



UNIVERSIDAD DE CÓRDOBA

Creencias sobre la formación inicial y la identidad profesional docente del profesorado de educación secundaria

Beliefs about initial training and teachers'
professional identity of secondary
education teachers

Elisa Pérez Gracia

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TITULO: *Creencias sobre la formación inicial y la identidad profesional docente del profesorado de educación secundaria*

AUTOR: *Elisa Pérez Gracia*

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TESIS DOCTORAL

Creencias sobre la formación inicial y la identidad profesional docente del profesorado de educación secundaria

Beliefs about initial training and teachers'
professional identity of secondary
education teachers

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TÍTULO DE LA TESIS: Creencias sobre la formación inicial y la Identidad Profesional Docente del profesorado de Educación Secundaria

DOCTORANDA: Elisa Pérez Gracia

INFORME RAZONADO DE LOS DIRECTOR/ES DE LA TESIS

La tesis doctoral realizada por D^a. Elisa Pérez Gracia consiste en una investigación elaborada como compendio de artículos, publicados en prestigiosas revistas internacionales, sobre el pensamiento profesional docente del profesorado de enseñanza secundaria, durante el proceso de formación inicial. Esta investigación, además de centrarse en un tema relevante y novedoso, presenta excelentes indicios de calidad para ser defendida y evaluada por la Comisión Académica, con vistas a la consecución del grado de doctor. Se trata de un trabajo realizado con rigor científico y financiado mediante diferentes fuentes (Plan Propio de Investigación de la Universidad de Córdoba 2017 y Programa Operativo de Fondos FEDER Andalucía).

El hilo conductor de este proyecto de tesis consiste en analizar las creencias y percepciones del alumnado del Máster de Educación Secundaria (MAES), sobre el desarrollo profesional y la construcción de la Identidad Profesional Docente (IPD). Tales aspectos del pensamiento docente se han recogido, durante el proceso de formación inicial, mediante diferentes instrumentos utilizados como actividades de aula, en diversas materias del máster, contando con la colaboración del profesorado que las imparte. El proyecto de investigación se ha desarrollado en dos fases consecutivas y complementarias, integradas por varios estudios específicos que han dado lugar a los diferentes artículos que componen el conjunto de la tesis doctoral.

El problema principal que se aborda en la primera fase se relaciona con la necesidad de conocer si el futuro profesorado de educación secundaria se siente preparado para su desempeño profesional. Al analizar y desglosar esta cuestión, desde diferentes perspectivas, se han llevado a cabo cuatro estudios empíricos cuyos resultados se han mostrado en los diferentes artículos que se comentan a continuación. En el primer trabajo se recogen y analizan los datos de una exploración sobre las creencias que muestra el alumnado del MAES sobre la profesión docente y su relación con los principales modelos didácticos. En el segundo artículo, se describen las creencias de los futuros docentes de enseñanza secundaria sobre las necesidades formativas para ejercer la docencia y su relación con diversos aspectos que influyen en el desarrollo profesional. En el tercer trabajo se analiza el nivel de desarrollo de las competencias docentes, adquiridas por el alumnado del máster durante el proceso de formación inicial. En el cuarto artículo se indaga sobre cómo valora el alumnado del MAES la formación inicial docente adquirida durante el curso y

la importancia atribuida al desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

La segunda fase del proyecto de investigación se ha centrado en analizar cómo van construyendo los estudiantes del MAES su propia identidad profesional docente (IPD) y qué factores consideran que intervienen en mayor grado durante su desarrollo. Al desglosar esta problemática en los diferentes aspectos que la integran se han desarrollado, de nuevo, otros cuatro artículos que se comentan a continuación. El primer trabajo de esta fase, que corresponde al quinto artículo del proyecto de investigación, consiste en una revisión -bastante completa y actualizada- de la literatura científica sobre IPD, que permite conocer su evolución durante el proceso de formación inicial, analizando cómo se aborda en los programas de formación docente y los factores que contribuyen a su desarrollo. En el sexto artículo se describe el proceso de diseño y validación de un instrumento adecuado para analizar las creencias del futuro profesorado de educación secundaria sobre el desarrollo de la IPD. El séptimo artículo analiza las creencias sobre la construcción de la IPD en el alumnado del MAES de las áreas de conocimiento de Ciencias Experimentales y de Tecnología. Finalmente, en el último artículo se presentan y analizan las creencias del futuro profesorado de educación secundaria de inglés como lengua extranjera sobre la construcción de la IPD.

Dado que la tesis se presenta como compendio de artículos, conviene resaltar que todos los trabajos forman parte de un proyecto único, que se fundamenta en un marco teórico global, establecido a partir de una exhaustiva revisión de los antecedentes sobre la problemática abordada. Así mismo, en el desarrollo de este proyecto de investigación se ha utilizado una metodología adecuada para conseguir los objetivos planificados, analizar los resultados obtenidos y extraer un conjunto de conclusiones útiles para mejorar el desarrollo de competencias y ayudar a construir la identidad profesional docente del profesorado de secundaria durante el proceso de formación inicial que ofrece el MAES. Por tanto, se trata de un proyecto amplio, ambicioso y novedoso, estructurado en torno a los ocho artículos que se han comentado anteriormente, de los cuales se han publicado cuatro en JCR (segundo y tercer cuartil) y otros cuatro en SJR (primer, segundo y tercer cuartil). Los numerosos y variados resultados de esta tesis, además de constituir relevantes aportaciones científicas, permiten extraer interesantes implicaciones prácticas para el diseño y el desarrollo de un programa de formación del profesorado de educación secundaria, que resulte acorde a las demandas de la reciente propuesta de reforma para la mejora de la profesión docente, anunciada por el Ministerio de Educación y Formación profesional en enero de 2022.

Por todo ello, se autoriza la presentación de la tesis doctoral.

Córdoba, 15 de junio de 2022

Firma de los directores

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Estas líneas me ofrecen la oportunidad de reconocer la entrega y el esfuerzo que han dedicado mis directores, el Prof. Dr. Alfonso Pontes Pedrajas y la Profa. Dra. Rocío Serrano Rodríguez en la realización de esta tesis doctoral. Desde el inicio compartimos la ilusión por llevar a cabo este proyecto y hemos sido capaces de mantenerla viva hasta el final. Muchas gracias por vuestra disponibilidad, generosidad, profesionalidad, constancia, por cada una de las sugerencias de las que tanto he aprendido, por vuestro apoyo y palabras de ánimo que me han alentado en los momentos más complejos, en definitiva, por estar cerca en el día a día. Gracias por vuestra confianza en mí y por permitirme el lujo de formar parte de un equipo tan extraordinario.

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RESUMEN

Los sucesivos y significantes cambios en la legislación educativa y la adaptación de las enseñanzas universitarias al Espacio Europeo de Educación Superior (EEES) han cuestionado la formación inicial del profesorado de educación secundaria debido a las nuevas exigencias y funciones académicas que han de asumir los centros educativos y su personal docente (Bahia, et al., 2017). En España, esta formación se realiza a través del Máster del Máster de Formación Inicial del Profesorado de Educación Secundaria Obligatoria, de Bachillerato, de Formación Profesional y de Enseñanza de Idiomas (MAES), que sigue un modelo formativo consecutivo (Eurydice, 2018) caracterizado por una alta dedicación al aprendizaje psicopedagógico y didáctico. En este sentido, el nuevo y complejo perfil profesional docente de educación secundaria suscita un debate profundo sobre las competencias que deben desarrollar en su periodo formativo y la necesidad de orientar la formación hacia la construcción de la Identidad Profesional Docente (IPD) para garantizar un desarrollo profesional óptimo y prevenir el abandono temprano de la formación (Flores, 2020; Suelves, et al., 2021). Tras más de una década desde la implantación de este título oficial es necesario conocer las percepciones que tiene su alumnado sobre estos aspectos que tienen una influencia directa en la calidad educativa (Du Plessis, 2015; Egmir y Çelik, 2019) con el objeto de poder identificar debilidades y fortalezas del currículum de formación inicial docente y diseñar mejoras al respecto. Por lo tanto, esta tesis doctoral tiene un doble objetivo general, por una parte, busca analizar las creencias del alumnado del MAES sobre la profesión docente, la formación inicial adquirida en el máster de profesorado y el nivel de desarrollo de las competencias docentes previstas en el mismo, y por otra parte conocer cómo construyen su IPD durante el desarrollo del máster y analizar las posibles diferencias entre diversas áreas de conocimiento en este proceso. Se trata de una investigación empírica, de carácter descriptivo que se ha desarrollado en dos fases complementarias, cada una de ellas con cuatro estudios que han permitido llevar a cabo el análisis de numerosos datos recogidos a lo largo de varios cursos académicos y a los que se le han aplicado análisis descriptivos, de contraste de medias, análisis de varianza y Modelos Lineales Generalizados (MLG), entre otros. Los resultados muestran que existe una concepción bastante extendida entre el alumnado del MAES sobre que para ser docente es necesario tener un dominio de la disciplina a impartir. No obstante, también identifican necesidades formativas vinculadas principalmente con habilidades metodológicas, la incorporación de las tecnologías de la información y la comunicación en el proceso enseñanza-aprendizaje y la atención a la diversidad. Asimismo, relacionan la IPD con cualidades imprescindibles para el desempeño docente como el compromiso con la educación, la autoestima, la capacidad de reflexión y autocrítica y la capacidad para adaptarse a los numerosos cambios sociales. De igual modo, piensan que el periodo de prácticas es el principal factor que contribuye al desarrollo de la IPD. Finalmente, los diferentes estudios que conforman esta tesis doctoral contribuyen a reducir la brecha entre la investigación en educación y la formación del profesorado con el objetivo de poder reflexionar sobre el currículum del MAES y la formación de su profesorado para así conseguir una mejora de la calidad educativa.

ABSTRACT

The successive and significant changes in education policies and the adaptation of university teachings to the European Higher Education Area (EHEA) have questioned the initial training of secondary education teachers due to the new demands and academic functions that educational centres and its teaching staff must assume (Bahia, et al., 2017). In Spain, this training is carried out through the Master's Degree in Initial Teacher Training in Compulsory Secondary Education, Baccalaureate, Vocational Training and Language Teaching (MAES), which follows a consecutive training model (Eurydice, 2018) characterized by for a high dedication to psycho-pedagogical and didactic learning. In this sense, the new and complex professional profile of secondary education teachers brings about a deep debate about the skills that they must develop in their training period and the need to guide training towards the construction of the Teachers' Professional Identity (TPI) to guarantee an optimal professional development and prevent early abandonment of training (Flores, 2020; Suelves, et al., 2021). After more than a decade since the implementation of this official title in Spanish universities, it is necessary to know the perceptions that their students have about these aspects that have a direct impact on educational quality (Du Plessis, 2015; Egmir and Çelik, 2019) in order to be able to identify weaknesses and strengths of the initial teacher training curriculum and design improvements in this regard. Therefore, this doctoral thesis has a double general objective, on the one hand, it seeks to analyse the beliefs of the MAES students about the teaching profession, the initial training acquired in the teaching master's degree and the level of development of the teaching competences foreseen in the same, and on the other hand to know how they build their TPI during the development of the master and analyse the possible differences between different areas of knowledge in this process. It is an empirical investigation, of a descriptive nature that has been developed in two complementary phases, each one of them with four studies that have allowed carrying out the analysis of numerous data collected throughout several academic courses and to which They have applied descriptive analysis, contrast of means, analysis of variance and Generalized Linear Models (GLM), among others. The results show that there is a widespread conception among MAES students that to be a teacher it is necessary to have mastery of the discipline to be taught. However, they also identify training needs linked mainly to methodological skills, the incorporation of information and communication technologies in the teaching-learning process and attention to diversity. Likewise, they relate TPI to essential qualities for teaching performance, such as commitment to education, self-esteem, the capacity for reflection and self-criticism, and the ability to adapt to numerous social changes. Similarly, they think that the internship period is the main factor that contributes to the development of TPI. Finally, the different studies that make up this doctoral thesis contribute to reducing the gap between research in education and teacher training with the aim of being able to reflect on the MAES curriculum and the training of its teachers in order to achieve an improvement in education quality.

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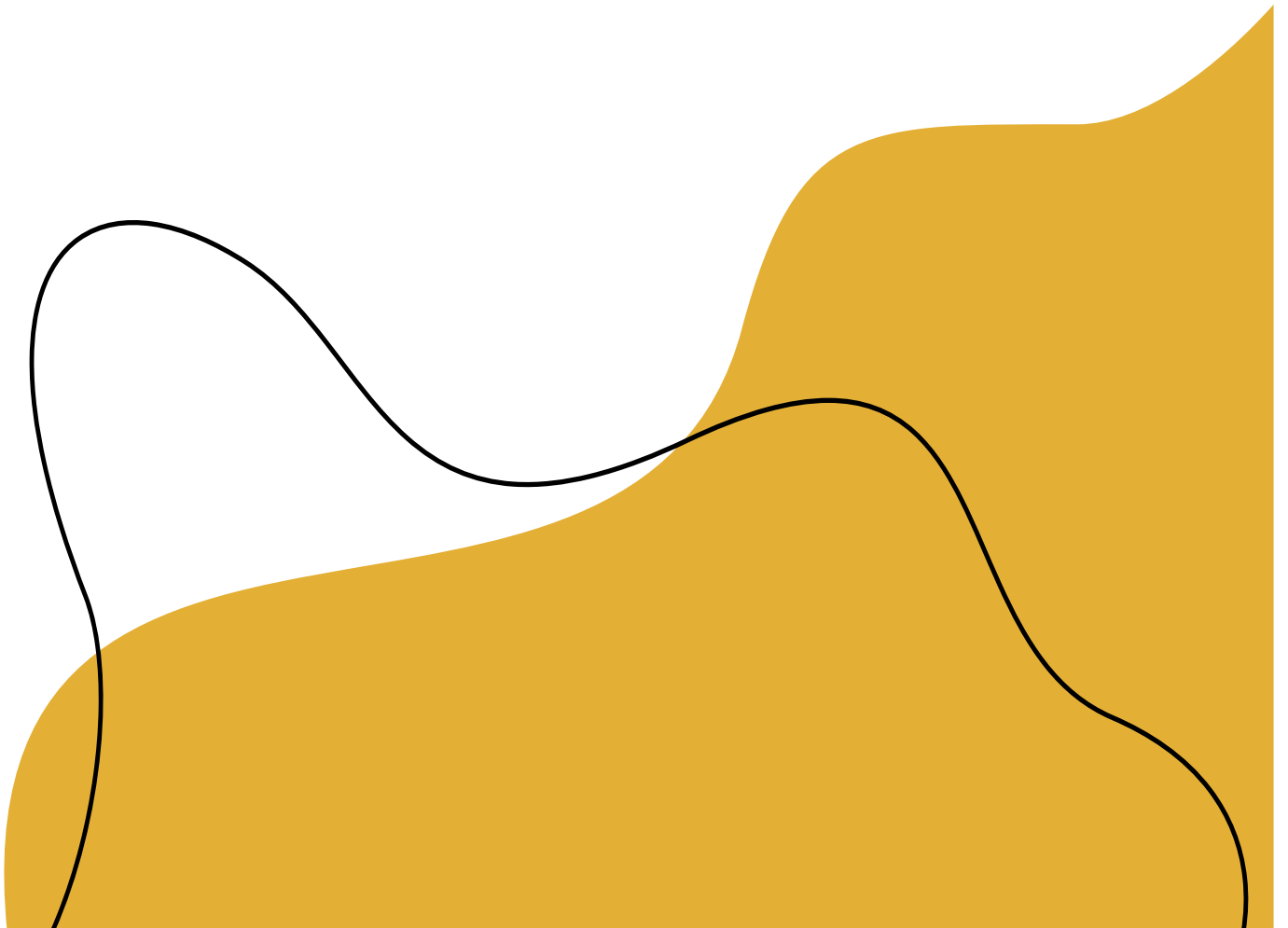
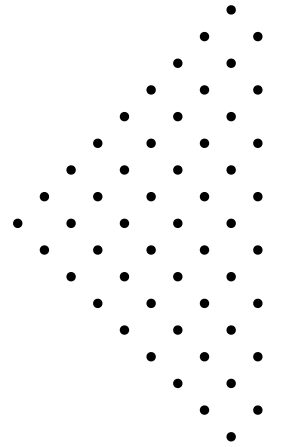
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CAPÍTULO I





CAPÍTULO I

- 1.1. ORIGEN Y JUSTIFICACIÓN DEL PROYECTO
- 1.2. CONTEXTO DE LA INVESTIGACIÓN
- 1.3. ESTRUCTURA DE LA MEMORIA

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1.1. ORIGEN Y JUSTIFICACIÓN DEL PROYECTO

La docencia en educación secundaria es una actividad profesional compleja y en la mejora de la calidad de la enseñanza influyen, de forma importante, la motivación, el pensamiento inicial sobre la docencia y la formación del profesorado de esta etapa (Esteve, 1999; Escudero, 2009). Por ello, estamos desarrollando desde hace tiempo un programa de investigación orientado a fomentar la mejora de la formación inicial del profesorado de secundaria (FIPS), ayudando a los futuros docentes de esta etapa a explicitar y debatir en el aula las concepciones y actitudes sobre aspectos que pueden ser útiles para reflexionar sobre la profesionalidad docente durante el proceso de formación inicial (Pontes-Pedrajas, Serrano-Rodríguez y Poyato, 2013). Los problemas que pueden abordarse en torno a un tema tan general pueden ser muy amplios, ya que la profesionalidad docente está relacionada con aspectos tales como el interés por la docencia, el perfil profesional del profesorado, el desarrollo de competencias docentes, la visión de la educación secundaria actual, los problemas profesionales del profesorado, el papel de la motivación en el desarrollo profesional, la interpretación de los procesos de aprendizaje, el uso de metodologías innovadoras de enseñanza, el empleo en el aula de los nuevos recursos educativos, la evaluación del aprendizaje, la implicación y colaboración en el funcionamiento del centro educativo,... (Serrano-Rodríguez y Pontes-Pedrajas; 2016; Pérez-Gracia, Serrano-Rodríguez y Pontes-Pedrajas, 2019).

