.

Students' performance before the application of the Didactic Framework stages for grammatical accuracy development in speaking skills

Levels/Total students in the level	Percentage of students who met the criteria				
	ARG	ASCF	DCF	AG	ARRG
L-1/66 ss	48.4	42.4	45.4	51.5	45.4
L-2/15 ss	46.6	66.6	66.6	53.3	53.3
L-3/16 ss	50.0	50.0	56.2	56.2	56.2
L-6/7 ss	71.4	71.4	85.7	71.4	71.4
TOTAL	50.5	49.0	52.8	53.8	50.5

The results in Table 1 were part of the diagnosis developed to corroborate the need for the design and elaboration of a framework. The diagnosis was applied 2 weeks after the students had started the levels, and the tasks assigned belonged to the first two units of each coursebook. All tasks were the same tasks already designed in the platform.

Table 2.

Students' performance after the application of the Didactic Framework stages for grammatical accuracy development in speaking skills

Levels/Total students in the level	Percentage of students who met the criteria				
	ARG	ASCF	DCF	AG	ARRG
L-1/66 ss	77.2	84.8	75.7	81.8	87.8
L-2/15 ss	80.0	100	86.6	80.0	100
L-3/16 ss	75.0	68.7	93.7	87.5	100
L-6/7 ss	100	100	100	100	100
TOTAL	78.0	85.5	81.7	83.6	92.3

As for the data collected in Table 2, they show the students' performance after a six-week course in which they had to develop the speaking tasks in MEL platform, following the stages determined in the didactic framework presented.

As stated above, the main reason why the two data are presented is to allow the author establish a comparison of how accurate the students use the grammar in speaking skills was. It can be noted that before the application of the stages of the DF, the average percentage of students who were able to meet the criteria defined in order to accurately use grammar to develop speaking skills was 51.3%.

On the other hand, after introducing the stages of the DF with the specific aim described above, the average percentage of students who were able to accurately complete the speaking tasks on MEL was 87.8%. This increase is a result of the previous and post analyses related to the use of grammatically correct structures in online tasks that are defined by MEL platform, but assessed by the teacher.

Furthermore, the facts that students can recall the grammar they have been previously exposed to before they use it in the actual task, allows them prepare themselves for the task. Accordingly, teachers should be able to guide the students towards the correct development of each of the stages in the DF, so that students do not get "lost" while completing the actions that belong to each stage. Appropriately selecting the communicative functions in which the specific grammar for certain unit can be used helps students focus on the communicative aspect of language. At the same time, defining the communicative functions that are related to the task, and discriminating among those that are general also allows them be more precise while using the specific grammar taught with a communicative purpose.

As noted on tables 1 and 2, the appropriate selection by the students of the communicative functions in which the grammar taught can be used increased in 36.5 percent. This means that, this stage is crucial for the distinction of the functions necessary to complete the speaking tasks. Additionally, the possibility of revisiting and revising the grammar used for the completion of the task is another stage the students paid more attention to. This may be because they focused on accurate structures that helped them communicate more efficiently in English.

All five criteria showed an increased in the use of grammatical structures while speaking in English and provided the students with a more structured way to develop speaking skills accurately. The growth in students' performance in each of the stages and criteria determined was progressive, as can be noted in Figures 3 to 7 below. These figures show how students performed before (Bef) and after (Aft) the application of the DF stages. Each of the figures shows a particular criterion and is graded from the first to the last stage presented in the DF.

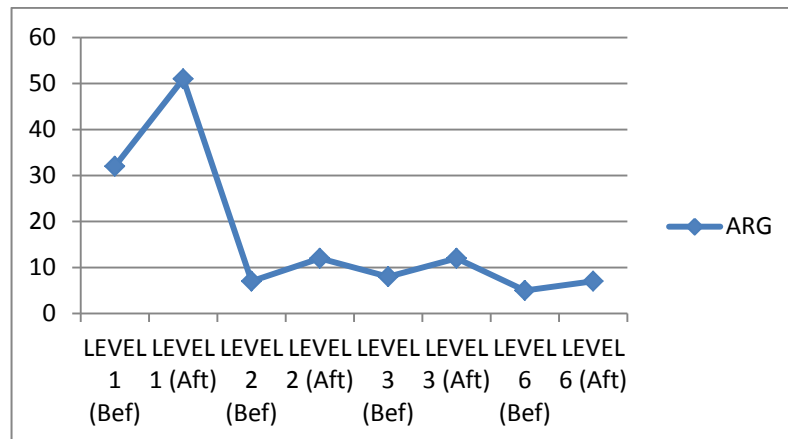


Figure 3. Progress in students' performance while appropriately recalling grammar

The figure above presents the improvement in the students' performance while appropriately recalling the grammar they needed to complete the tasks assigned. As shown in figure 3, there was an increase in 28.3% of Level 1 students' performance. At the same time, after implementing the stages of the DF; there was an increase in the percent of students in each level who effectively recalled the grammatical aspects needed to complete speaking skills tasks. Thus, 33.4 % of Level 2 students, 25 % of the Level 3 students, and 28.6% of the Level 6 students showed progress in this criterion.

On the other hand, appropriately recalling the grammar needed to complete speaking tasks is not enough since students need to be able to select the appropriate functions to communicate what they want to convey. Figure 4 shows this progress after the DF stages were implemented. In this sense, it can be said that the average percentage of students from Levels 1 to 6 who improved their performance in appropriately recognizing and selecting the communicative functions 36.5 %.