En la FIPS de nuestro país se llevó a cabo una transformación importante, hace algo más de una década, tras proceder a la implantación del Máster de Formación Inicial del Profesorado de Educación Secundaria Obligatoria, de Bachillerato, de Formación Profesional y de Enseñanza de Idiomas, más conocido como Máster de Enseñanza Secundaria (MAES), cuyo objetivo primordial era garantizar una formación profesionalizante basada en el desarrollo de competencias docentes efectivas (Gairín, 2011; García y Castro, 2012). En este contexto, nos planteamos avanzar en nuestro programa de investigación a través de un proyecto de trabajo más específico, centrado en el estudio del pensamiento inicial del alumnado del MAES sobre la profesionalidad docente y el proceso de identificación que tales estudiantes realizan en torno a esta profesión. Por lo tanto, el origen de esta investigación se centra en conocer cómo los aspirantes a profesores y profesoras de educación secundaria, perciben y valoran la formación inicial recibida durante el MAES, el impacto que ésta tiene en el desarrollo de sus competencias docentes y su vínculo con la construcción de la Identidad Profesional Docente (IPD), como elementos clave para poder garantizar un desarrollo profesional eficaz, en el que se sientan más identificados y comprometidos con su profesión y puedan contribuir a mejorar la calidad de la educación.

En el desarrollo de esta investigación se ha puesto el foco en la formación inicial porque existen evidencias científicas que corroboran que el profesorado que se encuentra en su periodo de formación inicial posee ideas, actitudes y motivaciones respecto a dicha formación y a su futuro ejercicio profesional (Dinçer y Bikmaz, 2020; Salazar Noguera y McCluskey, 2017). También es bien conocido que las motivaciones y creencias de los futuros docentes influyen notablemente en el ejercicio posterior de la actividad educativa y, por tanto, una buena formación docente es un elemento clave para mejorar la calidad de la enseñanza y el aprendizaje (González Sanmamed, 2009, 2009; Hernández y Maquilón, 2010; Ibáñez y Oliva, 2018).

Por lo tanto, es necesario indagar y conocer en profundidad las creencias de los futuros docentes sobre la formación inicial en general y la IPD en particular, analizando los factores que influyen en su desarrollo, para aportar datos empíricos y propuestas didácticas que ayuden a mejorar el currículum de la formación inicial docente. Para ello se parte de una investigación anterior de corte cualitativo, que permitió recoger interesantes datos sobre el tema (Serrano y Pontes, 2016) y ha servido de base para la elaboración de un nuevo instrumento de investigación de corte cuantitativo (Serrano, Pérez y Pontes, 2018).

Sobre la base de tales argumentos, esta tesis doctoral trata de contribuir a la mejora de la formación inicial docente que se lleva a cabo en el MAES, planteando actividades que invitan a los alumnos y alumnas a reflexionar sobre esta temática, ya que la exploración y la discusión en el aula de las ideas de los futuros docentes sobre los procesos educativos, las competencias docentes y todos los aspectos que afectan al desarrollo profesional, pueden llegar a desempeñar un papel formativo importante.

1.2. CONTEXTO DE LA INVESTIGACIÓN

En España, el modelo de formación inicial docente para la etapa de educación secundaria se corresponde con un modelo consecutivo que se caracteriza por una carga notable de aprendizaje psicopedagógico y didáctico, ya que el alumnado previamente ha obtenido un título universitario en algún área específica y, por lo tanto, son expertos en el conocimiento disciplinar de las materias a enseñar.

La investigación se desarrolla en el ámbito de la educación superior y de forma más concreta se centra en el MAES de la Universidad de Córdoba durante los últimos cursos académicos. De modo más específico, la mayor parte de los datos utilizados para los ocho estudios que se incluyen en esta tesis doctoral se han recogido al inicio del módulo específico, de múltiples especialidades del citado máster, aunque otros se han desarrollado en el marco del prácticum o en la asignatura de Procesos y Contextos Educativos del módulo genérico.

1.3. ESTRUCTURA DE LA MEMORIA

En esta memoria se describe una investigación educativa de carácter descriptivo sobre una serie de aspectos vinculados con la formación inicial docente, el desarrollo profesional y la construcción de la IPD, a partir del pensamiento del estudiantado del MAES sobre esta temática y con la finalidad de poder llegar a repensar el currículum del máster de profesorado y plantear nuevas propuestas educativas en el marco de este título oficial.

El desarrollo de la investigación se ha estructurado atendiendo a un total de ocho estudios empíricos, divididos en dos fases consecutivas y complementarias. En la fase I se aborda la primera pregunta que nos lleva a conocer si el futuro profesorado de educación secundaria se siente preparado para su desempeño profesional. Esta incluye un total de cuatro estudios cuyas implicaciones han influido en la formulación de la siguiente fase y su correspondiente pregunta de investigación. Por lo tanto, la fase II se pretende conocer cómo entiende el futuro profesorado de educación secundaria la IPD y qué factores consideran que intervienen en su desarrollo. Al igual que en el caso anterior, esta fase incluye otros cuatro estudios empíricos que nos permiten dar respuesta a la cuestión planteada a partir de sus resultados e implicaciones.

La memoria incluye seis capítulos incluyendo las referencias bibliográficas y un conjunto de documentos anexos. A continuación, se adelanta una breve síntesis de cada uno de ellos para facilitar su lectura.

El segundo capítulo presenta un balance del estado de la cuestión, tras realizar una revisión minuciosa y actualizada de la literatura científica, que nos ha servido para establecer un marco teórico de la investigación sólido y bien organizado, de acuerdo con los principales objetivos de esta tesis doctoral. Incluye cuatro grandes bloques: i) importancia de la formación inicial para el ejercicio de la profesión docente; ii) el pensamiento inicial del profesorado en formación y su relación con la profesionalidad docente; iii) investigaciones sobre la IPD y iv) implicaciones para la mejora de la formación inicial docente.

El tercer capítulo explica en detalle cómo se ha planificado y abordado la investigación. Se inicia el capítulo formulando los dos problemas a partir de los cuáles se definen tanto los objetivos generales como los específicos que se pretenden alcanzar y que nos permitirán dar respuesta a las cuestiones de origen. A continuación, se describe el diseño de la investigación, detallando las dos fases que la componen, las muestras de cada uno de los estudios, los instrumentos de medida, los procedimientos de recogida de datos, así como los diferentes métodos de análisis de los resultados obtenidos.

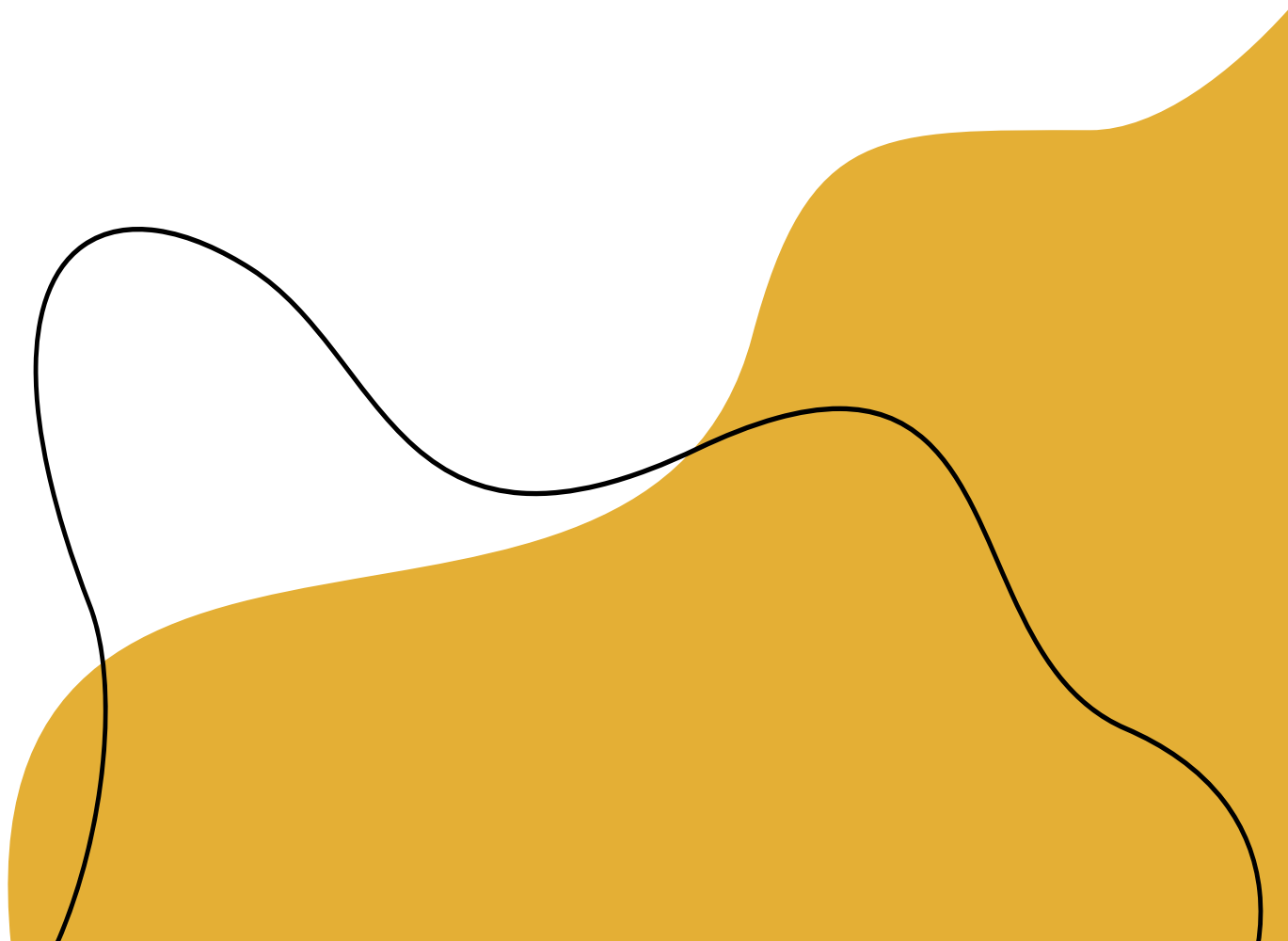
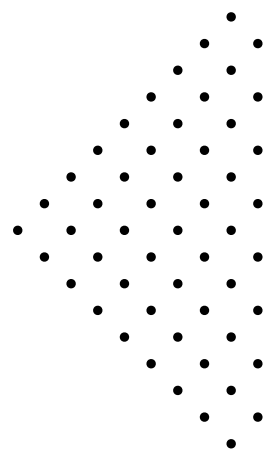
El cuarto capítulo se ha dedicado a mostrar los resultados de la investigación, que se presentan en formato de artículo, uno para cada uno de los ocho estudios abordados en las dos fases del proyecto. Dentro de la primera fase, en la que se aborda el primer problema de investigación, el primer artículo explora las creencias que tiene al alumnado del MAES sobre la profesión docente y cómo establecen relaciones con los principales modelos didácticos. El segundo trabajo nos muestra un estudio sobre las necesidades formativas que identifica este colectivo para poder ejercer como docentes y la repercusión que estas tienen sobre la construcción de la IPD. El tercer artículo se ha dedicado a analizar el nivel de desarrollo competencial del alumnado durante el MAES. El cuarto estudio nos permite conocer la valoración que hacen tales estudiantes sobre el máster y la relevancia que le conceden a la capacidad de generar espacios de enseñanza-aprendizaje que fomenten la igualdad de género, siendo este uno de los principales aspectos transversales a tratar. A continuación, se muestran los trabajos correspondientes a la segunda fase, en los que se aborda el segundo problema principal de la investigación, comenzando por el quinto artículo donde se muestran los resultados de una revisión sistemática de la literatura que arroja información sobre cómo la IPD se ha ido abordando en los programas de formación docente y qué factores han sido identificados como determinantes en su desarrollo. En el sexto trabajo se ha mostrado el proceso de diseño y validación de un instrumento de investigación destinado a conocer y analizar las creencias del alumnado del MAES sobre la IPD, que servirá de base al desarrollo de estudios posteriores más específicos. En el séptimo artículo se analizan las percepciones e ideas que tiene el futuro profesorado de secundaria de las áreas de ciencias experimentales y de tecnología sobre la construcción de la IPD. Finalmente, el octavo artículo comparte la misma finalidad que el anterior, pero tomando como muestra el futuro profesorado de inglés como lengua extranjera.

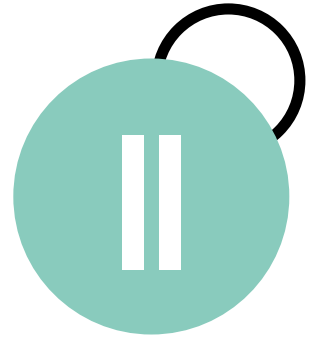
El quinto capítulo de la memoria presenta la discusión de los resultados por objetivos específicos, así como las conclusiones derivadas de todos ellos. Finalmente, se describen las dificultades afrontadas a lo largo de todo el proceso y las posibles líneas de investigación en las que nos gustaría seguir trabajando próximamente.

El sexto capítulo recoge el listado completo de las referencias bibliográficas utilizadas en la totalidad del proyecto, tanto las que se incluyen en los ocho artículos de investigación, como las que se han incorporado en el capítulo dedicado a la fundamentación teórica de este proyecto.

La memoria de esta investigación finaliza incluyendo un conjunto de anexos, en los que se muestran los diferentes instrumentos de recogida de información utilizados en el desarrollo del proyecto, en su versión original.

CAPÍTULO II





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2.1. INTRODUCCIÓN

En este capítulo se recoge la fundamentación teórica sobre la que pivotan los dos ejes fundamentales del proyecto de investigación: 1) la importancia de la formación inicial del profesorado, 2) el pensamiento inicial sobre la profesionalidad docente y 3) la construcción de la Identidad Profesional Docente (IPD) durante el proceso de formación inicial del profesorado de enseñanza secundaria.

En primer lugar, se analiza la importancia de la formación inicial del profesorado de secundaria (FIPS), que es el contexto educativo en el que se desarrolla la parte empírica de este proyecto de investigación y se concede especial atención al análisis de los distintos modelos de formación inicial del profesorado de educación secundaria a nivel europeo.

En segundo lugar, se hace una revisión de los estudios sobre el pensamiento del alumnado del Máster de Enseñanza Secundaria (MAES) acerca de la formación inicial y su relación con el desarrollo de la profesionalidad docente, prestando especial atención al estudio de las motivaciones, actitudes y creencias del profesorado en formación en torno a la compleja temática de profesionalidad docente.

En tercer lugar, se hace una revisión de los estudios sobre relaciones entre el desarrollo profesional y la construcción de la Identidad Profesional Docente, tratando de estudiar con detalle la naturaleza de la IPD y analizar los diferentes factores que intervienen en su desarrollo, durante el proceso de formación inicial del profesorado de enseñanza secundaria.

2.2. IMPORTANCIA DE LA FORMACIÓN INICIAL PARA EL EJERCICIO DE LA PROFESIÓN DOCENTE

La educación secundaria ha experimentado unos cambios bastante notables en los últimos años, tanto en España como en el resto de los países europeos, surgiendo nuevas demandas sociales y nuevos retos para el profesorado de esta etapa. A modo de ejemplo se podrían citar la incorporación a los centros educativos de numerosos jóvenes y adolescentes procedentes de diferentes países y culturas (debido al fenómeno de la inmigración), la problemática de las personas con necesidades educativas especiales, los cambios sociales y culturales acaecidos en la sociedad moderna que están modificando los comportamientos, actitudes y valores del alumnado de enseñanza secundaria (con los consiguientes problemas de convivencia), así como la creciente complejidad en la organización interna y el funcionamiento de los centros de enseñanza para abordar adecuadamente aspectos como el tratamiento del bilingüismo, el uso generalizado de las Tecnologías de la Información y la Comunicación (TIC), la atención a la diversidad del alumnado o los programas educativos de ayuda a las familias que implican el desarrollo de actividades complementarias, ... (Pontes, 2008; Escudero, 2009; Azcárate y Cuesta, 2012).

Estas demandas sociales respecto a la educación secundaria afecta a la acción educativa del profesorado e influyen, inevitablemente, en el proceso de formación docente obligando a la administración educativa a ir modificando y adaptando continuamente el modelo de formación inicial del profesorado de secundaria (FIPS), con objeto de propiciar el cambio de su mentalidad desde el punto de vista conceptual (revisión de las concepciones docentes sobre la enseñanza), metodológico (revisión de los métodos y estrategias educativas) y actitudinal (desarrollo de actitudes positivas sobre la educación y la profesión docente), tratando de avanzar hacia el desarrollo de la profesionalidad docente basada en la práctica reflexiva (Esteve, 2009; Perrenoud, 2010; Martínez y Villardón, 2015)

Por otra parte, para ayudar a cambiar la mentalidad tradicional del profesorado, la formación inicial docente debe incidir positivamente en la mejora de la educación tratando de atender adecuadamente a

las siguientes necesidades formativas de los futuros docentes: a) Conocimiento disciplinar de la materia a enseñar adaptado a las características del nivel educativo en el que se imparte la enseñanza; b) Conocimiento del contexto escolar relacionado con el sistema educativo, la vida en los centros y las características del alumnado; c) Conocimientos prácticos sobre psicología educativa, planificación de la enseñanza, técnicas y recursos didácticos, resolución de conflictos, trabajo en el aula y técnicas de evaluación; d) Formación en didáctica específica de la propia disciplina que implica conocer bien el currículum del área, las dificultades de aprendizaje el diseño de unidades didácticas y el manejo de recursos educativos; e) Formación práctica en centros de enseñanza secundaria (Romero, Gutiérrez y Coriat, 2003; Torrecilla et al., 2014; Serrano y Pontes, 2016).