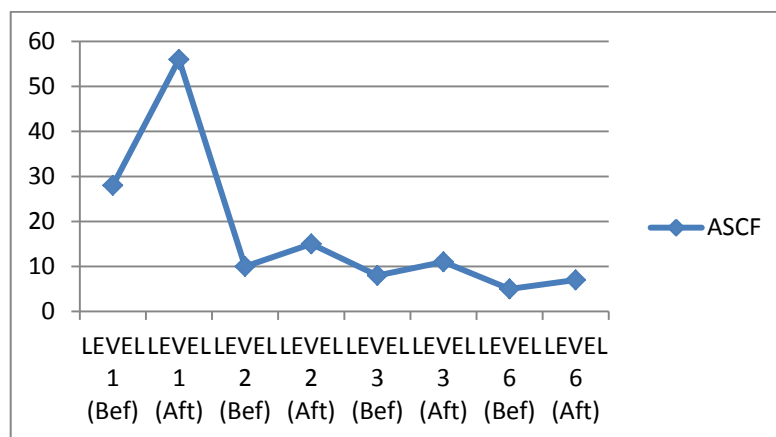


Figure 4. Progress in students' performance while appropriately selecting the Communicative Functions in which the grammar taught can be used

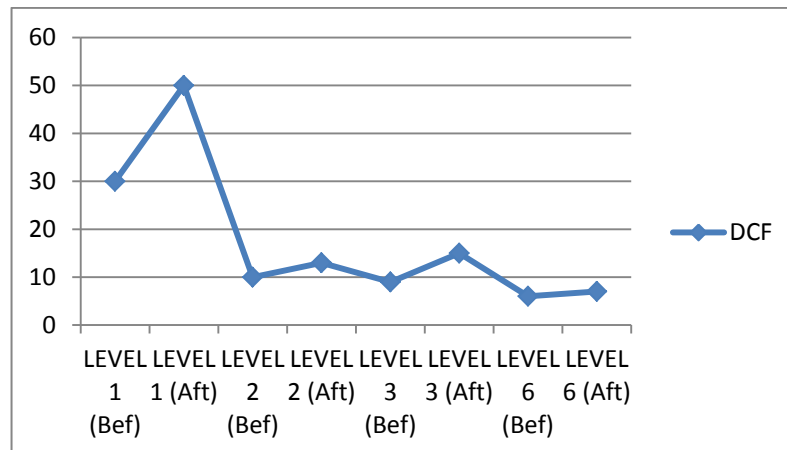


Figure 5. Progress in students' performance while defining the Communicative Functions to be used in the speaking task assigned in MEL platform

Figure 5 presents key results to one of the most difficult stages in the DF. This time students had to define which of the communicate functions selected in the previous stage were the ones they had to use in the speaking task. Thus, 30.1% of Level 1 students showed progress in this matter, while 20% showed progress in Level 2, 37.5% of Level 3 students improved their performance in this criterion, and 14.3% of the students did show progress in Level 6. Overall, 25.4% of the sample students who participated in the study showed progress while defining the specific communicative functions needed to complete the speaking tasks assigned in MEL.

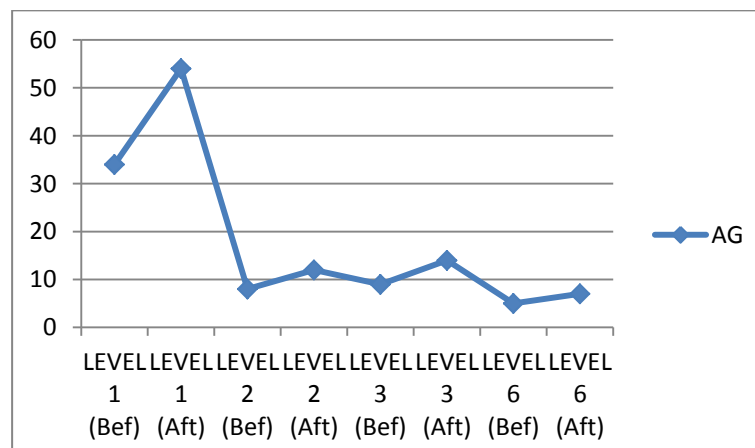


Figure 6: Progress in students' performance while accurately using grammar in the speaking task

On the other hand, Figure 6 shows the actual performance of students in the speaking skills and evaluates how effective the previous stages of the DF were in order to meet the outcomes for speaking skills development. Accordingly, the figure presents an increase of 29.8 average percent of the sample who were able to use accurately the grammar to complete the speaking task from MEL. The students who were in Level 3 were the ones who showed more progress, with an increase of 31.3% of effectiveness and grammatical accuracy.

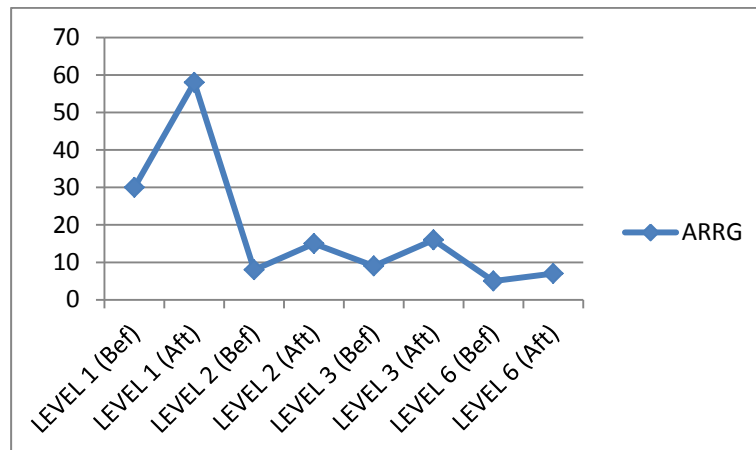


Figure 7. Progress in students' performance while revising and revisiting the grammar used for the speaking task completion

Finally, after finishing the speaking tasks, and in order to assess their performance, the final stage of the DF was applied. Figure 6 shows the students' performance while revising and revisiting the grammar used in the speaking tasks. Thus, Level 1 students showed an increase of 42.4% of effectiveness after performing a revision of the grammar used. Furthermore, 46.7% of the sample from Level 2 showed progress in this stage, as well as 43.8% of the Level 3 students, and 41.8% of the sample from Level 6.

The fact that all speaking tasks were developed in MEL platform, and that the use of online resources certainly motivates students towards learning is a positive thing. However, teachers still have to correct the speaking tasks the students recorded on the platform, and monitor students' progress in speaking skills development. Thus, a systematic follow up to students work in MEL platform is decisive for the teacher to assess the progress of the students.

5. Conclusions

In this study, the author presented an analysis on how MEL online platform can be used in order to develop grammatical accuracy in speaking skills through the application of the stages defined in a Didactic Framework designed for that matter. Furthermore, far from being conclusive in research, the article also presents the results of a six-week period application of the stages mentioned in order to assess the students' performance in the tasks MEL platform offers for the development of speaking skills.

These results show that more than 80% of the participants involved in the study were able to appropriately recall the grammar taught in order to select and define the communicative functions they need to complete the speaking tasks in an accurate way.

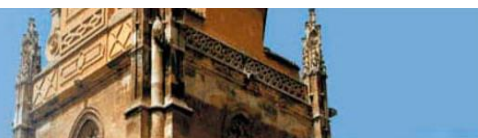
Moreover, 36.5% of the sample students who participated in the study showed progress while appropriately selecting the communicate functions they had to use in the speaking task. Accordingly, there was an increase in the percent of students who were able to define which of the communicate functions selected were necessary to complete each of the speaking tasks assigned.

The development of the speaking tasks themselves was effective since 29% of the sample showed progress in the skills after applying the stages of the DF presented. Finally, 96% of the students were able to revise and revisit the grammar used for the completion of the tasks so that the rules could be learnt and the same mistakes are not made in future speaking tasks.

A didactic framework for grammatical accuracy in speaking skills was necessary and helped students meet the goals set in order to develop the language skill in amore communicative way.

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School principal self-efficacy: a study on self-efficacy levels of the Turkish primary school principals

Auto-efficacité des directeurs d'école: étude sur les niveaux d'auto-efficacité des directeurs d'école primaire Turquie

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Journal for Educators, Teachers and Trainers, Vol. 9 (1)

<http://www.ugr.es/~jett/index.php>

Date of reception: 7 December de 2017

Date of revision: 8 July 2018

Date of acceptance: 28 December 2018

Karadag, E., Cogaltay, N. & Su, A. (2018). School principal self-efficacy: a study on self-efficacy levels of the Turkish primary school principals. *Journal for Educators, Teachers and Trainers*, Vol. 9(1). 208 – 221.



Journal for Educators, Teachers and Trainers, Vol. 9 (1)

ISSN 1989 – 9572

<http://www.ugr.es/~jett/index.php>

School principal self-efficacy: a study on self-efficacy levels of the Turkish primary school principals

Auto-efficacité des directeurs d'école: étude sur les niveaux d'auto-efficacité des directeurs d'école primaire Turquie

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Abstract

The aim of this study was to determine self-efficacy levels of Turkish primary school principals. The study, designed with survey method, was conducted with 198 (33 principals & 165 vice principals) participants selected through stratified sampling. School Administrator Efficacy Scale (SAES, McCollum, Kajs & Minter, 2006a) was employed as an instrument in this study. Independent samples t-test, Kruskal Wallis-H test and correlation analysis were carried out during data analysis process. The findings of the study indicated that the highest level of school principal self-efficacy was in 'Resource and Facility Management' dimension and the lowest level was in 'Use of Community Resources' dimension.

Resumé

Le but de cette étude était de déterminer les niveaux d'auto-efficacité des directeurs d'école primaire en Turquie. L'étude, conçue à l'aide d'une méthode d'enquête, a été menée auprès de 198 participants (33 directeurs et 165 directeurs principaux) sélectionnés au moyen d'un échantillonnage stratifié. L'échelle d'efficacité des administrateurs d'école (LDAD, McCollum, Kajs & Minter, 2006a) a été utilisée comme instrument dans cette étude. Un t-test d'échantillons indépendants, un test de Kruskal Wallis-H et une analyse de corrélation ont été effectués au cours du processus d'analyse des données. Les conclusions de l'étude ont montré que le degré le plus élevé d'auto-efficacité de la direction de l'école se situait dans la catégorie 'Gestion des ressources et des installations' et le niveau le plus bas dans la dimension 'Utilisation des ressources communautaires'.

Keywords

Efficacy; Self-efficacy; School principal; Turkey educational system

Mots-clés

Efficacité; Auto-efficacité; Directeur d'école; Système éducatif turc

1. Introduction

Among all aspects of self-knowledge and self-regulation, personal efficacy is probably the most influential in everyday life. Self-efficacy refers to 'beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments' (Bandura, 1997, pp. 41). In other words, it is an individual's overall judgment of his or her perceived capacity for performing a task. For example, the belief of a mathematics teacher that he or she can successfully teach calculus to a class of 12th grade students is an efficacy judgment. Similarly, principals with high self-efficacy might increase the emphasis on academic learning in schools. Note that, in contrast to causal attributions where the focus is on the past, a perception of self-efficacy represents future expectations of being able to attain certain levels of performance (Hoy & Miskel, 2005). Bandura (1977) has defined personal self-efficacy as a person's perception of his or her ability to perform a behavior; in this case, we describe the teacher's ability to teach effectively (Enochs & Riggs, 1990).