2.2.1. Los modelos de Formación Inicial del Profesorado

La formación inicial del profesorado requiere de un modelo de profesión docente capaz de responder a los retos y exigencias sociales de la actualidad, un modelo que además de dar respuesta a la acción de educar, fortalezca, reconozca y valore la profesionalidad (Muñoz, 2019). La complejidad de los cambios vertiginosos en la sociedad y a nivel educativo exigen una mayor y mejor profesionalidad, es decir, se necesitan profesionales que no solo impartan contenidos, sino que desarrollen competencias indagadoras e investigadoras para conseguir que reflexionen y autoevalúen su ejercicio docente y, además asuman la responsabilidad que ello supone (Moya y Manso, 2019).

El profesorado, siendo uno de los elementos principales del sistema educativo, ejerce su profesión bajo una normativa y estructura institucional que regula no solo su desempeño, sino también su formación. Por lo tanto, este colectivo requiere de una atención específica desde las instituciones a nivel supranacional, nacional, autonómico y local, con estrategias que pongan énfasis en el sistema de selección, en la formación inicial y permanente. Es necesario brindarles una formación eficaz y un apoyo profesional temprano que prevenga el abandono y el burnout, y les permita estar actualizados trabajando aquellas habilidades y competencias necesarias en cada momento (Meissel, Parr y Timperley, 2016).

El Consejo de Europa identifica la calidad de la educación y la formación docente como uno de los objetivos estratégicos ya que apuntan que “there is a need to ensure high quality teaching, to provide adequate initial teacher education, continuous professional development for teachers and trainers, and to make teaching an attractive career-choice” (Council of Europe, 2009, p. 4). Por lo tanto, revisar la eficiencia y calidad de los modelos de formación inicial y el impulso al inicio de la profesión docente es una tarea de gran importancia para asegurar el desarrollo de la excelencia en la docencia.

Los programas de formación inicial docente deberían proveer un equilibrio entre el conocimiento teórico sobre la disciplina a impartir, las habilidades metodológicas y pedagógicas y la experiencia práctica para que los egresados se sientan competentes para poner en práctica todo lo aprendido y cuestionar su ejercicio de manera continua.

Parar referimos a la formación inicial docente del futuro profesorado de educación secundaria en el contexto europeo, primero es crucial entender que desde la convergencia del Espacio Europeo de Educación Superior (EEES), conocido como el Proceso de Bolonia, se buscaba lograr una armonía entre las Instituciones de Educación Superior (IES) europeas y el desarrollo de competencias profesionales y personales del alumnado de este nivel (Gómez, Aranda y Santos, 2016). Como consecuencia, esto supuso cambios significativos a nivel pedagógico y organizativo (López, Pérez-García y Rodríguez, 2015) que implicaron a su vez una variación en el enfoque de “enseñar” a “aprender” requiriendo nuevos roles y funciones académicas en el personal docente para mejorar la calidad educativa (Du Plessis, 2015).

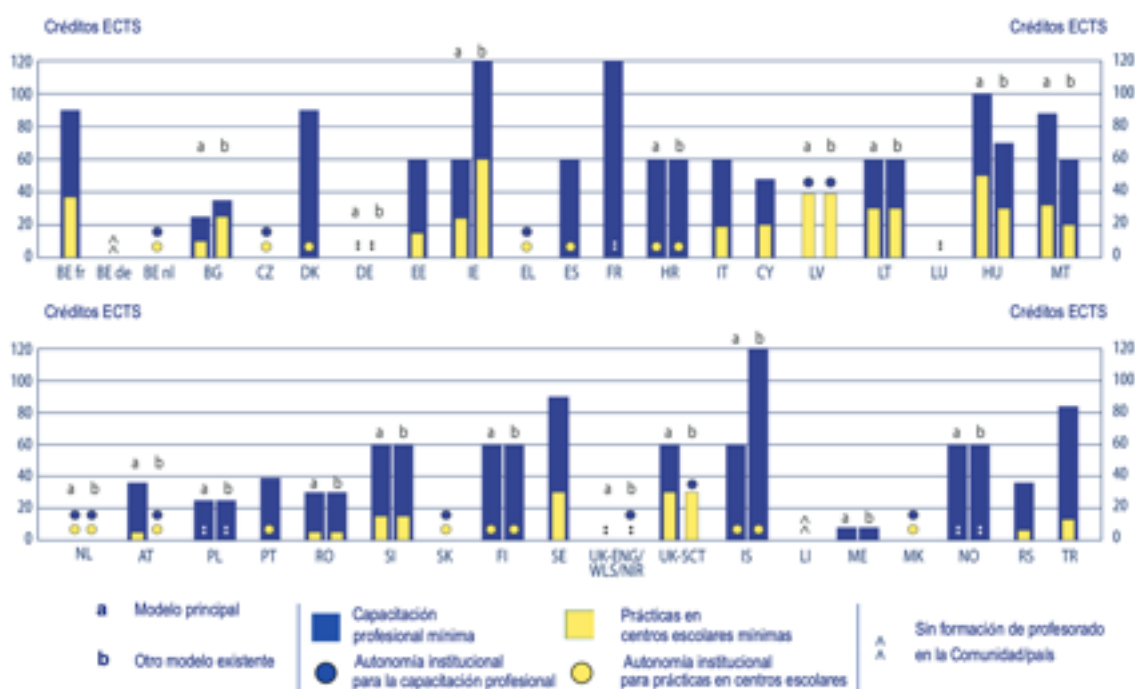
En la mayor parte del mapa europeo coexisten dos modelos de formación inicial para el profesorado de secundaria en el sector público que ofrecen las mismas salidas profesionales: modelo simultáneo y modelo consecutivo (Zuzovsky y Donitsa-Schmidt, 2017). Por una parte, en el modelo simultáneo los contenidos propios de la materia y los pedagógicos están integrados y son enseñados al mismo tiempo por lo que desde el inicio siguen una ruta con un carácter más profesionalizante en el ámbito de la docencia. La extensión de las prácticas a lo largo de todo su periodo formativo facilita el objetivo de mejorar la integración de los diferentes aprendizajes, la puesta en práctica de los conocimientos y el contacto con la realidad profesional desde el inicio.

Además, el modelo consecutivo se centra fundamentalmente en todo lo relacionado con la formación psicopedagógica y didáctica, ya que este alumnado previamente ha cursado un grado universitario en alguna materia específica, por lo que se les considera expertos en esa disciplina y es momento de proveerlos de las habilidades docentes oportunas para impartirla. Este modelo incluye también un periodo de prácticas, pero más corto que el anterior y, por lo general, tiende a recoger un perfil de alumnado mayor y más maduro, son titulados universitarios que pueden tener experiencias previas en otros ámbitos profesionales y conocen el funcionamiento del sistema educativo en educación superior.

Por lo tanto, ambos modelos tienen sus ventajas y desventajas. El modelo paralelo ofrece una opción formativa más integrada y un periodo de prácticas más amplio, pero este requiere de una decisión temprana que quizá esté acompañada de una falta de madurez para acompañarla y presenta una estructura más rígida. El modelo consecutivo es más flexible en su acceso y brinda una oportunidad a aquellos profesionales que han tomado la decisión de convertirse en docente a partir de sus experiencias previas.

Por otro lado, la duración de la formación y los requisitos de acceso a la misma varía según el modelo aplicado y el país en cuestión. En las figuras siguientes (Figura 1 y Figura 2) se muestran varios diagramas de barras que aportan información interesante sobre tales aspectos, en relación con el contexto europeo.

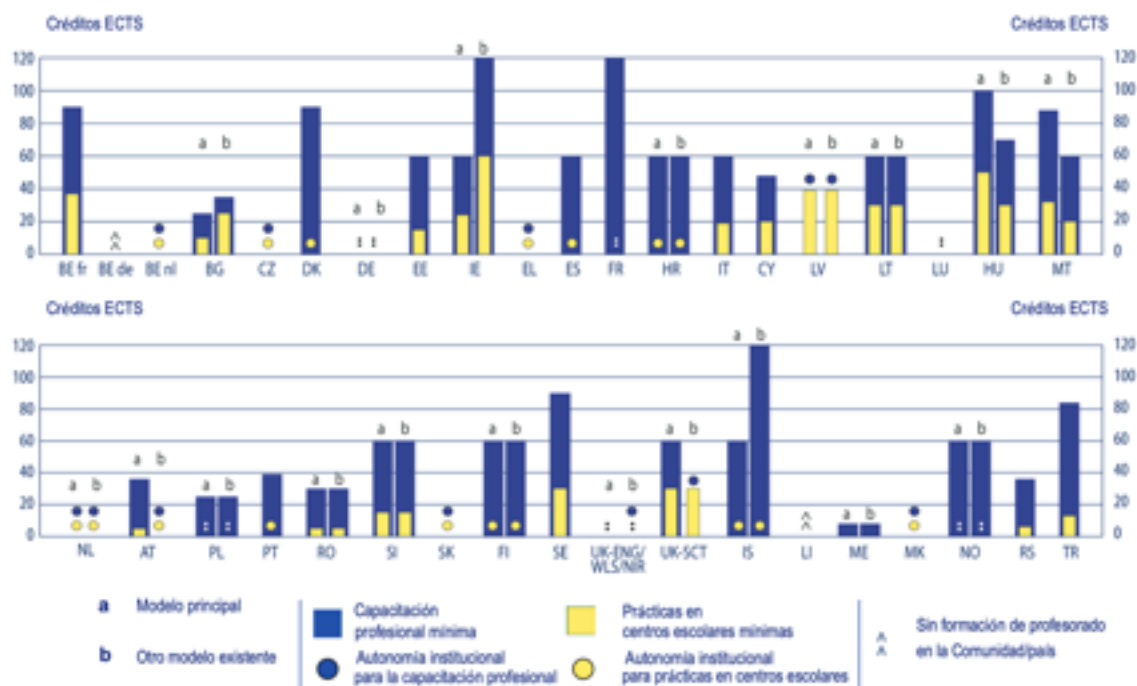
Figura 2.1.
Acceso y modelos de formación inicial docente



Fuente: Eurydice (2015)

En el caso de España (ES), el modelo utilizado para la formación inicial del profesorado de educación secundaria sigue un modelo consecutivo que se corresponde con el MAES, con un total de 60 ECTS impartido a lo largo de un año académico que complementaría los cuatro años anteriores de grado.

Figura 2.2.
Prácticas en la formación inicial docente



Fuente: Eurydice (2015)

Con respecto a las prácticas, también existe diversidad en la manera de abordarlas en los distintos países. En España, el prácticum tiene un total de 16 ECTS

Desde la Comisión Europea existe igualmente una clara preocupación por el proceso de inducción del nuevo profesorado hacia su carrera y desarrollo profesional, ya que entienden que es un momento crucial en el que se necesita acompañamiento que ayude a forjar un compromiso con la profesión lo óptimo posible (Eurydice, 2015). Esta fase de inducción se caracteriza por tener un fuerte componente formativo, de ayuda y asesoramiento que debe durar al menos varios meses.

2.2.2. El modelo de formación inicial del profesorado de secundaria en España: Evolución, estructura actual y relación con la investigación educativa

Desde los años setenta del siglo XX el modelo de FIPS en España se basaba en que los futuros docentes realizasen el curso para la obtención del Certificado de Aptitud Pedagógica (CAP), cuyos metas generales eran las siguientes: 1) Promover la reflexión en torno a la educación y el mundo docente, así como su estructura actual y su evolución histórica; 2) Ayudar a conocer la psicología del alumno adolescente, iniciando una introducción al estudio de las bases psicológicas del aprendizaje y de su aplicación en el aula; 3) Construir una base pedagógica mínima que permita al profesorado novel el desarrollo de su futura actuación docente a los principios que regulan los procesos de enseñanza-aprendizaje; 4) Adquirir los conocimientos didácticos necesarios para realizar un correcto diseño de los procesos de enseñanza-aprendizaje (métodos, técnicas, recursos, evaluación y estrategias de innovación) y desarrollar el currículum a través de unidades didácticas; 5) Llevar a la práctica docente, con ayuda de profesorado experto, los

conocimientos psicopedagógicos adquiridos durante la fase teórica del curso (Esteve, 1997; Pontes, 2008).

En la normativa legal que regulaba el citado curso se establecía que la formación pedagógica de los profesores de Bachillerato se debía desarrollar, durante 300 horas lectivas en un cuatrimestre o un semestre, en dos ciclos (teórico y práctico), con una duración de ciento cincuenta horas para cada ciclo. En la primera fase del curso del CAP, se recomendaba impartir contenidos de carácter teórico relacionados con los bloques temáticos siguientes: (1) Principios, objetivos y problemática de la educación en sus tres aspectos psicológico, sociológico e histórico; (2) Didáctica general; (3) Didácticas especiales de las diversas materias de la educación Secundaria y (4) Tecnología educativa. La segunda fase, de carácter práctico, debería consistir en el ejercicio de la labor docente en centros de Bachillerato bajo la dirección de un profesor tutor del área correspondiente. En principio esta propuesta de organización de la formación inicial docente parecía adecuada para la realidad educativa de los años setenta del pasado siglo, pero en la práctica dicho modelo se fue deteriorando y de hecho el número de horas previsto inicialmente para el desarrollo de las fases teórica y práctica del CAP se llegó a reducir hasta un máximo de 180 horas en total (120 y 60 horas aproximadamente para cada fase), resultando ser un modelo de formación demasiado breve e insuficiente, que en su etapa final alcanzó numerosas críticas por presentar muchas deficiencias y problemas (Marcelo, 2009; Lorenzo et al., 2015).

Las deficiencias y problemas del curso del CAP generaron una fuerte necesidad de cambiar el modelo de FIPS, durante la década de los años noventa del siglo XX y la primera década del siglo XXI, de modo que se llegaron a formular diversas propuestas relacionadas con los sucesivos cambios de la legislación educativa acaecidos durante tales décadas, tales como el Curso de Cualificación Pedagógica (CCP) que estaba ligado al desarrollo de la Ley de Ordenación General del Sistema Educativo (LOGSE), con una extensión mucho mayor que la del curso del CAP, porque se trataba de un curso de 60 créditos europeos que era equivalente a 600 horas de formación docente. Con esta propuesta de formación inicial se pretendía desarrollar un curso de postgrado de carácter profesionalizador para el ejercicio de la docencia, buscando el mayor grado posible de integración entre la formación teórica y la práctica, entendida ésta como práctica profesional docente, pero esta propuesta no llegó a implementarse en la práctica (Escudero, 2009; Martínez y Villardón, 2015).

En la primera década de este siglo se desarrollaron nuevas transformaciones en el sistema educativo y en la formación docente al entrar en vigor la Ley Orgánica de Calidad de la Educación de 2002, en la que se contemplaba regular la FIPS mediante la obtención del Título de Especialización Didáctica, por parte de los aspirantes a ser profesores y profesoras de enseñanza secundaria. En esta nueva propuesta se asumía la necesidad de transformar y mejorar el modelo vigente de FIPS basado todavía en el CAP, que había quedado desfasado ante los cambios educativos y sociales de las últimas décadas y resultaba claramente necesario configurar un perfil profesional docente sobre la base de un proceso de una formación teórico-práctica de mayor rigor académico, organizado en dos etapas: académica y práctica, que podrían realizarse en dos cursos (González Sanmamed, 2009). También se contemplaba la necesidad de profundizar en la formación psicopedagógica y científica de los futuros profesores, partiendo de una titulación universitaria de carácter disciplinar y un diploma complementario de carácter didáctico, que tenía carácter de postgrado y que debía homologar la Formación Inicial del Profesorado de España con el resto de los países de la Unión Europea, mediante la integración en el Espacio Europeo de Educación Superior (EEES).

Ninguna de las dos propuestas de modificar el modelo de FIPS, que se han comentado anteriormente (CCP y TED), llegaron a ponerse en práctica y el curso del CAP se mantuvo como modelo vigente de formación inicial docente hasta 2009, cuando el modelo de FIPS en España se convirtió por fin en un curso de postgrado de carácter profesionalizador, denominado Máster de Formación Inicial

del Profesorado de Educación Secundaria Obligatoria, de Bachillerato, de Formación Profesional y de Enseñanza de Idiomas, más conocido como Máster de Enseñanza Secundaria (MAES). Dicho máster, que se implantó durante el curso académico 2009-10, se fundamenta en la Ley Orgánica de Educación de 2006 (LOE), estableciendo una carga docente de 60 créditos ECTS. Por tanto, este curso de postgrado tiene una duración similar a la que se había propuesto para el CCP y sus contenidos -con un grado mínimo del 80% de formación presencial- se distribuyeron en una serie de materias agrupadas en los siguientes módulos: Formación genérica, Formación específica, Módulo de Prácticas en Centros Docentes (Prácticum) y Módulo de Formación Complementaria (integrado por varias materias optativas).