Self-efficacy beliefs contribute to motivation by determining the goals that individuals set for themselves, how much effort they expend, how long they persevere in the face of difficulties, and their resilience to failures (Bandura, 1993, 2000; Wood & Bandura, 1989). Bandura (1997) wrote, 'people's level of motivation, affective states, and actions are based more on what they believe than on what is objectively true (pp. 51)'. People's efficacy beliefs play a crucial role in their actions, which in turn influence their environments and future thoughts (McCullum & Kans, 2007a). There is also a need for greater understanding about the kinds of context variables linked to a higher self-efficacy (Labone, 2004). Social cognitive theory suggests that personal factors (including self-efficacy beliefs) and behaviors interact with the environment to influence each other through a process of reciprocal determinism (Tschannen-Moran & Woolfolk-Hoy, 2007). The stronger people believe in their capabilities, the greater and more persistent are their efforts. People tend to avoid tasks and situations that exceed their capacity; they seek activities they judge themselves capable of handling. The consequences of high self-efficacy –willingness to approach and persist on tasks, selection of task and situation, a focus on problem-solving strategies, reduced fear and anxiety, positive emotional experiences– effect achievement outcomes (Stipek, 1993). Consequently, people who have the same skills but different levels of personal efficacy may perform at different levels because of the way they use, combine, and sequence their skills in a changing context (Gist & Mitchell, 1992).

Researchers working on teacher self-efficacy, who have developed in a parallel route to the influence of theoretical perspectives of Rotter (1966) identified teacher self-efficacy as the degree of teachers' beliefs that they can control the causes of teachers' actions. Teachers who believed that they could influence student achievement and motivation (internal locus) were more effective than those who thought the external forces could not be overcome (Hoy & Miskel, 2005). Research on teachers' efficacy suggests that behaviors such as persistence on a task, risk taking, and use of innovations are related to degrees of efficacy (Ashton, 1985). For example, highly efficacious teachers have been found to be more likely to use inquiry- and student-centered teaching strategies, whereas teachers with a low sense of efficacy are more likely to use teacher-directed strategies, such as lecture and reading from the text (Czerniak, 1990). A second, more recent and useful conceptual strand of theory and research has evolved from the work of Bandura (1977). Bandura (1977) defined teacher efficacy as a type of self-efficacy –the outcome of a cognitive process in which people construct beliefs about their capacity to reform well. These self-efficacy beliefs effect how much effort people expend, how long they will persist in the face of difficulties, their resilience in dealing with failures, and the stress they experience in coping with demanding situations (Bandura, 1997). The existence of the two separate but intertwined conceptual strands emerging from two theoretical perspectives has contributed some confusion about the nature of teacher efficacy; however, perceived self-efficacy is a much stronger predictor of behavior than locus of control (Bandura, 1997; Tschannen-Moran, Woolfolk-Hoy & Hoy, 1998). From this perspective; the effectiveness (efficacy) sense for the teachers based on inner sense of perception forms a response to the concept of self-efficacy. Perceived self-efficacy can be equivalent to substantial effectiveness level. This perception of self-efficacy could be above or below actual level. The concept of sufficiency for teachers has a task-oriented structure based intrinsically on external control and

environmental factors and constitutes form of competency which is expressed as result capacity by Bandura (Baloğlu & Karadağ, 2008).

In summary, teacher self-efficacy influenced directly or indirectly both Gilbert & Levinson's study in 1957 and Rotter's study on locus of control in 1966, and all studies after those. The findings also showed that views on effectiveness which were stated in Reddin's 3D leadership theory (1970) laid a foundation for Bandura's social learning theory which was developed in 1977. Teacher self-efficacy studies consistently show two distinct factors or dimensions. There is a still-ongoing disagreement on their meanings in terms of established literature, and these discussions still go on (Ashton, et. al., 1982; Gibson & Dembo, 1984; Guskey, 1987; Guskey & Passaro, 1994; Pajares, 1996, 1997; Tchannen-Moran, Woolfolk-Hoy & Hoy, 1998).

During the past two decades, researchers have consistently established strong concoctions between teacher efficacy and teacher behaviors that foster student achievement (Allinder, 1994; Ashton & Webb; Gibson & Dembo, 1984; Hoy & Woolfolk-Hoy, 1990; 1993; Tchannen-Moran, Woolfolk-Hoy & Hoy, 1998; Woolfolk & Hoy, 1990; Woolfolk, Rosoff & Hoy, 1990). Cheng (1994) found that the attitudes of internal control-oriented teachers towards their jobs were more positive in terms of organizational commitment. Besides, their sense of internal, external, social and effective satisfaction and role clarity and job performance were higher. In addition, he suggested that the teachers who have this tendency have more positive perception in terms of leadership of the manager, organizational structure, teachers' social norms and organizational culture and effectiveness. A growing body of empirical evidence supports Bandura's (1977) theory that teachers' self-efficacy beliefs are related to the effort teachers invest in teaching, the goals they set, their persistence when things do not go smoothly and their resilience in the face of setbacks (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Teaching success, effort, and persistence depend on the extent to which a teacher believes he or she has the capability to organize and execute teaching that will lead to successful learning in a specific situation (Hoy & Miskel, 2005). These elements are especially important for carrying out responsibilities of instructional leadership (McCollum, Kans & Minter, 2006b) because the quality of the principal is linked statistically and practically to student achievement (Kaplan, Owings & Nunnery, 2005). In this context self-efficacy research has primarily focused on teachers, with little information on the construct's use to understand behaviors of school principals, e.g., principals and superintendents (McCollum, Kans & Minter, 2006a).