Al establecer el nuevo modelo de formación docente la administración educativa asumía que el rendimiento académico y la formación de los estudiantes de Secundaria están necesariamente vinculados a la formación inicial psicopedagógica y didáctica del profesorado, junto con la formación disciplinar previa adquirida a lo largo de su carrera profesional. También se constataba el deseo de la Comisión Europea de potenciar una política de formación del profesorado orientada a desarrollar una profesión de carácter universitario, atractiva, sujeta a movilidad entre países europeos, situada en el contexto del aprendizaje a lo largo de la vida, que estimule la colaboración entre el profesorado y el entorno social, y que permita compatibilizar las tareas docentes con las investigadoras, de forma que la innovación en las aulas sea una consecuencia del propio trabajo del profesorado (Benarroch, 2011). Así pues, la implantación y desarrollo del MAES ha marcado un hito en la consideración de la formación inicial del profesorado de secundaria en nuestro país, ya que ha permitido desarrollar unos contenidos que pretenden garantizar una formación profesionalizante, tanto en el ámbito teórico como en el práctico, al estar basados en el desarrollo de verdaderas competencias docentes (Gairín, 2011; García y Castro, 2012).

Actualmente en España, el acceso a la docencia en educación secundaria requiere que los aspirantes a profesores cursen el MAES y después pueden optar por un contrato laboral en la enseñanza privada y concertada, o bien pueden realizar un concurso-oposición para acceder a centros docentes del sector público. En este proceso son las Comunidades Autónomas las que definen las características de la forma de acceso a la función docente, aunque todas concuerdan en que su duración coincide con un curso académico (el primero tras obtener la plaza). Por lo general, al profesorado nuevo se le considera como profesorado en prácticas y se le asigna un tutor dentro de su centro escolar que guiará toda la fase y quien emitirá un informe de evaluación al final. De igual manera, a través de los Centros de Profesorado (CEP), tendrán que cubrir un número específico de horas de formación teórico-práctica que les será muy útil para mejorar su práctica docente diaria. Por último, también estarán en contacto con el servicio de inspección ya que recibirán al menos dos visitas del inspector o la inspectora asignado al centro con el objetivo de supervisar el desempeño docente y evaluarlo de manera constructiva. Por lo tanto, dada la importancia de este periodo inicial formativo y la calidad de éste, conocer y escuchar las voces, las motivaciones, las ideas, las percepciones y las necesidades del futuro profesorado durante dicho periodo es muy útil para poder introducir posibles cambios en los programas formativos y mejorar la calidad educativa (Korthagen, Loughran y Russell, 2006).

Por otra parte, el MAES ha sido el contexto educativo en el que se ha incrementado de forma muy relevante la investigación sobre formación inicial docente, ya que se han realizado en la última década numerosos estudios acerca de múltiples aspectos que afectan a la mejora de la FIPS como son el estudio de las motivaciones de los estudiantes del MAES por la docencia (Pontes, Serrano y Poyato, 2013), las concepciones previas sobre los procesos educativos (Solís et al., 2013; Ibáñez y Oliva, 2018), el conocimiento profesional de tipo práctico (Guisasola et al., 2013), los contenidos a desarrollar en el máster (Rivero et al., 2014), el desarrollo de competencias (Buendía et al., 2011; Torrecilla et al., 2014), las expectativas sobre la formación inicial (Cantón et al., 2015; Serrano y Pontes, 2017) o la valoración de los estudiantes sobre el proceso formativo desarrollado en el MAES (Hernández y Carrasco, 2012; Manso y

Martín, 2014), entre otros muchos temas. Algunos de estos asuntos se trataron, desde los primeros años de implantación del MAES en congresos específicos sobre el MAES y números monográficos de revistas de investigación educativa, como el que realizó la revista Eureka (Pontes, García-Molina y Oliva, 2013).

2.3. PENSAMIENTO INICIAL DEL PROFESORADO EN FORMACIÓN Y SU RELACIÓN CON LA PROFESIONALIDAD DOCENTE

Tras la implantación del MAES se ha producido un incremento notable del interés por llevar a cabo investigaciones sobre el pensamiento inicial docente, las motivaciones y expectativas del profesorado en formación (Solís et al., 2013) o el desarrollo de competencias docentes (Serrano y Pontes, 2015), junto al desarrollo de propuestas metodológicas que favorezcan la reflexión en el aula y el desarrollo profesional docente (Rodríguez-Arteche y Martínez-Aznar, 2016).

2.3.1. Actitudes, motivaciones y expectativas respecto de la profesión y la formación docente

En diversos estudios se ha puesto de manifiesto que los futuros docentes presentan al inicio del proceso de formación una serie de ideas preconcebidas, sobre la enseñanza que pueden afectar al posterior ejercicio profesional (Sanya Pelini, 2017). Asimismo, se apunta que estas ideas previas tienden a evolucionar desde una perspectiva más egocéntrica, en la que la principal preocupación es el rendimiento individual y cumplir con las exigencias formativas, hacia un plano más exocéntrico donde empiezan a reconocerse a sí mismos dentro del contexto educativo, escuchando las necesidades que les rodean y considerando las relaciones interpersonales con otros profesionales y con el alumnado (Dinçer y Bikmaz, 2020). De hecho, una de las cuestiones más controvertidas en las investigaciones sobre el pensamiento inicial docente es el de la estabilidad de sus creencias y la resistencia que ellas tienen en las intervenciones formativas. Por eso, se entienden como flexibles y modificables en el tiempo (Clark, Byrnes y Sudweeks, 2015).

La literatura científica recoge la relevancia de estas preconcepciones y esquemas iniciales de pensamiento docente, considerando que si se puede detectar e identificar lo que preocupa al futuro profesorado antes de comenzar su andadura profesional, se podrá mejorar el proceso de formación y ayudar a los futuros docentes a construir una identidad profesional más robusta (Johnson, et al., 2020). Es cierto que en la literatura se utiliza diversidad de términos como ideas previas, creencias, teorías implícitas, concepciones, etc., para referirse a las opiniones que caracterizan el saber profesional del personal docente (Porlán y Martín, 2004). En este proyecto de investigación hemos adoptado la siguiente clasificación y nomenclatura: i) “concepciones” se utiliza generalmente para referirse a las respuestas más amplias y extensas que se contestan a preguntas abiertas sobre un tema específico; ii) “creencias” es un término que se utiliza fundamentalmente para referirse a ideas concisas sobre cualquier tema utilizando preguntas de opción múltiple o incluso cuestionarios de escala tipo Likert.; iii) los términos “esquemas conceptuales”, “modelos de pensamiento” y “teorías implícitas” generalmente hacen referencia a un conjunto más amplio de ideas básicas sobre un tema considerando que existe algún grado de articulación o interrelación interna entre las ideas que componen el modelo o esquema (Pozo et al., 2006; Solís et al., 2012; Pontes et al., 2013). En concreto, los estudios aquí recogidos se centran en el término “creencias” para referirnos a las ideas que el futuro profesorado de educación secundaria tiene sobre la profesión docente, su desarrollo e identidad profesional.

Uno de los aspectos del pensamiento docente sobre el que no se han desarrollado tantas investigaciones se refiere al estudio de las actitudes y motivaciones hacia la docencia de los futuros profesores y profesoras de secundaria. En diversos estudios sobre el tema se ha observado que existe un

amplio espectro de motivaciones por la docencia, en algunos casos contradictorias, de modo que conviene seguir profundizando en esta temática antes de alcanzar conclusiones significativas (Córdoba, Ortega y Pontes, 2009). En otros estudios se aprecia que los futuros docentes presentan diferentes formas de entender y valorar la formación inicial, aunque la mayoría coincide que se necesita una buena formación pedagógica y didáctica para el ejercicio de esta profesión (Pérez, Gilar y González, 2007). También se ha observado que los sujetos con mayor interés profesional por la docencia son los que presentan mayores demandas de formación, como se ha observado en un estudio anterior sobre esta temática con una muestra de futuros docentes del área científico-tecnológica (Pontes, Ariza, Serrano y Sánchez, 2011).

En los estudios sobre motivaciones hacia el ejercicio de la docencia como actividad profesional algunos autores suelen establecer dos tipos de motivaciones bien diferenciadas (Ryan y Deci, 2000): (1) La motivación controlada por presiones externas o internas; (2) La motivación autónoma. Los autores citados consideran que las motivaciones docentes que no tienen un origen autónomo generan conflictos internos, mientras que las motivaciones autónomas aumentan la capacidad de llevar a cabo esfuerzos sostenidos en el tiempo. De modo que los motivos por los que se ingresa en la profesión docente pueden tener consecuencias en la manera en la que se lleva a cabo la enseñanza y, por tal motivo, se considera interesante el análisis de estos temas. Otros autores agrupan en tres categorías los motivos que apuntan los profesores noveles para acceder a la profesión docente (Morán et al., 2001; Watt y Richardson, 2007): (a) motivos extrínsecos, asociados generalmente a ciertas características propias del trabajo docente que se consideran ventajosas, como las buenas condiciones laborales, el salario o las amplias vacaciones; (b) motivos intrínsecos, relacionados con el ámbito de las emociones y que tienen un carácter más personal, como pueden ser la afinidad por el ejercicio profesional docente, el desarrollo intelectual inherente a la profesión o las experiencias que se desarrollan durante la carrera como docente; (c) motivos altruistas, que se identifican con razones relacionadas con el crecimiento personal y cognitivo de los demás, o con realizar una contribución social a través del ejercicio de la docencia.

Algunos de los estudios anteriores sobre motivaciones del profesorado sugieren que las expectativas de éxito y el valor subjetivo de la tarea docente son los principales determinantes de la motivación para la elección de la docencia como actividad profesional (Malmberg, 2008). Dentro de los estudios que analizan las motivaciones por las que se escoge la docencia como profesión, también resultan interesantes aquellas investigaciones que analizan los motivos por continuar en la profesión, ya que este tipo de trabajos pueden ayudar a garantizar el bienestar de los futuros docentes y a proporcionar evidencias que permitan a la administración educativa gestionar mejor el talento, la formación y la experiencia del profesorado en ejercicio (Chiong et al., 2017).

2.3.2. Adquisición de competencias docentes y desarrollo profesional del profesorado

Además de la relevancia y el alcance del aprendizaje profesional como forma de apoyar las habilidades, cada vez más complejas, que el estudiantado del MAES necesita desarrollar para prepararse para la educación del siglo XXI, en paralelo, es preciso un desarrollo profesional efectivo. El propio concepto de desarrollo profesional o desarrollo de la profesionalidad docente es complejo en sí mismo porque está vinculado a una amplia gama de factores y elementos (competencias docentes, conocimiento de contenidos didácticos, nivel de experticidad de la disciplina a enseñar, planificación y programación didácticas, estrategias y recursos, comunicación, evaluación, relaciones escuela-familia, identidad profesional, emociones, entre otros) que, a su vez, pueden ser abordados desde distintas perspectivas (Ingleby, 2017). La profesionalidad docente va más allá del concepto clásico de esta profesión entendida como ser un experto en una materia concreta. Es un proceso dinámico de acción y cooperación, de reflexión, de indagación y experimentación, donde el docente aprende enseñando (Demirkasimoglu, 2010). El profesionalismo no significa el estado final al que se dirigen las diversas ocupaciones, sino que es

un proceso continuo en pos de un ejercicio útil y responsable de cada profesión. Este proceso requiere una atención específica debido a la amplia gama de responsabilidades que tienen y los enormes desafíos que les impone la sociedad. Como adultos inmersos en la sociedad del conocimiento, más allá del rol tradicional de transmisores de contenidos, se demanda que los docentes actúen como guías del conocimiento de su alumnado y del proceso de aprendizaje (Darling-Hammond y Bensford, 2005).

Son numerosos los estudios que han abordado estos factores en las dos últimas décadas. Algunos asignan gran importancia a la especialización en el área de conocimiento para convertirse en un docente eficiente (Recchia y Puig, 2011). Por su parte, Reoyo, et al. (2012) resaltan la capacidad de motivar al alumnado a aprender y el desarrollo de competencias docentes en lo que a metodología se refiere, mientras que Valdés y Bolívar (2014) añaden a esto la habilidad para diseñar recursos didácticos y el manejo de las Tecnologías de la Información y la Comunicación (TIC) y las Tecnologías del Aprendizaje y el Conocimiento (TAC) y Sutherland, Howard y Markauskite (2010) subrayan el periodo de prácticas durante la formación inicial y las interacciones con otros profesionales de la educación como determinantes. También se abordan cómo las creencias del futuro profesorado influyen en el desarrollo de su profesionalidad y compromiso (Moses, et al. 2017).

Darling-Hammond, et al. (2017) llevaron a cabo una revisión de treinta y cinco estudios muy rigurosos a nivel metodológico que demostraban la conexión positiva entre el desarrollo de la profesionalidad docente, las prácticas y el rendimiento del alumnado. Esta revisión les permitió descubrir las características de un desarrollo profesional efectivo entendiendo este como un aprendizaje profesional estructurado que resulta en cambios en las prácticas docentes y mejoras en el rendimiento del alumnado. Encontraron siete características que compartían la mayoría de los estudios y definen que el desarrollo profesional efectivo es:

i. Focused content

El desarrollo profesional se vincula directamente con las estrategias docentes aplicadas a la disciplina en cuestión dentro de un contexto específico. Por lo tanto, el profesorado debe estar conocer en profundidad el currículum específico del área, así como cuáles son las orientaciones metodológicas propias de ella.

ii. Incorporates active learning

Atrás quedaron los entornos de aprendizaje tradicionales para dar paso a un aprendizaje activo en el que el profesorado además de diseñar estrategias de enseñanza de este tipo es partícipe de ellas para reforzar su desarrollo profesional y proveerlos de un aprendizaje profesional contextualizado.

iii. Supports collaboration

Un desarrollo profesional eficaz promueve espacios de colaboración, coordinación y cooperación que les facilite el sentimiento de pertenencia a una cultura e institución educativas.

iv. Use models of effective practice

Utilizar el modelado como estrategia para mejorar el desarrollo profesional es considerado como una buena práctica en el ámbito formativo. Ver, analizar y evaluar distintos modelos de enseñanza a partir de observaciones directas o casos prácticos permite la reflexión y autocrítica sobre el desempeño docente de cada uno.

v. Provides coaching and expert support

Contar con el apoyo y la orientación de expertos en al campo de la educación supone generar sinergias y fomentar el intercambio de conocimientos basados en evidencias científicas sobre aquellos

aspectos donde se detecte una necesidad formativa.

vi. Offers feedback and reflection

Un Desarrollo de la profesionalidad docente de alta calidad requiere disponer espacios y tiempo para promover una retroalimentación constructiva y positiva sobre la que reflexionar. A partir de ello, el profesorado podrá reflexionar y mejorar su propia práctica.

vii. Is of sustained duration

Al tratarse de un proceso y no un producto, mantener en el tiempo el aprendizaje, la práctica y la reflexión facilitará su adaptación a los diversos contextos de enseñanza-aprendizaje sin sentir amenazas al respecto.

De tal manera, se vuelve a evidenciar la complejidad de la profesionalidad docente y la necesidad de seguir indagando en ella. Centrándonos en el futuro profesorado de educación secundaria, los estudios se centran principalmente en el vínculo de la profesionalidad con la formación permanente (Korthagen, Loughran y Russell, 2006) y la formación del profesorado (Pro, Valcárcel y Blanco, 2005), pero también existen investigaciones que señalan la necesidad de profundizar en las competencias emocionales del profesorado (Gutiérrez-Moret, et al., 2016) y reflexionar sobre el desarrollo profesional de los docentes desde su formación inicial (Pool, Reitsma y Mentz, 2013) y su conexión con el desarrollo de la Identidad Profesional Docente (IPD) (Cruess, Cruess y Steinert, 2018; Noonan, 2019; Richardson y Watt, 2018).

Esta última relación entre el desarrollo profesional y la IPD es de vital importancia. La construcción de la IPD, como se verá en el epígrafe siguiente, es dinámica y en ella confluyen y se superponen la experiencia personal y el contexto profesional (Noonan, 2019). Este último es entendido como el dominio profesional que cubre aspectos exclusivos de la enseñanza en relación con otras profesiones, por ejemplo, requisitos relacionados con el desarrollo profesional, así como aspectos exclusivos de contextos escolares específicos. Por lo tanto, cabe profundizar en la IPD a partir de conocer las actitudes, motivaciones y expectativas sobre la formación inicial y el desarrollo de la profesionalidad docente.

2.4. INVESTIGACIONES SOBRE LA IDENTIDAD PROFESIONAL DOCENTE

Tras la revisión de estudios sobre el pensamiento inicial docente y las motivaciones de los futuros docentes por ejercer la docencia, que tienen gran influencia en el desarrollo profesional, a continuación, se tratará el tema de la identificación de los futuros docentes de enseñanza secundaria con los elementos esenciales del ejercicio de dicha profesión. En primer lugar, se aborda el proceso de construcción de la identidad profesional docente y, posteriormente, se analizarán los factores que influyen en el desarrollo de la IPD durante la formación inicial del profesorado de enseñanza secundaria.