In order to understand the school principals' self-efficacy, which represent the basic foundations of this paper, the following questions should be addressed. Do efficacious principals handle job stress, as well as relationships with staff, students, and parents more effectively? Do school principals, who demonstrate high efficacy, employ more effective management practices, e.g., organizational planning, problem solving, and community building? These issues are critical in the face of the changing roles of school principals and recent changes in their preparation (McCollum, Kans & Minter, 2006b).

The self-efficacy construct is important in developing educational leaders, as it is a construct tied to success in learning and work. The more efficacious an educational leadership student, the more likely they will be successful in their classes. Likewise, efficacious school leaders will be successful in their jobs. Without a sense of efficacy, school principals will not pursue challenging goals and will not attempt to surpass obstacles that get in the way of such goals (McCollum, Kans, & Minter, 2006a, 2006b; McCollum & Kans, 2007a). The school principal efficacy construct is one in a set of psychological variables that have recently been explored by McCollum & Kans (2007b) in the context of educational leadership.

What is school principal efficacy? In accordance with Bandura (1986) a school principal's efficacy is the judgment of one's 'capabilities to organize and execute courses of action required' for successful completion of school leadership tasks and reaching desired school outcomes (p.396).

The most important modeling studies about the maturation of the concept of school principal belong to McCollum, Kans & Minter (2006a). The model is based on leadership in education and management effectiveness criteria by Smith, Guarino, Strom & Adams (2006) and national

standards of Educational Leadership Constituent Council (ELCC). ELCC's leadership framework provides a roadmap for university-based educational principal preparation programs regarding specific knowledge, skills, and depositions related to key themes in the development of school principals and superintendents (NPBEA, 2002a). The current ELCC Standards consists of seven standards toward the preparation of school principals (see: Table 1, McCollum, Kans & Minter, 2006b).

Table 1.
Seven Standards in Educational Leadership Constituent Council (ELCC)

Standard 1	Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by facilitating the development, articulation, implementation, and stewardship of a school or district vision of learning supported by the school community.
Standard 2	Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by promoting a positive school culture, providing an effective instructional program, applying best practice to student learning, and designing comprehensive professional growth plans for staff.
Standard 3	Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by managing the organization, operations, and resources in a way that promotes a safe, efficient, and effective learning environment.
Standard 4	Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by collaborating with families and other community members, responding to diverse community interests and needs, and mobilizing community resources.
Standard 5	Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by acting with integrity, fairness, and in an ethical manner.
Standard 6	Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.
Standard 7	The internship provides significant opportunities for candidates to synthesize and apply the knowledge and practice and develop the skills identified in Standards 1-6 through substantial, sustained, standards-based work in real settings, planned and guided cooperatively by the institution and school district personnel for graduate credit.

Fuente: McCollum, Kans & Minter, 2006b

McCollum, Kajs & Minter (2006a) state that this model will be beneficial for the education of current and future school leaders. However, when the related literature is investigated, it is seen that the studies conducted in the concept of self-efficacy are limited to teachers and students. Smith, Guarino, Strom & Adams (2006), which is one of the rare studies on the subject, concluded that quality in teaching and learning was influenced by the directors' competence. Besides, in another study, it was found that high level of self-effectiveness in the school management and the relations with the families was related with the success in the management of student behavior, the ability to cope with the psychological and physical symptoms of stress, the effective use of stress management techniques and the reduction of the stress level (Parkay, Greenwood, Olenjnik & Proller, 1988). In their paper in which they develop a principal's self-efficacy scale in the context of school restructuring, Dimmock and Hattie (1996) found that their highly specific self-efficacy measure (geared only toward actions necessary when a school is restructuring) was positively related to principals' ability to effectively deal with changes in their schools and changes in their role as principals. Because of the benefits of self-efficacy studies for teachers, and especially since studies show that principal leadership is vital to the improvement of schools in preparing students effectively, it is critical that self-efficacy investigation is extended among schools and school principals (Barth, 2001; Lunenburg & Ornstein, 2004).

1.1. Purpose

In recent years, researches in the field of educational sciences and self-efficacy research which constitute an important place in this field have been frequently conducted in teacher and student sample. Although there are studies examining the interactions of teacher self-efficacy with a large number of variables in the literature, no studies have been found to determine the self-efficacies of school administrators. In this respect, in order to gain a high-level of effectiveness, managers need to improve their competencies through a reflective and holistic structure in an integrated process. Within the broad scope of the problem, it is seen that the determining the level of primary school principals' self-effectiveness especially has a great importance in terms of principal training practices. Taking the importance of the case into consideration, this paper aimed to answer this question: 'What is the level of competence of Turkish primary school administrators?'

1.1.1. Research questions

This study was constructed on three research questions:

- What is the general level of self-efficacy of school principals?
- Does the self-efficacy of school principals differentiate according to gender, position type and level of education?
- Is there a relationship between school principals' self-efficacy and age and seniority variables?

2. Method

2.1. The research approach

This study was designed as a survey model to determine the level of school principal's self-efficacy. Survey models are research approaches that aim to describe a situation that has existed in the past or still exists. The subject of the research, the individual or object is tried to be defined in its own conditions and as it is. The researchers don't attempt to change these current circumstances in any way. The important thing in survey model studies is to be able to observe and present the case properly. A survey with a screening model has two basic limitations. These are difficulties in controlling and gathering data. Screening models can be classified as general screening models and case study models (McMillan & Schumacher, 2006).