2.4.1. La construcción de la identidad profesional docente del profesorado de enseñanza secundaria

Cada vez existen más estudios que ponen el acento en el papel que desempeña el proceso de identificación con la profesión docente, por parte del profesorado en formación, en el desarrollo de valores que pueden ser importantes para avanzar en el desarrollo profesional (Flores y Day, 2006), como pueden ser la vocación intrínseca por la docencia, el compromiso con la mejora de la educación, la capacidad de reflexión y autocrítica, la flexibilidad para adaptarse a los cambios y la necesidad de mejorar la propia formación teórica y práctica (Berger y Lê Van, 2019; Izadania, 2016). Como consecuencia, la construcción y el desarrollo de la Identidad Profesional Docente (IPD) ha surgido como un área de investigación separada y relevante debido al gran impacto que tiene en la calidad educativa (Ntow y Adler, 2018; Stenberg y

Maaranen, 2020) y se entiende como un tema clave que abarca la totalidad del desarrollo profesional docente (Zhang et al., 2016).

La IPD no es un atributo estático que permanece igual a lo largo del proceso de formación (docentes en formación) y mientras se desarrolla su carrera (docentes en servicio) sino un proceso dinámico, cambiante, activo y continuo de interpretación de experiencias (Beijaard, et al., 2004). Sin embargo, también se reconoce que la construcción de la IPD debe comenzar a forjarse desde el inicio del periodo de formación, entendiéndola como un eje central en su futuro desempeño profesional. De esta forma, el profesorado en formación adquiere un sentido de control con respecto a su desarrollo.

Por tanto, la formación de la identidad del profesorado es un proceso continuo de carácter dinámico en el que se pueden encontrar tensiones variadas, ya que los docentes negocian y debaten sus autoconcepciones, conocimientos previos sobre los procedimientos de enseñanza-aprendizaje y reflexionan sobre su rol como docentes (Lim, 2011). También se ven implicados otros aspectos como las creencias previas, la motivación o la vocación y algunos elementos contextuales como la interacción con los compañeros (Avraamidou, 2014). Además, este interés es aún más relevante entre los docentes en formación por el hecho de que el enfoque reflexivo es un aspecto central en la formación del profesorado que se refiere a la influencia de quién eres en lo que aprenderás y en quien serás como profesor en un futuro próximo (Timostsuk y Ugate, 2010).

La literatura no solo señala que existe un efecto de la formación inicial del profesorado en la construcción del IPD (Salazar Noguera y McCluskey, 2017) sino que también se refiere al gran impacto que ejercen las creencias del profesorado en formación sobre el proceso de enseñanza-aprendizaje en la progresión de sus identidades como docentes (Stenberg, et al., 2014). Así, los formadores de docentes deben ser conscientes del impacto que tienen sus programas, no solo en lo que respecta a contenidos didácticos y pedagógicos, sino también en la forja de la identidad profesional de los futuros docentes (Salazar Noguera y McCluskey, 2017).

En este sentido, las exigencias hacia el futuro profesorado deben centrarse en aprender a enseñar, lo que significa comportarse como un docente, pensar como un docente, sentirse como un docente y actuar como un docente (Kim, 2013). Teniendo esto en cuenta, los currículos de formación inicial docente deben revisarse para responder a las demandas de la sociedad, deben incluir módulos que enseñen cómo analizar la amplia gama de factores que afectan las situaciones cotidianas de enseñanza-aprendizaje, así como su importancia para promover un entorno de aprendizaje apropiado. Por ello, la formación inicial debe empezar definiendo la identidad profesional porque esta determinará cómo los profesores establecen relaciones con su alumnado y su contexto (Esteve, 2009).

También es importante enfatizar qué roles profesionales asumirán como docentes, qué metas pueden ser realistas para su desempeño diario en el aula, y además, se debe perfilar el estilo propio de cada docente adaptado a su personalidad y a sus ideas y creencias propias sobre la docencia (Esteve, 2009). Debe haber un equilibrio entre cómo un docente se ve a sí mismo como persona y como profesional. De lo contrario, podría producirse una desmotivación al inicio de la carrera profesional que incluso podría llegar a provocar desgaste entre ellos (Hong, 2010; Rodríguez-Mantilla y Fernández-Díaz, 2017) y esto afectaría directamente a la calidad y excelencia de la enseñanza y, en consecuencia, al desempeño del alumnado.

2.4.2. Factores que influyen en el desarrollo de la IPD

En el enfoque reflexivo y constructivista de la formación docente (Perrenoud, 2001; Atkinson, 2002) se concede importancia al contexto en el que se desarrolla la actividad profesional y al proceso

de formación previo para ejercer la docencia. Estos aspectos influyen, sin duda, en la construcción de la IPD porque conviene recordar que el nuevo docente tiende a reproducir las estrategias del proceso de enseñanza-aprendizaje con las que se formó durante su época como estudiante (Pillen, et al., 2013). En este sentido, las concepciones que tenga el docente sobre experiencias previas pueden llegar a marcar su identidad profesional, así como su desarrollo posterior al proceso de formación inicial (Vilches y Gil, 2010).

En lo que respecta al contexto de los centros de enseñanza secundaria hay autores que apuntan a la necesidad de preparar bien a los futuros docentes para poder operar en situaciones problemáticas, ya que la incapacidad para abordar conflictos genera un grado importante de malestar en muchos docentes (Bolívar, 2007; Hong, 2010). Por ello en algunos trabajos apuntan hacia la relación existente entre el desarrollo de la IPD y el burnout laboral, sobre todo, en los primeros años de ejercicio profesional (Zhu et al., 2020). Tales autores conceptualizan la identificación con los problemas de la profesión docente como un proceso dinámico de construcción e interpretación de la identidad profesional, proceso que transcurre durante los distintos cambios que se sufren al pasar de ser estudiante a docente y en los que deben buscar una sintonía con entornos individuales y contextuales. Por lo tanto, el desgaste profesional en docentes es un asunto educativo que debe abordarse desde la construcción y desarrollo de la IPD para prevenir que profesorado realmente cualificado abandone su profesión por razones equivocadas (Kelchtermans, 2017).

Por otro lado, como se ha visto en el epígrafe anterior, la profesionalidad docente se relaciona con aspectos muy variados como pueden ser el interés por la docencia, el perfil profesional del profesorado, el desarrollo de las competencias docentes, la visión del sistema de educativo actual, la problemática profesional del profesorado, el papel de la motivación en la formación, la interpretación de los procesos de aprendizaje (ideas del estudiantado, obstáculos cognitivos, et.), el uso de estrategias innovadoras y metodologías activas, la evaluación de aprendizajes, el inicio de la investigación educativa, etc. Además, todos estos son elementos influyentes en la construcción de la IPD del profesorado de educación secundaria (Izadinia, 2015; 2016). Entre ellos, cabe mencionar: las competencias docentes (Manso Ayuso y Martín Ortega, 2013); los posibles conflictos en el desarrollo de la práctica docente (Hong, 2010); la gestión de contenidos específicos (Smith y Darfler, 2012) y estrategias de enseñanza (Lorenzo Vicente, et al., 2015).

A la luz de lo anterior, el proceso de formación del profesorado de Educación Secundaria debe dar respuesta a todos estos requisitos. Por un lado, se debe adecuar el diseño curricular y se debe considerar la construcción de la IPD como un eje fundamental (Torrecilla, et al., 2014.). Por otro lado, las prácticas pedagógicas actuales (tanto las prácticas educativas realizadas por los formadores de docentes como las que serán implementadas por los docentes en formación en su período de prácticas y en su futuro próximo) deben transformarse en ejemplos positivos de una enseñanza respetuosa con los procesos de aprendizaje del alumnado (Marcelo, 2009). Es por ello que los enfoques constructivos y reflexivos brindan la oportunidad de enfrentar la atención a las necesidades de formación de los futuros docentes, el desarrollo de competencias docentes adecuadas y el desarrollo de la identidad profesional de los docentes.

Por ello, la profesionalidad docente y las creencias de los docentes en formación sobre la profesión docente influyen en la IPD, de modo que deben explorarse con detalle para diseñar e introducir cambios dentro de los programas de formación docente que les permitan adaptarse fácilmente al contexto educativo real y sentirse con mayor seguridad y autoestima (Jones y Saye 2018).

En consecuencia, la investigación sobre la construcción y evolución de la identidad profesional de los docentes no solo es relevante para el profesorado de las titulaciones de educación en las universidades a fin de mejorar la práctica docente en los diferentes niveles educativos, sino también para los académicos interesados en comprender y conceptualizar mejor cómo debe abordarse la formación de la identidad profesional analizando los factores que influyen en ella y su repercusión en el desarrollo profesional, la

vocación y la motivación. Además, contribuye a la comprensión y reconocimiento de lo que se siente al ser docente en las escuelas de hoy, donde existen unos cambios vertiginosos, y cómo se enfrentan a ellos. Por consiguiente, la producción científica en esta temática ha evolucionado significativamente durante la última década en diversos aspectos como los enfoques metodológicos utilizados en dichas investigaciones y los factores o elementos que influyen en el proceso de desarrollo de la IPD.

En cuanto a la metodología de la investigación, la revisión de la literatura sobre IPD que llevamos a cabo (Pérez Gracia, Serrano Rodríguez y Pontes Pedrajas, 2022), constató la evolución progresiva en cuanto a los enfoques utilizados, por lo que refleja la creciente preocupación por este tema. Sin embargo, son muy escasos los estudios que utilizan escalas para evaluar la construcción de la IPD hasta el momento (Aykaç, et al., 2017). En un principio, la mayoría de los estudios tenían un corte teórico, se basaron en el análisis de documentos y políticas, currículos e informes internacionales, los cuales coinciden con la importancia y necesidad de dedicar una atención específica a la construcción de la IPD desde la formación inicial (Bolívar, 2007; Bolívar & Domingo, 2007; Esteve, 2009). Es importante mencionar que al analizar los programas y currículos de formación, Bolívar y Domingo (2006) afirmaron que los cambios en el currículo afectan directamente en la IPD porque se ha observado que introdujeron modificaciones relevantes en la profesionalización de la docencia. Esto conlleva especificar no solo habilidades y conocimientos profesionales, sino también identificar estrategias y modelos de formación convenientes. De esta manera, Bolívar (2007) y Esteve (2009) también concluyen que el programa de formación más idóneo y eficiente debe incluir fundamentos tanto pedagógicos como prácticos, y considerar la socialización y relaciones interpersonales en el contexto educativo para construir una IPD adecuada.

Posteriormente hubo un ligero cambio en el método y los investigadores comenzaron a entrevistar al profesorado universitario de titulaciones de educación y también a futuros docentes durante su formación inicial, con el fin de contar con información más real y cercana a la praxis educativa (Green, 2015; Hong, 2010; Izadnia, 2015; Kim, 2013; Raffo y Hall, 2006; Smith y Darfler, 2012). Estos académicos llegaron a diversas conclusiones relevantes como el hecho de que es decisivo conocerse a uno mismo antes de reconocerte como docente y la importancia de la experiencia del prácticum ya que esto reduce la tasa de deserción y brinda apoyo académico y emocional a los aprendices. En este sentido, el trabajo realizado por Green (2015) supuso un hito ya que enfatizó la conexión entre vocación e identidad y consideró que las experiencias profesionales previas (la mayoría de ellas en ámbitos diferentes a la educación) influyen en la formación de su identidad como docentes porque estos tienden a estar claramente más influenciados por sus experiencias previas en la industria y empresas de diversa índole y sus actitudes vocacionales, que por su programa de formación docente y sus experiencias en los centros escolares.

Finalmente, los estudios más recientes introducen análisis cuantitativos como comparación de medias (Iranzo-García, et al., 2020), análisis de conglomerados (Lim, 2011) y métodos de investigación mixtos (Delgado-García y Toscano Cruz, 2021; Papavassiliou-Alexiou y Zourna, 2016) que permiten al investigador obtener una mejor comprensión del problema de investigación debido a la integración de diversas estrategias. Estos estudios destacaron su preocupación bajo la premisa de que la formación de la identidad docente es un proceso de negociación entre diversas concepciones de la docencia que se pueden ver durante el período de prácticas al interactuar con los docentes en servicio y señalaron que el desarrollo de la IPD también está ligado a competencias docentes.

Los primeros estudios empíricos sobre IPD centraron su atención en los diversos factores que pueden influenciar su desarrollo, teniendo en cuenta que no es algo estático, sino que evoluciona progresivamente (Vokatis y Zhang, 2016). Este proceso de construcción de la IPD se inicia desde que se toma la decisión de querer llegar a ser docente (Donnini Rodrigues, et al., 2018). Estos factores pueden clasificarse entre personales y contextuales; internos y externos (Rodríguez y Mogarro, 2019).

Desde el punto de vista personal, cabe destacar la motivación tras la decisión de convertirse en docente (Leeferink et al., 2019), la propia personalidad, la autoestima, la confianza y el desarrollo de valores como la empatía (Day, 2018), y las aspiraciones (Nicotra, et al., 2012). En este mismo grupo, habría que señalar otros factores individuales como el sexo (Chang y Lo, 2016) ya que existen estudios previos que subrayan diferencias en torno a cómo los hombres y las mujeres construyen su IPD y sus actitudes hacia la profesión (Healey y Hays, 2012; Kapitanoff y Pandey, 2017).

Por otra parte, la investigación educativa a nivel internacional también sugiere que el futuro profesorado construye su IPD durante su formación inicial gracias a otros factores contextuales. Hacen hincapié en la importancia de la relación mentor-aprendiz en sus procesos de prácticas, de sentirse acompañado para prevenir emociones negativas en sus primeras experiencias en un contexto educativo real (Schaefer y Clandinin, 2019). De igual manera, también resaltan el aprendizaje a partir de entablar relaciones interpersonales con quienes serán sus compañeros y compañeras de profesión (Leeferink et al., 2019; Yuan, Liu y Lee, 2019). Por último, también se refieren al estatus social de la profesión (Sarasa y Solís, 2017) y al tipo de formación recibida en cuanto a aspectos pedagógicos, psicológicos y metodológicos (Tashma Baum, 2014).

En definitiva, se podría considerar que hay cuatro bloques principales en los que se pueden recopilar estas características y elementos relativos a la IPD. Primero, cómo las percepciones de los futuros profesores sobre TPI (Beauchamp y Thomas, 2009; Beijaard et al., 2004; Izadinia, 2015; Salazar y McCluskey, 2017); segundo, la evolución de la IPD en función del nivel educativo en el que los docentes desarrollan su labor (Chong, Ling y Chuan, 2011; Lenuta et al., 2013); tercero, la influencia de su cambio profesional (Avraamidou, 2014; Green, 2015; Izadinia 2015; Lim, 2011); y finalmente, los diversos factores que afectan la construcción y evolución de la IPD (Kim, 2013; Huu y Ngoc Tai, 2017; Nicotra et al., 2012; Timostsuk y Ugaste, 2010).

Para concluir, dada la complejidad de la IPD y su repercusión en la calidad de la educación en general, la formación docente debe apoyar el interés profesional de los futuros docentes por aprender a enseñar y desarrollar sus identidades como docentes, debe contribuir a integrar los fundamentos morales y racionales de la enseñanza en sus identidades personales. Así, desarrollarán una sensibilidad ética que los llevará a preocuparse por el bienestar de su alumnado y dar respuesta a sus necesidades. Además, desde la perspectiva racional de la enseñanza también se sentirán competentes a nivel pedagógico, psicológico y sociológico para guiar el proceso enseñanza-aprendizaje de manera eficiente e integral (Khali Gholami, et al., 2021).

2.5. IMPLICACIONES PARA LA MEJORA DE LA FORMACIÓN INICIAL DOCENTE

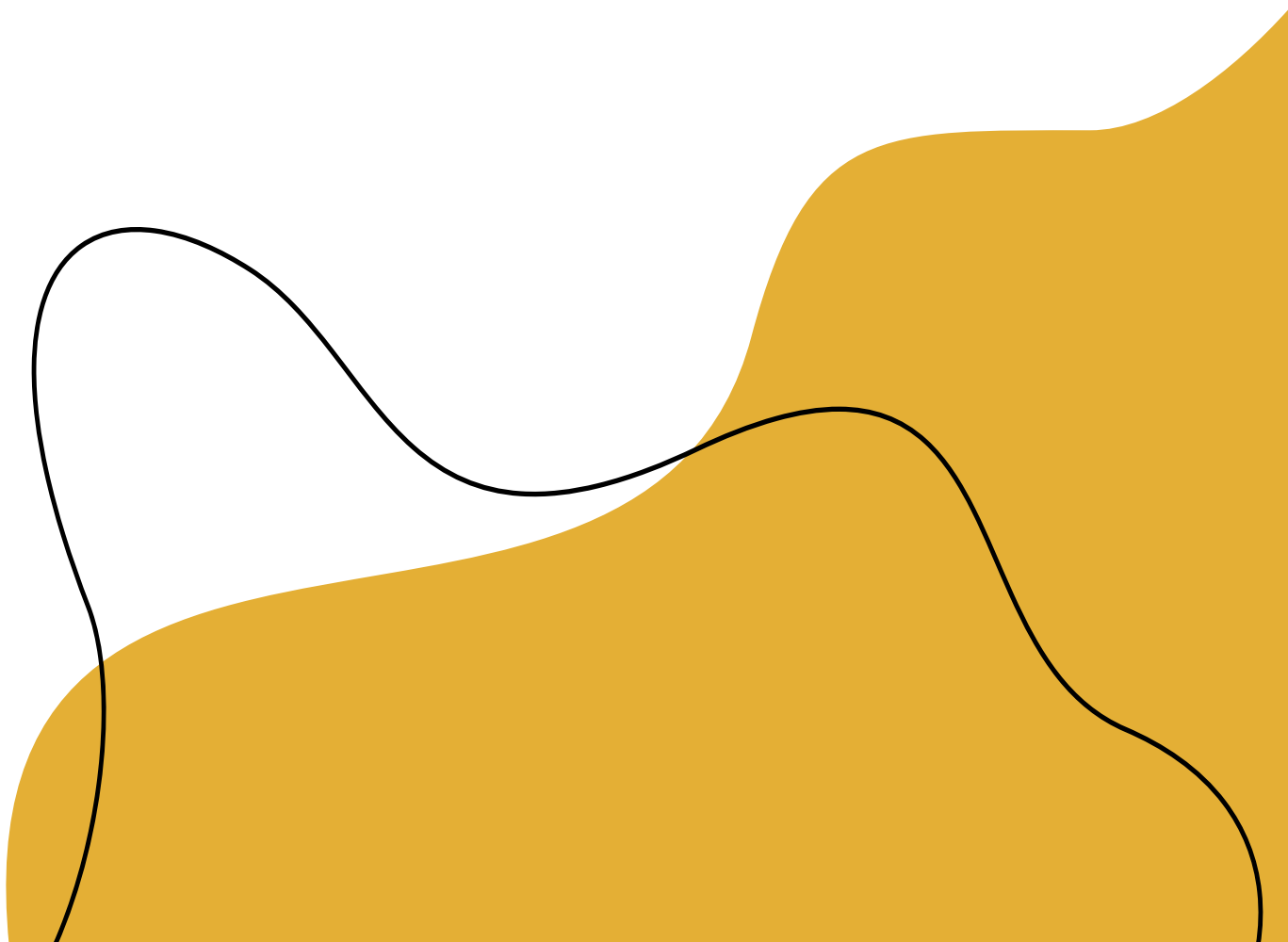
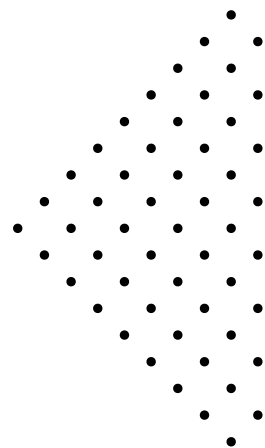
En los apartados y epígrafes anteriores se ha realizado una revisión de la panorámica de la FIPS en nuestro país, que ha servido de base al análisis de los fundamentos de este proyecto, que a su vez están relacionados con el conjunto de publicaciones realizadas previamente en torno a dos temas diferentes, pero estrechamente relacionados entre sí. El primer bloque de trabajos de esta tesis se refiere al tema del desarrollo profesional y su relación con los estudios sobre pensamiento inicial docente, motivaciones por la enseñanza, expectativas sobre la formación inicial y desarrollo de competencias en el MAES (p. ej. Serrano Rodríguez, Pontes Pedrajas y Pérez Gracia, 2019; Serrano Rodríguez, et a., 2021). El segundo bloque de publicaciones que integran esta investigación se refiere al tema de la construcción de la identidad profesional docente y los factores que influyen en su desarrollo durante la formación inicial del profesorado de enseñanza secundaria (p. ej. Pérez Gracia, Serrano Rodríguez y Pontes Pedrajas, 2022; 2021).

Pero la revisión de tales aspectos, además de contribuir a establecer los fundamentos de la investigación y proporcionar una visión global de conjunto, también debe servir de base para proponer ideas que ayuden a mejorar los programas de formación inicial del profesorado de secundaria que se desarrollan actualmente a través del MAES. A tal efecto conviene precisar que apostamos por una formación docente que responda a un enfoque reflexivo y constructivista (Abell et al., 1998; Raffo y Hall, 2006; Perrenoud, 2010; Ibañez y Oliva, 2018), con vistas a promover en el profesorado un desarrollo profesional ligado a la adquisición de competencias docentes efectivas (Sutton, 2011; Zabalza, 2012; Perales et al., 2014) y a la construcción de una identidad profesional docente (Timostsuk y Ugaste, 2010; Izadinia, 2015) que permita afrontar con la motivación y la preparación adecuada los retos que plantea la educación secundaria actual. En este enfoque se concede gran importancia al desarrollo de actividades que ayuden a los profesores en formación a reflexionar sobre la naturaleza de los procesos educativos, los problemas de la enseñanza y las prácticas docentes, tratando de favorecer la metacognición y autorregulación en la formación docente (Wallace y Kang, 2004; Nilsson, 2008; Pontes et al., 2013; Bennett y Chong, 2018)

La forma concreta de atender a los retos que la educación secundaria plantea al profesorado novel sería el establecimiento de un modelo de formación inicial docente que permitiera desarrollar las siguientes competencias: (1) Capacidad de planificación y organización del propio trabajo; (2) Experiencia en programación de la actividad docente y diseño de materiales didácticos de todo tipo; (3) Capacidad de comunicación adecuada y de interacción positiva con el alumnado; (4) Utilización innovadora de estrategias docentes y recursos didácticos; (5) Capacidad de usar significativamente las TIC; (6) Habilidades interpersonales para resolver conflictos y favorecer un buen ambiente de trabajo en el aula; (7) Capacidad de autoevaluar su propia actividad docente y de realizar los cambios necesarios para mejorarla (Cano, 2005; Perrenoud, 2010; Soininen et al., 2013).

Finalmente hay que considerar que la enseñanza es una profesión en la que, además de los conocimientos y las competencias profesionales, también tienen importancia fundamental los valores humanos y las cualidades personales del profesorado, entre las que habría que destacar la vocación docente (o al menos un cierto grado de entusiasmo por la enseñanza), el compromiso con la educación (educar no es sólo enseñar sino transmitir valores), el humanismo (los alumnos también son personas), el compañerismo (para favorecer el trabajo en equipo que es fundamental para mejorar el ambiente de trabajo y la convivencia en los centros), el espíritu crítico (para reflexionar sobre la complejidad de los procesos educativos) y la flexibilidad para renovarse (o la cualidad de comprender y asumir los cambios sociales y educativos). Es evidente que todas estas cualidades no se pueden desarrollar en un solo curso de formación inicial (MAES), pero es importante que los formadores del profesorado siembren durante este curso las semillas para que los futuros docentes puedan ir madurando y reflexionando sobre los problemas que presenta la práctica educativa en los actuales centros de enseñanza secundaria (Pontes, 2008; Esteve, 2009).

CAPÍTULO III





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3.1. INTRODUCCIÓN

En el presente capítulo se explica cómo se ha planificado este trabajo y se describen los procedimientos y métodos que se han puesto en práctica para su realización. Se inicia el capítulo formulando los problemas y objetivos de investigación que han dado origen a este estudio y se justifica su importancia para la investigación en el campo del desarrollo profesional y la identidad profesional docente. Después se definen los objetivos específicos que están directamente relacionados con los problemas de partida. Asimismo, se detalla el diseño metodológico, los participantes de cada uno de los estudios, las variables e instrumentos de medida, los procedimientos de recogida de datos y los diversos análisis estadísticos aplicados a estos.

Con el fin de clarificar toda la información relacionada con el diseño y la metodología de esta tesis doctoral los datos se presentan atendiendo a los diferentes estudios que responden a los dos problemas de partida del proyecto (véase tabla 3.1) y que aparecen definidos en la sección siguiente.

Tabla 3.1.

Relación de estudios de la Tesis Doctoral

Problema	Estudio	Título del Estudio
P1	E1.1	Creencias sobre la profesionalidad docente y los modelos de enseñanza en la formación inicial del profesorado.
	E1.2	Creencias docentes y desarrollo de la identidad profesional en la formación inicial del profesorado de secundaria.
	E1.3	¿Hasta qué punto los futuros docentes se sienten preparados para enseñar? Un estudio de caso en el máster universitario en formación del profesorado de educación secundaria.
	E1.4	Respeto e igualdad de género en la formación inicial docente.
P2	E2.1	Construcción de la Identidad Profesional Docente: Una revisión de la literatura.
	E2.2	Identidad Profesional Docente: Validación de un instrumento de evaluación para profesorado en formación inicial.
	E2.3	Análisis de las creencias del profesorado en formación de Ciencias y Tecnología sobre la construcción de la identidad profesional en el proceso de formación inicial.
	E.2.3	Construcción de la Identidad Profesional Docente de futuros docentes ILE : ¿Importa el género?

¹ *Profesorado de Inglés como Lengua Extranjera*

3.2. PROBLEMAS DE INVESTIGACIÓN

El punto de partida de esta investigación nace del interés por mejorar la formación inicial del profesorado de educación secundaria que se corresponde con el máster universitario en profesorado de enseñanza secundaria obligatoria y bachillerato, formación profesional y enseñanza de idiomas (MAES), a partir del análisis de las creencias y percepciones del futuro profesorado de dicha etapa. La decisión de tomar como referencia las concepciones, creencias y esquemas de conocimiento del profesorado en formación viene justificada por numerosos estudios previos que confirman la influencia directa que estas ideas tienen en el desarrollo de su futura práctica docente y su compromiso con esta profesión (Moses, et al., 2017). Además, de la necesidad de adecuar los procesos formativos al ejercicio y desarrollo de la profesión docente con el objetivo de responder a los numerosos retos que la sociedad nos plantea.

Para abordar esta problemática general, se definen dos problemas principales a partir de los cuales se derivan una serie de objetivos específicos vinculados con los distintos estudios que incluye el proyecto de investigación (tabla 3.1). Ambos problemas se abordan a partir del pensamiento, las creencias y las percepciones del futuro profesorado sobre diferentes aspectos que confluyen en su proceso de profesionalización como docentes.

Problema 1 (P1): ¿El futuro profesorado de educación secundaria se siente preparado para su desempeño profesional?

Este primer interrogante se centra en conocer cómo el futuro profesorado de educación secundaria percibe la formación que está recibiendo en el MAES y hasta qué punto se sienten competentes para afrontar la realidad profesional de su ámbito.

La complejidad de esta cuestión aconseja abordarla de forma analítica, diferenciando los diversos aspectos subyacentes en este problema general, para tratar de desglosarlo en varios subproblemas o cuestiones más concretas, que han servido de base al desarrollo de cuatro estudios específicos en los que se pretende dar respuesta a la cuestión planteada en P1. De tales estudios se derivan algunas implicaciones que han influido en la formulación tratamiento del siguiente problema de investigación.

En primer lugar, se analizan las creencias que muestran el alumnado del MAES sobre la profesión docente en general y cómo están vinculadas con los métodos de enseñanza. En segundo lugar, se pretende identificar sus percepciones sobre los aspectos formativos que consideran más relevantes atendiendo a contenidos, competencias, estrategias docentes y recursos didácticos, entre otros aspectos, así como descubrir la posible relación entre estas ideas y la construcción de la IPD. En tercer lugar, se evalúa y analiza la autopercepción que tienen sobre su nivel de desarrollo competencial (competencia social, competencia académica y competencia personal), así como los factores que pueden influir en la adquisición de dichas competencias. Por último, de manera más concreta se pretende conocer no solo ese nivel de desarrollo competencial, sino también la importancia que atribuyen a cada una de esas competencias, en relación con el conjunto global de competencias transversales que deben trabajar a lo largo de su periodo formativo, prestando especial interés a la coeducación.

Problema 2 (P2): ¿Qué entiende el futuro profesorado de educación secundaria por Identidad Profesional Docente (IPD) y qué factores consideran que influyen en su construcción?

Al igual que en el caso anterior, para abordar el tratamiento de este interrogante, se ha considerado necesario desglosarlo en varios subproblemas, que han permitido llevar a cabo varios estudios específicos para dar respuesta a la cuestión planteada en P2. Para empezar, se considera oportuno conocer cómo evoluciona la IPD durante los procesos de formación inicial docente, atendiendo a los resultados recogidos hasta el momento en la literatura científica publicada. Esta información ha permitido identificar las necesidades de la investigación y formular los objetivos específicos del resto de estudios que se incluyen en este problema. A partir de los resultados de un estudio anterior (Serrano, 2013) se ha diseñado y validado un instrumento que permite conocer en detalle cómo entienden los futuros docentes el concepto de IPD y su proceso de construcción a lo largo del MAES, permitiendo además analizar la influencia de las áreas de conocimiento y otros factores individuales y contextuales que pueden ser intervenir en la construcción de la IPD.

3.3. FINES DE LA INVESTIGACIÓN

A continuación, tras formular los problemas principales del proyecto de investigación, se deben definir los objetivos generales y específicos que se vinculan con los diversos estudios correspondientes al tratamiento de los problemas principales P1 y P2. Como norma general, para abordar cada problema principal se formulará un objetivo general, que se desglosará en varios objetivos específicos, relacionados con los diferentes estudios integrados en cada problema. Tales estudios, a su vez pueden incluir algunos subobjetivos más concretos.

El tratamiento del problema principal P1 se ha ligado al desarrollo del objetivo general O1, que se ha desglosado a su vez en cuatro objetivos más específicos (O1.1, O1.2, O1.3 y O1.4). Para abordar tales objetivos se han llevado a cabo cuatro estudios empíricos, con unas metas muy concretas que se exponen a continuación:

Objetivo General 1 (O1): Analizar las creencias del alumnado del MAES sobre la profesión docente, la formación inicial adquirida en el máster de profesorado y el nivel de desarrollo de las competencias docentes previstas en el mismo.

O1.1. Explorar las creencias del alumnado del Máster de Profesorado de Educación Secundaria sobre la profesión docente y su relación con los principales modelos didácticos.

O.1.1.1. Estudiar las creencias sobre la profesión docente del alumnado del MAES.

O.1.1.2. Analizar si existe una relación significativa entre estas creencias y los principales modelos docentes.

O1.2. Conocer las creencias del alumnado del MAES sobre las necesidades formativas para ejercer la docencia y cómo se relaciona tales aspectos con la construcción de la IPD.

O.1.2.1. Identificar qué aspectos principales considera el alumnado del MAES que deben ser abordados de forma prioritaria en su formación inicial.

O.1.2.2. Analizar si existe una relación significativa entre las opiniones sobre las necesidades de formación docente y la construcción de la IPD.

O1.3. Explorar y analizar el nivel de desarrollo de las competencias adquiridas por el alumnado del máster de educación secundaria durante su formación inicial.

O.1.3.1. Analizar la estructura factorial de la escala diseñada en este estudio y su pertinencia para evaluar las competencias generales previstas en el programa formativo del MAES.

O.1.3.2. Conocer el nivel de desarrollo de las competencias generales del MAES, autopercebido por el alumnado del máster.

O.1.3.3. Identificar los factores que afectan a los resultados del análisis de competencias y analizar si existen diferencias significativas entre los grupos de variables definidos en la escala (académico, social y personal).

O1.4. Conocer cómo valora el alumnado del máster de profesorado de educación secundaria la formación adquirida en el MAES y la importancia atribuida al desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

O.1.4.1. Explorar las creencias del alumnado del MAES sobre el nivel de desarrollo y la importancia atribuida al desarrollo de espacios que favorezcan el respeto y la igualdad de género en relación con el conjunto global de competencias transversales.

O.1.4.2. Analizar la relación entre la importancia atribuida y el nivel de desarrollo adquirido para diseñar espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

O.1.4.3. Determinar la relación entre factores como el género, la edad y el área de conocimiento y, el desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

El tratamiento del problema principal P2 se ha ligado al desarrollo del objetivo general O2, que a su vez se ha desglosado en cuatro objetivos más específicos (O2.1, O2.2, O2.3 y O2.4). Para abordar tales objetivos se han llevado a cabo cuatro estudios, con unas metas muy concretas que se exponen a continuación:

Objetivo General 2 (O2): Conocer cómo construye el alumnado del máster de profesorado de educación secundaria su IPD durante el desarrollo del MAES y analizar las posibles diferencias entre diversas áreas de conocimiento en este proceso.

O2.1. Explorar cómo evoluciona la IPD durante el proceso de formación inicial del profesorado de educación secundaria, analizando cómo se aborda este tema en los programas de formación docente y qué factores pueden influir en su desarrollo.

O.2.1.1. Conocer cómo abordan los programas de formación del profesorado la construcción de la IPD.

O.2.1.2. Conocer cómo evoluciona la IPD durante las diferentes etapas del proceso de formación inicial.

O.2.1.3. Conocer qué elementos influyen en el desarrollo de la IPD.

O2.2. Desarrollar y validar un instrumento adecuado para analizar las creencias del alumnado del máster de profesorado de educación secundaria sobre el desarrollo de la IPD en el proceso de formación.

O.2.2.1. Analizar la validez del contenido del instrumento.

O.2.2.2. Analizar la validez de comprensión del instrumento.

O.2.2.3. Analizar la validez de constructo del instrumento.

O2.3. Explorar y analizar las creencias sobre la construcción de la IPD en el alumnado del máster de profesorado de educación secundaria de las áreas de conocimiento de Ciencias Experimentales y de Tecnología.

O.2.3.1. Identificar las similitudes y diferencias entre el alumnado del MAES de ciencias experimentales y el de tecnología con respecto a sus ideas sobre la IPD, el desarrollo de la IPD en diferentes etapas educativas, la relación entre la IPD y la identidad profesional en otros ámbitos y los aspectos que contribuyen a la construcción de la IPD durante el proceso de formación inicial.

O.2.3.2. Analizar las percepciones de los participantes sobre la construcción y el desarrollo de la IPD.

O.2.3.3. Indagar si existen diferencias significativas entre las cuatro dimensiones de la escala: (i) Definición de IPD; (ii) Desarrollo de la IPD en diferentes niveles educativos; (iii) Desarrollo de la IPD en comparación con la identidad profesional en otras profesiones; (iv) Factores que contribuyen al desarrollo de la IPD.