2.2. Participants

The sample consisted of 198 school principals who volunteered to participate in the study and were included using three strata cluster sampling method according to the socioeconomic structure of the region (upper-middle-lower). Information on the demographic characteristics of the sample group is presented in Table 2.

Table 2.
Demographic information on participants

Variables		1	2	3	Total
Sex		Male	Female		-
	<i>n</i>	144	54		198
	%	72.7	27.3		100
Task		Principal	Vice Principal		-
	<i>n</i>	33	165		198
	%	16.7	83.3		100
Education level		Associate Degree	Undergradute	Gradute	-
	<i>n</i>	12	153	33	198
	%	6.1	83.3	16.7	100

Note: Age $M=40.6$, $SD=8.5$; Seniority of administration $X=6.3$, $SD=4.9$

2.3. Instrument

School Administrator Efficacy Scale [SAES]: The scale was developed in parallel with the model developed by McCollum, Kajs & Minter (2006a) about self-efficacy of the school principals. The scale was later tested by McCollum, Kajs & Minter (2006b) with confirmatory factor analysis (Confirmatory Factor Analysis). As a result of this process the scale was found to consist of 8 factors and 51 items. There factors are: (i) Instructional Leadership and Staff Development, (ii) School Climate Development, (iii) Community Collaboration, (iv) Data-based Decision Making Aligned with Legal and Ethical Principles, (v) Resource and Facility Management, (vi) Use of Community Resources, (vii) Communication in a Diverse Environment and (viii) Development of School Vision. The factor structure of the scale in Turkish culture was tested with confirmatory factor analysis. Confirmatory factor analysis of the scale was carried out in two stages. It was determined that the factors obtained as a result of the exploratory factor analysis in relation to the first stage of analysis of the scale did not exceed the theoretical limits before the evaluation of the confirmatory factor analysis results. Chi-square (χ^2) value and statistical significance levels were calculated as [$\chi^2=271.89$, $df=328$] for the scale. Besides, other fit indices of the model [$GFI=0.94$, $AGFI=0.96$, $RMSR=0.04$] suggest that the proposed model is appropriate. In addition, the factor loadings obtained from the confirmatory factor analysis of the scale were between 0.41 and 0.84. As a result, SAES, which is a seven-point (1=not true, 7=completely true for me) scale, is composed of 51 items, and 8 factors, and was used to examine the self-efficacy levels of the school principals. In Table 3, Cronbach's alpha reliability coefficients of the factors of the scale were given (McCollum, Kajs & Minter, 2006b and this study).

Table 3.
Reliability coefficients of the subscales and item numbers

Factors	Item	2006b		This Study	
		Alpha	N	Alpha	n
1-Instructional Leadership and Staff Development	12	.93	559	.89	198
2- School Climate Development	7	.93	559	.87	198
3-Community Collaboration	7	.91	559	.86	198
4-Data-based Decision Making Aligned with Legal and Ethical Principles	8	.93	559	.91	198
5-Resource and Facility Management	5	.89	559	.90	198
6-Use of Community Resources	3	.95	559	.92	198
7-Communication in a Diverse Environment	3	.81	559	.83	198
8-Development of School Vision	4	.96	559	.93	198

2.4. Procedure

In the study, data were obtained by administering the scale to the principals by the researchers. It was observed that the answering the items on the scale lasted about 10-15 minutes. In the study, demographic variables were grouped before the statistical analysis and the items on the data collection tool administered to the principals were scored with 7-point Likert system. Demographic characteristics of the school principals who constitute the study group were calculated and summarized by using frequency (n) and percentage (%) values, and mean (M) and standard deviation (SD) scores of all sub-scales were calculated. In the study groups, non-parametric techniques were used for those that do not show normal distribution ($n<30$) in groups, and parametric techniques were used for those with normal distribution characteristics. In this regard, in order to determine whether school principals competency levels differ according to gender and position type, independent samples t test; to determine whether school principals competency levels differ according to level of education, Kruskal Wallis-H test; to examine the relationship between age and seniority Pearson Correlation coefficient were used.

3. Findings

Among the self-efficacy levels of school principals, the highest average score belongs to 'Resource and Facility Management' factor, while the lowest average score belongs to 'Use of Community Resources' factor. In addition, the examination of the averages of all factors show that they have an average of more than five out of seven (see Table 4).

Table 4.
Mean and standard deviation of school principals' self-efficacy

Factors	<i>n</i>	<i>M</i>	<i>SD</i>
1-Instructional Leadership and Staff Development	198	5.27	1.09
2-School Climate Development	198	5.32	1.16
3-Community Collaboration	198	5.31	1.03
4-Data-based Decision Making Aligned with Legal and Ethical Principles	198	5.53	1.13
5-Resource and Facility Management	198	5.39	1.16
6-Use of Community Resources	198	5.26	1.15
7-Communication in a Diverse Environment	198	5.35	1.11
8-Development of School Vision	198	5.25	1.23

Table 5 presents the t-test results of the school principals' competence in relation to the gender variable. According to the statistical results, a significant difference was found in favor of male managers in 'Community Collaboration' factor score related to school manager competence. On the other hand, there was no significant difference between male and female principals in the other factor scores of school management competence.

Table 5.
t-Test results for gender of school principals

Factors	Male <i>n</i> =144		Female <i>n</i> =54		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
1-Instructional Leadership and Staff Development	5.31	1.13	5.19	1.02	.70	196	.48
2-School Climate Development	5.39	1.18	5.15	1.10	1.27	196	.20
3-Community Collaboration	5.43	1.01	5.01	1.07	2.60	196	.01
4-Data-based Decision Making Aligned with Legal and Ethical Principles	5.56	1.13	5.47	1.15	.49	196	.62
5-Resource and Facility Management	5.41	1.15	5.33	1.20	.43	196	.66
6-Use of Community Resources	5.30	1.18	5.15	1.10	.83	196	.40
7-Communication in a Diverse Environment	5.38	1.14	5.30	1.05	.45	196	.65
8-Development of School Vision	5.32	1.26	5.07	1.18	1.25	196	.21

In Table 6, t-test results of school administrator self-efficacy according to position type (principal & vice principal) are given. According to the statistical results, there was no significant difference between the principal and vice principal positions in all factor scores related to the school principal self-efficacy.

Table 6.
t-Test results for position type

Factors	Principal n=33		Vice Principal n=165		t	df	p
	M	SD	M	SD			
1-Instructional Leadership and Staff Development	5.23	1.17	5.29	1.09	-.25	196	.80
2-School Climate Development	5.40	1.19	5.31	1.16	.43	196	.66
3-Community Collaboration	5.26	1.15	5.33	1.02	-.34	196	.72
4-Data-based Decision Making Aligned with Legal and Ethical Principles	5.30	1.22	5.59	1.12	-1.34	196	.17
5-Resource and Facility Management	5.30	1.39	5.41	1.11	-.52	196	.60
6-Use of Community Resources	5.24	1.28	5.26	1.14	-.10	196	.92
7-Communication in a Diverse Environment	5.06	1.33	5.41	1.06	-1.66	196	.09
8-Development of School Vision	5.36	1.31	5.23	1.23	.57	196	.56

Table 7 shows the results of the Kruskal Wallis-H test conducted to determine the differences between the school administrator self-efficacy and the education level of the school principals. According to the statistical results, a significant difference was found in favor of the administrators of the associate degree level in the 'Use of Community Resources' factor score related to the school principal self-efficacy. On the other hand, there were no significant differences in other factor scores of the school principal self-efficacy among the administrators at the associate, undergraduate and graduate level.

Table 7.
Kruskal wallis-h test results of school principals concerning the education level variable

Factors	Groups	n	M	SD	X _{rank}	X ²	df	p	Difference
1-Instructional Leadership and Staff Development	1- Associate Degree	12	5.86	0.41	129.5	3.50	2	.17	-
	2-Undergraduate	153	5.23	1.17	97.5				
	3-Gradute	33	5.30	0.89	97.4				
2-School Climate Development	1- Associate Degree	12	5.59	1.16	113.6	1.03	2	.59	-
	2-Undergraduate	153	5.31	1.22	99.5				
	3-Gradute	33	5.27	0.87	94.0				
3-Community Collaboration	1- Associate Degree	12	5.57	0.18	107.7	.44	2	.80	-
	2-Undergraduate	153	5.28	1.11	98.1				
	3-Gradute	33	5.42	0.89	102.7				
4-Data-based Decision Making Aligned with Legal and Ethical Principles	1- Associate Degree	12	6.16	0.48	129.8	4.50	2	.10	-
	2-Undergraduate	153	5.51	1.17	99.3				
	3-Gradute	33	5.43	1.12	89.0				
5-Resource and Facility Management	1- Associate Degree	12	6.00	0.18	131.7	4.28	2	.11	-
	2-Undergraduate	153	5.32	1.23	96.5				
	3-Gradute	33	5.50	0.99	101.5				
6-Use of Community Resources	1- Associate Degree	12	6.00	0.24	140.0	6.69	2	.03	1-2 1-3
	2-Undergraduate	153	5.17	1.27	96.0				
	3-Gradute	33	5.42	0.56	101.0				
7-Communication in a Diverse Environment	1- Associate Degree	12	5.75	0.45	118.2	1.85	2	.39	-
	2-Undergraduate	153	5.33	1.16	99.6				
	3-Gradute	33	5.30	1.03	92.1				
8-Development of School Vision	1- Associate Degree	12	5.19	1.03	92.0	.22	2	.89	-
	2-Undergraduate	153	5.25	1.31	100.0				
	3-Gradute	33	5.30	0.97	99.9				

Table 8 presents the correlation analysis results to determine the relationship between school administrator self-efficacy and the age and seniority of managers. According to the statistical results, there was no statistically significant relationship between all sub-dimensions of school administrator self-efficacy and age and seniority of managers.

Table 8.

Pearson correlation matrix between school principals views and their age and seniority

Variables	1	2	3	4	5	6	7	8	9	10
Factors										
1-Instructional Leadership and Staff Development	-									
2-School Climate Development	.80*	-								
3-Community Collaboration	.79*	.76*	-							
4-Data-based Decision Making Aligned with Legal and Ethical Principles	.86*	.75*	.89*	-						
5-Resource and Facility Management	.81*	.66*	.85*	.86*	-					
6-Use of Community Resources	.74*	.64*	.71*	.70*	.74*	-				
7-Communication in a Diverse Environment	.79*	.75*	.79*	.85*	.80*	.82*	-			
8-Development of School Vision	.72*	.82*	.64*	.68*	.59*	.58*	.75*	-		
9-Age	-.06	-.31	-.06	.37	-.10	.03	.00	-.06	-	
10-Seniority of administration	.05	.04	.17	.41	.07	.16	.05	.04	.00	-

$n = 198$, $*p < .01$

4. Discussion

Central to the social cognitive theory are thoughts people have about their actions, of which self-efficacy beliefs are a key component. 'Self-efficacy beliefs are people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances' (Bandura, 1986, p.391). 'Self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishment' (Pajares, 2002, p.3). Within the scope of these definitions; school principal self-efficacy is a principal's belief in the capacity of a principal (of herself/himself) to plan and act to achieve a particular teaching action in a particular context.