O2.4. Explorar y analizar las creencias de los futuros docentes de educación secundaria de Inglés como Lengua Extranjera (ILE) sobre la construcción de la IPD.

O.2.4.1. Conocer las creencias de los futuros docentes de educación secundaria de Inglés como Lengua Extranjera (ILE) sobre la IPD y los factores que influyen en su desarrollo.

O.2.4.2. Identificar si existen diferencias significativas entre los alumnos y las alumnas del MAES en torno a tales creencias.

O.2.4.3. Analizar cuáles pueden ser las variables responsables de las posibles diferencias.

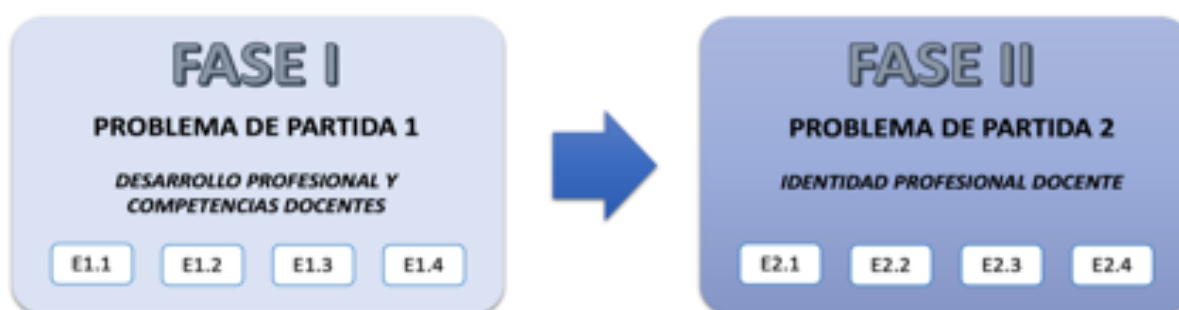
3.4. DISEÑO DE LA INVESTIGACIÓN

Esta investigación es de corte empírico, pues se basa en el análisis cuantitativo de numerosos datos sobre el pensamiento inicial docente, recogidos a lo largo de varios cursos académicos mediante encuestas al alumnado del MAES. La metodología de investigación es de carácter descriptivo, pues se pretende recoger información sobre las creencias de los futuros docentes para conocer mejor una serie de aspectos sobre la formación inicial y el desarrollo de la identidad profesional que resulten útiles, en una etapa posterior, para mejorar los programas de formación inicial docente.

El proyecto de investigación se ha desarrollado en dos fases consecutivas, ya que los principales problemas abordados son complementarios, pero el tratamiento del primer problema y los resultados obtenidos han influido en la formulación y en el tratamiento del segundo problema (véase figura 3.1). También cabe destacar, como se ha indicado en la introducción de esta memoria, que este proyecto se fundamenta en los resultados de una investigación previa (Serrano, 2013), en la que se recogieron abundantes datos de tipo cualitativo, orientados a identificar las necesidades formativas del alumnado del MAES, explorar sus creencias sobre la profesión docente, conocer cómo comienzan los futuros docentes a construir la IPD y se detectaron una serie de implicaciones que son necesarias para la mejorar de la formación inicial del profesorado de educación secundaria.

Figura 3.1.

Fases de la Tesis Doctoral



Los aspectos abordados en las dos fases del proyecto son los siguientes:

Fase I: Se corresponde con el tratamiento del primer problema de investigación (P1). Por lo tanto, se centra en investigar las ideas previas sobre la profesión docente, el nivel de desarrollo competencial y la importancia que conceden los alumnos y alumnas del MAES a la formación inicial docente y al tema de la IPD. Los aspectos específicos que afectan al tratamiento del primer problema principal se han abordado

a través de 4 estudios empíricos complementarios (E1.1, E1.2, E1.3 y E1.4) relacionados respectivamente con el desarrollo de los objetivos específicos que forman parte primer objetivo general (O1.1, O1.2, O1,3 y O1.4) y que se han formulado anteriormente.

Fase II: Se corresponde con el tratamiento del segundo problema de investigación (P2). En esta fase se trata de profundizar en la recogida de datos sobre la construcción de la IPD durante el MAES, indagando sobre qué entienden los futuros docentes de educación secundaria sobre la IPD, qué factores y variables consideran que influyen de manera más directa en su desarrollo y construcción, y qué diferencias pueden existir al respecto entre el profesorado de diferentes áreas de conocimiento. Los aspectos específicos que afectan al tratamiento del segundo problema principal se han abordado también a través de un estudio teórico (E2.1) y tres estudios empíricos complementarios (E2.2, E2.3 y E2.4), relacionados respectivamente con el desarrollo de los objetivos específicos del segundo objetivo general (O2.1, O2.2, O2,3 y O2.4), los cuales se han formulado en un apartado anterior.

3.4.1. Participantes

Los participantes en los diferentes estudios empíricos que integran esta investigación son estudiantes del MAES, correspondientes a distintos cursos académicos y diversas áreas de conocimiento, excepto en el estudio E2.1 (correspondiente al tratamiento del objetivo O2.1 del proyecto), cuya meta consiste en analizar los principales artículos de investigación sobre el desarrollo de la IPD, ya que para investigar sobre esta temática es necesario partir de una revisión sistemática de la literatura.

Tabla 3.2.

Participantes de cada estudio

Problema	Estudio	Participantes (n)	Cursos académicos	Áreas	Edad media	Sexo
P1	E1.1	361	2014-2016	Todas*	25,8	53,7% mujeres 46,3% hombres
	E1.2					
	E1.3	353	2015-2017		25,6	53,8% mujeres 46,2% hombres
	E1.4	353	2011-2013			
P2	E2.1	35 artículos	-	-	-	-
	E2.2	733	2014-2018	Todas*	26,1	62,6% mujeres 37,2% hombres
	E2.3	279		Ciencias y Tecnología	26,8	51,5% mujeres 48,4% hombres
	E2.4	131	2014-2020	Inglés como lengua Extranjera	21,2	84% mujeres 16% hombres

* Ciencias Sociales y Jurídicas, Ciencias Experimentales, Ciencias Instrumentales, Arte y Humanidades

3.4.2. Instrumentos de medida

Teniendo en cuenta la finalidad y la naturaleza de cada uno de los estudios que componen esta investigación ha sido necesario diseñar diferentes instrumentos de recogida de datos para cada caso. En la tabla 3.3 aparece una síntesis de cada uno de los instrumentos en relación con el estudio, el problema y el objetivo a abordar.

Tabla 3.3.

Instrumento de cada estudio

Problema	Estudio	Objetivo	Instrumento*	Nº ítems
P1	E1.1	O1.1	CCPD	14
	E1.2	O1.2	NFID	23
	E1.3	O1.3	CVD-MES	13
	E1.4	O1.4		
P2	E2.1	O2.1	RAP-IPD	9
	E2.2	O2.2	C-IPD	31
	E2.3	O2.3		
	E2.4	O2.4		

**Las siglas correspondientes a cada instrumento se comentan en la siguiente sección*

A continuación, se detallan las características de los cinco instrumentos que se han utilizado en el desarrollo del proyecto de investigación:

1. Cuestionario del estudio E1.1: Cuestionario de Creencias sobre la Profesión Docente (CCPD)

Este cuestionario (Anexo 1) permite recoger información sobre las ideas previas del futuro profesorado de educación secundaria al inicio del MAES. Se divide en dos secciones bien diferenciadas. Por una parte, incluye variables sobre información general de los participantes como son el sexo, la edad y la especialidad del MAES que están cursando. La segunda sección cuenta con 14 ítems cerrados en formato de escala Likert con valores del 1 al 5 (nada, poco, intermedio, bastante y mucho) para que los participantes puedan valorar su nivel de acuerdo o desacuerdo con respecto a diversas proposiciones relacionadas con la profesión docente.

1. Para ser profesor/a lo que importa es tener un amplio conocimiento de los contenidos y enseñarlos con claridad.
2. La profesión docente se puede aprender y mejorar con la formación teórica y práctica
3. Antes de ser profesor/a es necesario adquirir conocimientos profundos de psicología, pedagogía y didáctica específica.
4. Aspectos como la autoridad o la capacidad de dirigir al alumnado no se aprenden en un curso de formación.
5. La principal misión de la formación del profesorado es desarrollar la capacidad de interesar a los alumnos por el aprendizaje.

6. El profesor de secundaria es sobre todo un especialista en su materia y esa formación sólo se adquiere durante su carrera.
7. Para motivar a los alumnos por el aprendizaje es necesario adquirir ciertas destrezas propias de la profesión docente.
8. Los mejores docentes son personas con cualidades innatas para la comunicación y la docencia.
9. La formación debe centrarse en aprender a programar la docencia y dominar las técnicas de comunicación en el aula.
10. La formación para el ejercicio de la docencia sólo se adquiere con la experiencia.
11. La formación inicial debería ayudar a desarrollar la identidad profesional docente centrada en los problemas educativos.
12. La principal cualidad del profesor es la vocación docente, pero no se consigue en cursos de formación pedagógica.
13. No resulta fácil ser profesor/a de secundaria en la actualidad, sobre todo si te has formado previamente pensando en ejercer otra profesión distinta (economista, historiador/a, traductor/a, ingeniero/a, biólogo/a, veterinario/a, etc.).
14. Cualquier graduado universitario puede adquirir en un curso de postgrado la formación docente necesaria para enseñar bien su materia y realizar el resto de las funciones educativas que demanda la enseñanza secundaria actual.

Asimismo, este cuestionario fue sometido a una prueba de fiabilidad, dando como resultado un valor de alfa de Cronbach de 0,756.

2. Cuestionario del estudio E1.2: Necesidades de Formación Inicial Docente (NFID)

Este segundo instrumento (Anexo 2) se corresponde con un cuestionario cuya primera sección coincide con la del instrumento 1 (edad, sexo y especialidad del MAES). La segunda sección está compuesta por un total de 23 ítems de escala Likert con valores del 1 al 5 (nada, poco, intermedio, bastante y mucho) para que los participantes valoren su nivel de acuerdo o desacuerdo sobre las necesidades formativas que sienten.

1. Organización y estructura del sistema educativo.
2. Funcionamiento de un centro de secundaria.
3. Normativa y legislación educativa.
4. Programación educativa y diseño del currículo.
5. Técnicas y recursos de comunicación oral.
6. Metodología y estrategias de enseñanza.
7. Diseño de actividades de aprendizaje.
8. Técnicas de motivación del alumnado.
9. Aplicaciones educativas de las nuevas tecnologías.
10. Uso didáctico de esquemas y mapas conceptuales.
11. Técnicas e instrumentos de evaluación.
12. Elaboración de unidades didácticas.
13. Características de los procesos de aprendizaje.
14. Desarrollo cognitivo e intelectual del alumnado.
15. Psicología de la adolescencia.
16. Atención a la diversidad y a las necesidades especiales.
17. Pedagogía para la convivencia en el centro y el aula.
18. Orientación educativa y acción tutorial.

19. Técnicas de dinámica de grupo.
20. Técnicas de resolución de conflictos.
21. Desarrollo de la autoridad académica.
22. Superación de situaciones de stress profesional.
23. Temas educativos transversales (valores humanos, salud y desarrollo, educación ambiental, ...)

Asimismo, este cuestionario obtuvo un valor de alfa de Cronbach de 0,909.

3. Cuestionario del estudio E1.3 y E1.4: Valoración de las Competencias Docentes del Máster de Enseñanza Secundaria (VCD-MAES)

Al igual que en los instrumentos anteriores, este cuestionario (Anexo 3) empieza con una sección para recoger datos generales sobre los participantes (edad, sexo, año de finalización de los estudios, especialidad del MAES, situación laboral actual y experiencia previa).

A partir de ahí, se recogen 13 ítems que han de valorarse atendiendo a dos categorías. Por una parte, el nivel de desarrollo competencial y, por otra parte, la importancia que le conceden a cada uno de esos aspectos a lo largo de su proceso formativo. Ambas categorías se responden con una escala Likert del 1 al 5 (nada, muy poco, poco, aceptable y bastante).

1. Conocer los contenidos curriculares de las materias relativas a la especialización docente correspondiente.
2. Planificar, desarrollar y evaluar el proceso de enseñanza y aprendizaje.
3. Buscar, obtener, procesar y comunicar información (oral, impresa, audiovisual, digital o multimedia), acreditando un manejo adecuado de las Tics y el dominio de una segunda lengua en los procesos de comunicación.
4. Concretar el currículo que se vaya a implantar en un centro docente, desarrollando y aplicando metodologías didácticas tanto grupales como personalizadas, adaptadas a la diversidad de los estudiantes.
5. Diseñar y desarrollar espacios de aprendizaje que favorezcan el respeto y la igualdad de género.
6. Adquirir estrategias para estimular el esfuerzo del estudiante y promover su capacidad para aprender por sí mismo y con otros.
7. Conocer los procesos de interacción y comunicación en el aula, para fomentar el aprendizaje y la convivencia en el aula, y abordar problemas de disciplina y resolución de conflictos.
8. Diseñar y realizar actividades formales y no formales.
9. Conocer la normativa y la organización institucional del sistema educativo.
10. Conocer y analizar las características históricas de la profesión docente.
11. Informar y asesorar a las familias acerca del proceso de enseñanza y aprendizaje y sobre la orientación personal, académica y profesional de sus hijos.
12. Fomentar el espíritu crítico, reflexivo, emprendedor y los hábitos de búsqueda activa de empleo.
13. Favorecer y garantizar el respeto a los Derechos Humanos y a los principios de accesibilidad universal, igualdad, no discriminación y fomento de los valores democráticos y de la cultura de paz.

Este instrumento obtuvo un alfa de Cronbach de 0,923.

4. Cuestionario del estudio E2.1: Hoja de registro de análisis de Publicaciones sobre la Identidad Profesional Docente (HR-IPD)

Para llevar a cabo la revisión de la literatura, se utilizó una rúbrica (Anexo 4) en la que recogió información de cada artículo encontrado en las distintas bases de datos relativa a autoría, título, revista, base de datos, cuartil, año de publicación, país, IPD en formación y elementos IPD.

5. Cuestionario del estudio E2.2, E2.3 y E2.4: Cuestionario de Creencias sobre la Identidad Profesional Docente (C-IPD)

Por último, el instrumento diseñado y validado en el estudio E2.2 y utilizado para recoger datos en los estudios E2.3 y E2.4 está compuesto por dos bloques (Anexo 5). El primer bloque tiene como objetivo obtener datos generales de los participantes con respecto al sexo, edad, año de finalización de sus estudios, grado, situación laboral actual y experiencia docente. El segundo bloque incluye 31 ítems que se responden con una escala Likert del 1 al 5 (totalmente en desacuerdo, en desacuerdo, parcialmente de acuerdo, de acuerdo, totalmente de acuerdo).

Estos 31 ítems quedan organizados en cuatro escalas que cubren los principales aspectos relacionados con la IPD recogidos en la literatura previa: i) definición de la IPD, ii) desarrollo de la IPD en diferentes niveles educativos, iii) desarrollo de la IPD en comparación con la identidad profesional en otras profesiones y iv) factores que contribuyen al desarrollo de la IPD.

i) Definición de IPD

1. Poseer una capacidad adecuada para enseñar
2. Sentir un grado elevado de compromiso con la profesión docente
3. Disponer de una formación general amplia sobre educación y docencia
4. Construir una imagen positiva de uno mismo como aspirante a profesor
5. Saber adaptarse a los cambios educativos en función de las circunstancias
6. Utilizar y dominar las técnicas de comunicación docente
7. Mostrar interés por conocer y comprender a los alumnos
8. Integrar en la docencia las nuevas Tecnologías
9. Combinar adecuadamente el saber teórico y práctico sobre la docencia
10. Preocuparse por las relaciones humanas que se producen en el contexto educativo
11. Capacidad para gestionar el trabajo en el aula y resolver posibles conflictos
12. Disponer de una elevada autoestima como enseñante
13. Tener un buen dominio de los conocimientos de la propia disciplina
14. Motivación para despertar en el alumnado el interés por el aprendizaje
15. Adoptar una postura reflexiva y autocrítica con respecto a la práctica docente

ii) Desarrollo de la IPD en diferentes niveles educativos.

1. La formación académica recibida para ser docente es distinta en cada etapa
2. Existe un currículum diferente para cada nivel de enseñanza
3. Las estrategias metodológicas y los recursos utilizados cambian según las circunstancias
4. Los problemas de convivencia son mayores en la etapa de Educación Secundaria
5. Existen distintas funciones docentes en cada etapa

iii) Desarrollo de la IPD en comparación con la identidad profesional en otras profesiones.

1. Se requiere una formación psicopedagógica para el ejercicio de la profesión docente
2. En la docencia existe una práctica educativa que la hace diferente de otras profesiones
3. La docencia implica una relación con el alumnado que contribuye a su desarrollo personal y académico
4. La docencia confiere una importancia diferente a las relaciones interpersonales que se producen en el centro de trabajo
5. La docencia cumple una misión social muy específica y diferente de otras profesiones

iv) Factores que contribuyen al desarrollo de la IPD.

1. El aumento del periodo de prácticas
2. Una formación psicopedagógica más amplia durante el Máster de Secundaria
3. El reconocimiento y la valoración social de la profesión
4. La adquisición de nuevas metodologías y la utilización de recursos educativos
5. El aprendizaje a través de experiencias con profesionales dedicados a la docencia
6. El fomento de la motivación docente y el desarrollo de un proyecto profesional

El conjunto global del instrumento tiene un valor de alfa de Cronbach de 0,879.