In this context, the study searched for answers about the self-efficacy levels of the Turkish school principals working in Turkish primary schools. Within this scope, findings can be summarized as:

- Self-efficacy level of school principals is high, and school principals feel themselves sufficient in 'Resource and Facility Management' factor.
- Male school principals feel more sufficient in 'Community Collaboration' factor.
- Principals who have associate degree feel more sufficient in the 'Use of Community' Resources factor.
- Significant correlation isn't found between school principals self-efficacy scores and age and seniority.

School principal self-efficacy varies depending on the context. Managers don't feel themselves equally active in all management situations. In certain environments, the principals feel competent when they manage certain teachers on specific issues. In different situations they feel more or less active. The level of competence of managers can vary from one management activity to another (Rossi, Cousins & Gadalla, 1996; Raudenbush, Rowan & Cheong, 1992). When evaluating self-efficacy, consideration of the management work and context is as necessary as the assessment of the weaknesses and strengths of the person associated with the requirements of the work to be performed. According to Bandura (1977) people evaluate the

competence of their actions throughout their life and compare these actions with those of others. An individual who believes he is capable of a subject can develop a positive sense of self-efficacy, even if he is not capable. The opposite is also possible. In other words, individuals may tend to exhibit ineffective behaviors about any skill by developing a negative sense of self-efficacy- even if they are capable. However, according to Bandura (1977), individuals with high perceived self-efficacy have more control over their environment and have more success in dealing with the difficulties they face. Another kind of self-efficacy suggested by Bandura (1998) is the result effectiveness. This type of self-efficacy accounts for the ability of individuals to reach a result by controlling the environmental factors and reaching the result. This type of self-efficacy meet the individuals in order to reach the goal under the control of environmental factors can reach to the result of the self-efficacy. Efficacy can serve as a means to understanding school principals' thoughts and motivations, tied to their behaviors and the school environments they create. School leaders with a sense of efficacy tend to make noble efforts to achieve school goals, including a relentless persistence even through difficult circumstances (Osterman & Sullivan, 1996). School principal's efficacy can affect task performance, motivational level, and self-improvement efforts linked to school practices (Schultz & Schultz, 1998). Furthermore, efficacy is especially critical in relation to instructional leadership because the quality of a school principal's leadership is linked statistically and practically to student achievement (Kaplan, Owings, & Nunnery, 2005, p. 43). Dimmock and Hattie (1996) concluded that principal efficacy is central for schools going through a restructuring process, and Smith, Guarino, Strom, and Adams (2006) noted that principal efficacy effects how well teachers instruct and students learn. Because of the major, long-term impact that school principal efficacy can play in the lives of the campus community and the community at large, the study of the efficacy construct and how it influences multiple school-related activities and processes, for example, planning, decision making, and organizational development, is vital (McCollum & Kajs, 2007a). When all the findings in the literature are examined in the present study, it is seen that in the flow models of the school budgets in the European Union countries, local governments generally have an impact on the creation of the education budget. Local administrations support the school in areas such as employment of education and training personnel, transportation, canteen, major repairs and building construction, food, milk, insurance, water, electricity and health. In the European Union countries, the school directorate has been given the freedom to make school budgets in areas such as the employment of teachers, minor repairs, and use of educational materials (Eurydice, 2001). However, the case isn't the same in Turkish education system. In Turkish education system, the central and local government assistance to schools is limited or absent. This situation necessitates all schools to create their own resources. Therefore, it can be said that the most important managerial task of Turkish school principals is the management of public resources. In parallel with this situation, the result is as was expected.

Another important result obtained in the study, concerning of school principal competencies in 'Community Collaboration' factor has been seen that male managers are more dominant. While this situation has been examined in detail, it is seen that male managers compared women managers have high managerial experiences. *Mastery experience* is the single most important source of self-efficacy. Performance successes and failures (i.e., actual experiences) in completing a task have strong effects on self-efficacy. Recurrent successes raise efficacy perceptions; regular failures produce self-doubts and reduce self-efficacy, especially if failure occurs early in a task sequence and does not reflect a lack of effort or opposing external influences. Efficacy is facilitated as gradual accomplishments build skills, coping abilities, and expose needed for task performance (Hoy & Miskel, 2005, p. 151).

As a result, experimental studies on self-efficacy in the organizational and managerial literature gave consistent results. Self-efficacy is associated with performance in jobs such as productivity, coping with difficult jobs, career choice, learning, success, and adapting to new technology (Gist & Mitchell, 1992). Similar results are evident in educational settings. Self-efficacy research in schools tends to focus on one of two areas of approaches. The first group of studies test for the effects of student and teacher self-efficacy on various motivational and achievement indicators (Hoy & Miskel, 2005). The general finding is that self-efficacy is positively related to teaching (Ashton & Webb, 1986; Enochs & Riggs, 1990; Gibson & Dembo, 1984; Guskey, 1988), achievement (Anderson, Greene & Loewen, 1988; Ashton & Webb, 1986;

Midgley, Feldlaufer & Eccles, 1989; Ross, 1992), course grades (Pintrich & Garcia, 1991), student motivation (Midgley, Feldlaufer & Eccles, 1989), and classroom management strategies of teachers (Ashton & Webb, 1986). Moreover, experimental studies have consistently found that changing self-efficacy beliefs can lead to better use of cognitive strategies and higher levels of academic achievement for mathematics, reading, and writing tasks (Schunk, 1991). In addition to these results, this research reveals the self-efficacy of the school principals who are the most important stakeholders of the schools.

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