3.4.3. Procedimientos de recogida de datos

Teniendo en cuenta los fines e instrumentos de recogida de datos de los diferentes estudios que componen esta Tesis Doctoral, los procedimientos de recogida de datos en cada caso se han adaptado a la naturaleza de cada uno de tales estudios, aunque debe tenerse en cuenta que todos ellos se llevaron a cabo dentro del contexto del MAES. En la tabla 3.4. se muestra un resumen de los procesos de recogida de datos de cada estudio en función de los objetivos y de la naturaleza de este.

Tabla 3.4.

Recogida de datos de cada estudio

Estudio	Objetivo	Recogida de datos	Modalidad
E1.1	O1.1	Al inicio de la asignatura “Procesos y contextos educativos” ya que ésta incluye un bloque sobre la profesionalización docente.	Presencial
E1.2	O1.2	Al inicio del módulo específico del MAES.	Presencial
E1.3	O1.3	Al final del MAES a través de la plataforma Moodle.	Virtual
E1.4	O1.4	En un seminario virtual incluido en el Módulo del Prácticum del MAES.	Virtual
E2.1	O2.1	Los datos se corresponden con artículos científicos publicados en revistas indexadas en SJR y JCR entre 1990 y 2019.	Virtual
E2.2	O2.2	Al inicio del módulo específico del MAES, dentro de la asignatura de Complementos para la Formación Disciplinar porque esta incluye un tema sobre los perfiles profesionales docentes.	Presencial
E2.3	O2.3		
E2.4	O2.4		

3.4.4. Análisis de datos

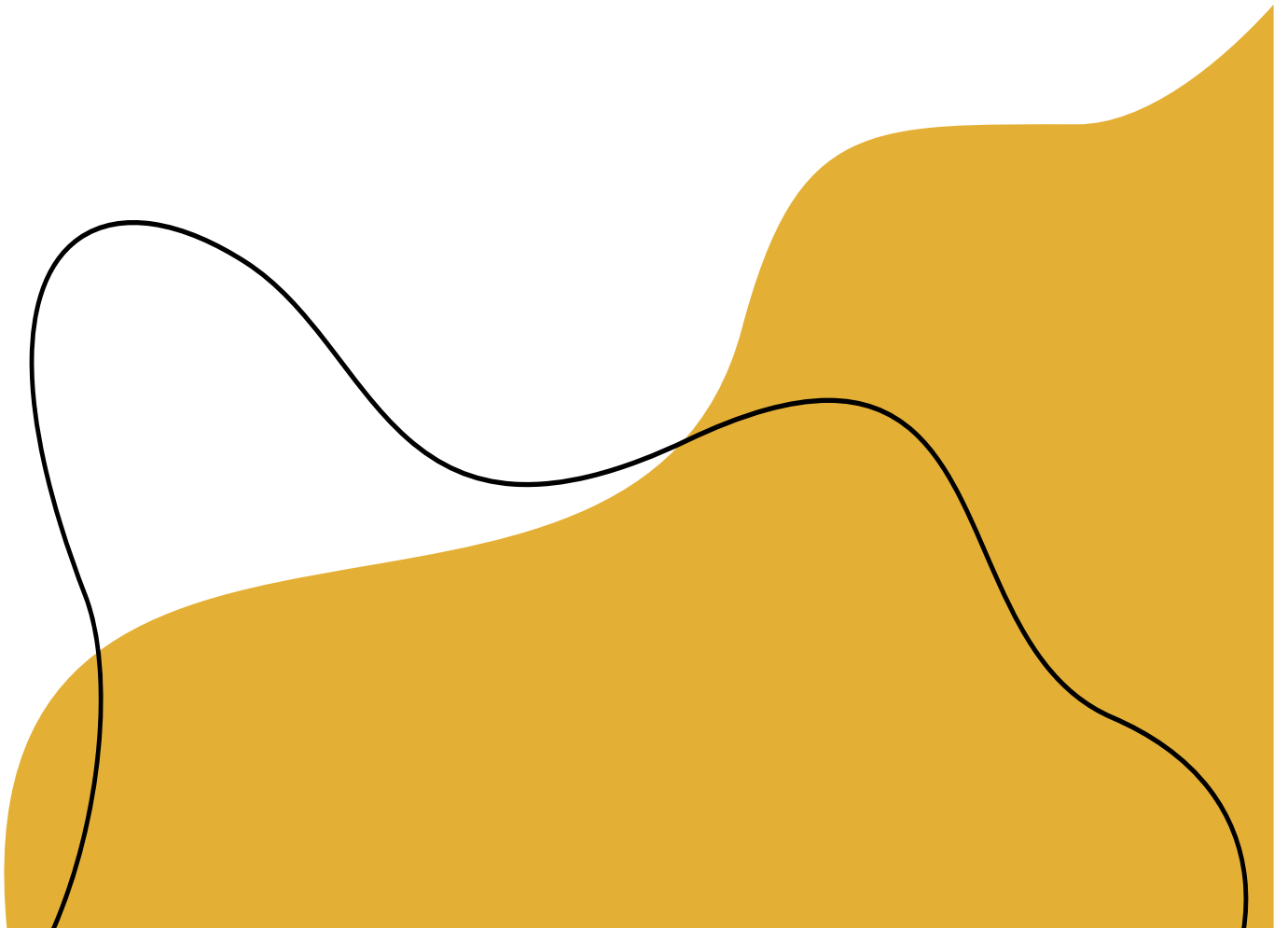
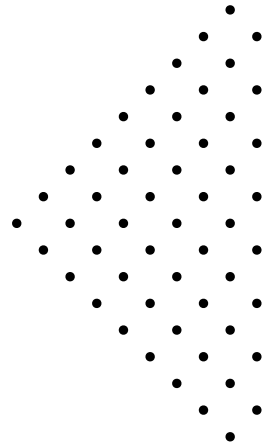
Para abordar los diferentes problemas y desarrollar los objetivos del proyecto, los métodos de análisis de datos en cada caso se han adaptado a la naturaleza específica de cada uno de los estudios que integran el proyecto de tesis. En la tabla 3.5. se muestra un resumen de los métodos de análisis de datos de cada estudio específico.

Tabla 3.5.

Técnicas y análisis de datos utilizados en la Tesis Doctoral

Técnicas	Estudios	Análisis	Propósito
Descriptiva	E2.1	Prisma y PICO	Seleccionar y filtrar artículos de investigación.
	E2.2	Validación de contenido	A través de un panel de expertos se evalúa la claridad, pertenencia y relevancia de los ítems.
	E1.1, E.12, E1.3, E1.4, E2.3, E2.4	Frecuencias, medias, desviación típica y varianza	Conocer las creencias sobre la profesión docente, las necesidades formativas durante el MAES, el nivel de desarrollo competencial y las percepciones sobre la IPD y su construcción.
Inferencial	E2.5	Prueba T de Student	Comparar medias de dos grupos (alumnado del MAES de ciencias experimentales y de tecnología) que siguen una distribución normal.
	E1.1, E1.2, E2.5	Mann-Witney U, Kruskal-Wallis	Comparar datos de los participantes atendiendo al área de conocimiento para unificarlos en un único grupo.
	E1.1, E1.2	Análisis de conglomerados	Agrupar los ítems en función a distintos modelos de aprendizaje y en función a los tipos de necesidades formativas.
	E2.2	Análisis Factorial Exploratorio	Explorar con precisión los constructos y variables latentes del instrumento.
	E1.3, E2.2	Análisis Factorial Confirmatorio	Analizar la estructura factorial del instrumento 3 utilizado al agrupar las competencias en tres grupos (académicas, sociales y personales) (E3) y del instrumento 5.
	E1.3	Modelos lineales	Identificar los factores que afectan/explican a los resultados.
	E1.4	Análisis de Correlación de Pearson	Calcular si existe una relación entre los valores que los participantes asignan a la importancia de las competencias y el nivel de desarrollo atribuido.
	E1.4	ANOVA	Evaluar las diferencias en las variables respuestas en función al factor de sexo, edad y macroárea de manera independiente.
	E2.2	Análisis Factorial Exploratorio	Explorar con precisión los constructos y variables latentes del instrumento.
	E1.4, E2.2,	Modelos de Ecuaciones Estructurales	Estudiar la relación que hay entre variables latentes y observadas.
	E2.3, E2.4	PERMANOVA	Evaluar las diferencias entre las respuestas de acuerdo con las variables de sexo y edad (E7) y sexo (E8).
E2.3, E2.4	SIMPER	Identificar los ítems responsables de las diferencias encontradas en PERMANOVA.	

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4.1. INTRODUCCIÓN

En este capítulo se presentan los resultados derivados de los ocho estudios que componen la investigación y que dan respuesta a los dos grandes interrogantes de esta.

En primer lugar, el desarrollo y el análisis de los resultados de los cuatro primeros estudios (E1.1, E1.2, E1.3 y E1.4) nos permiten conocer si el futuro profesorado de educación secundaria se siente preparado para su desempeño profesional.

En segundo lugar, los cuatro estudios siguientes (E2.1, E2.2, E2.3 y E2.4) tienen su foco central en la IPD y arrojan datos que nos llevan a comprender cómo el futuro profesado de educación secundaria entiende la IPD y qué factores consideran que influyen de manera más directa en su construcción.


4.2. ESTUDIO 1.1. CREENCIAS SOBRE LA PROFESIONALIDAD DOCENTE Y LOS MODELOS DE ENSEÑANZA EN LA FORMACIÓN INICIAL DEL PROFESORADO

Referencia: Serrano Rodríguez, R., Pontes Pedrajas, A., & Pérez Gracia, E. (2019). Beliefs on the teacher professionalism and teaching models in initial teacher education. *Revista Brasileira de Educação*, 24. <http://dx.doi.org/10.1590/S1413-24782019240018>

Este estudio tiene como objetivo general explorar las creencias que el alumnado del MAES tiene sobre la profesión docente y su relación con los principales modelos didácticos.

ARTICLE

Beliefs on the teacher professionalism and teaching models in initial teacher education

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ABSTRACT

The aim of this paper is to know student teachers' beliefs on the teaching profession as well as its relation with diverse teaching methods. A Likert scale questionnaire collected the opinions of 361 students enrolled in the master's degree in secondary education teacher training. A descriptive methodology was applied through a questionnaire in order to collect the data. The most extended beliefs concerning the teaching profession are identified, emphasising future teachers' interests in more practical teaching and student-centred approach. This investigation highlights the importance of including within the curriculum of pre-service secondary education teachers, activities that enable students reflect about their own beliefs regarding the teaching profession for the reasons that they are decisive to introduce changes in the teacher training curriculum.

KEYWORDS

initial teacher training; teaching profession; educational models.

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CRENÇAS SOBRE O PROFISSIONALISMO DO PROFESSOR E MODELOS DE ENSINO NA FORMAÇÃO INICIAL DE PROFESSORES

RESUMO

O objetivo deste artigo é conhecer as crenças dos professores universitários sobre a profissão docente, bem como sua relação com diversos métodos de ensino. Um questionário da escala Likert coletou as opiniões de 361 alunos matriculados no curso de mestrado para professores do ensino médio. A coleta de dados foi conduzida por metodologia descritiva, por meio de um questionário. Crenças sobre a profissão docente são identificadas, enfatizando o futuro interesse de professores no ensino mais prático e na abordagem centrada no aluno. Essa investigação ressalta a importância de incluir a reflexão de alunos sobre suas próprias crenças em relação à profissão docente no currículo das atividades dos professores do ensino médio, uma vez que estas podem ser decisivas para a introdução de mudanças no currículo de formação de professores.

PALAVRAS-CHAVE

formação inicial de professores; profissão docente; modelos educativos.

CREENCIAS SOBRE LA PROFESIONALIDAD DOCENTE Y LOS MODELOS DE ENSEÑANZA EN LA FORMACIÓN INICIAL DEL PROFESORADO

RESUMEN

El objetivo de este estudio es conocer las creencias del profesorado de Educación Secundaria en formación sobre la profesión docente y su relación con diversos métodos de enseñanza. Un cuestionario de escala Likert recogió las opiniones de 361 estudiantes matriculados en el máster en formación de docentes de educación secundaria. Se aplicó una metodología descriptiva a través de un cuestionario para recopilar los datos. Se identifican las creencias sobre la profesión docente, enfatizando los intereses de los futuros docentes en una enseñanza más práctica y un enfoque centrado en el alumnado. Esta investigación resalta la importancia de incluir en el plan de estudios del futuro profesorado de educación secundaria actividades y metodologías que permita a los estudiantes reflexionar acerca de sus propias creencias sobre la profesión docente y el proceso enseñanza-aprendizaje, ya que estas son decisivas para introducir cambios en el currículo de formación docente.

PALABRAS CLAVE

formación inicial docente; profesionalidad docente; modelos educativos.

INTRODUCTION

In the decade of 2000, the universities in Europe (in Spain in 2007) were preparing themselves for full convergence within the European Higher Education Area (EHEA), known as the Bologna Process. This process aimed to get harmony among European Higher Education Institutions (EHEI) and the development of students' professional and personal competences. Therefore, it brought about great and significant pedagogical and organisational changes (López, Pérez-García and Rodríguez, 2015). In addition, it undergoes a change in the focus from "teaching" on to "learning", requiring teachers' new academic roles and functions (López-Pastor *et al.*, 2013), so as to improve educational quality (Du Plessis, 2015).

Within this context of changes in Spain, a new teaching model emerged around the master's degree in secondary education teacher training.¹ It aims to adapt to new social and political demands as well as to improve secondary education teachers' competences. Diverse reports (Eurydice, 2012, 2013) have analysed the wide range of difficulties involved in the training process of these teachers. The new professional profile of secondary education teacher provokes a debate on which skills they must acquire and develop throughout the formative period (Lorenzo Vicente, Muñoz Galiano and Beas Miranda, 2015).

In this sense, future teachers play an important role within this process so it is both necessary and important to know not only their beliefs on the profession, but also the training needs they point out (González Sanmamed, 2009; Serrano, 2013). Future teachers' voices are relevant because they are useful to introduce possible changes in training programmes (Korthagen, Loughran and Russell, 2006).

Accordingly, several research studies about the effects of preservice preparation evince the influences they have on teachers' instructional decision-making processes and practices. Furthermore, there are changes on teachers' rationales because of the difficulty to implement concrete strategies in their school contexts as well as the growing awareness of the great distance between their beliefs and their practices, between theory and practice (Jones and Saye, 2018).

BELIEFS ON THE TEACHER PROFESSIONALISM

The students enrolled in the master's degree in secondary teacher training have ideas, attitudes and motivations regarding teaching, learning and many other educational aspects that influence the construction of professional knowledge for the teaching practise as well as the teachers' professional identity (Sanya Pelini, 2017; Sanz, Hernando and Mula, 2015).

In regard with teacher thought, it is necessary to highlight that literature frequently includes wide diverse terms (previous ideas, preconceptions, beliefs, conceptions, implicit theories etc.) in order to refer to the opinions and thoughts that characterise teachers' professional knowledge (Nilsson, 2008; Porlán and Martín, 2004). In this sense, Pontes, Serrano and Poyato (2013) explained some differences among these terms used when analysing the teachers' initial teaching

1 Royal decree n. 1.834/2008. It defines the training conditions for teaching in compulsory secondary education level and establishes the different specialties (fields of knowledge).

thinking. Moreover, previous literature includes five terms that are used to refer to various types of ideas among pre-service teachers. According to Solís *et al.* (2013), they are defined as follows:

- “conceptions” which is generally used to refer to broader answers to open questions about a specific topic;
- the term “beliefs” is mainly used to characterize brief and concise ideas on any topic using multiple choice questions or even rating scale questionnaires (*e.g.*, Likert);
- the terms “conceptual schemes”, “though models” and “implicit theories” generally make reference to a broader set of basic ideas on a topic considering that there is some degree of articulation or internal interrelation among the ideas that make up the model or scheme.

This paper focused on the term “beliefs” to refer to pre-service teachers’ ideas regarding the teaching profession, since a Likert scale questionnaire composed of a set of very specific proposals on this subject has been used.

The development of teaching professionalism is an important issue within the educational field, but it is a complex term, which is related to many factors and has been approached from a wide range of perspectives (Darder, 2009; Ingleby, 2017). Most scholars, who have researched about this concept agree that it is a rather complex topic (Korthagen, Loughran and Russell, 2006; Mellado, Blanco and Ruiz, 1999; Pro, Valcárcel and Sánchez, 2005), given that there are many aspects to consider regarding the teachers’ professional activity (didactic content knowledge, teaching planning, design and use of educational resources, communication in the classroom, interaction with students, evaluation of learning, relationship with families and with other professionals in the same context etc.). Some studies on the teaching thinking of science teachers have tried to address teachers’ beliefs about a broad set of educational issues (learning processes, teaching methodology, nature of scientific knowledge, teacher’s teaching model etc.) (Porlán and Martín, 2004; Solís *et al.*, 2013) that involve working with many variables. As opposed to that, the research project in which this study is included was focused on very specific issues such as professional identity, initial teacher training demands and teaching competences (Serrano, 2013) so as to be able to make a deeper analysis of the data collected. Therefore, the conclusions of this study will be limited to the results obtained on this matter.

These aspects are linked to teaching professionalism and they allow considering three dimensions within the teaching profession, which are respectively related to the field of knowledge or theoretical thinking, the field of emotions or motivations and the scope of skills. Thus, pre-service teachers’ beliefs on the profession are related to these three areas but within them, a wide range of elements has been mentioned in literature (Pontes, Serrano and Poyato, 2013). Some studies reveal that they give great importance to the expertise in the field of knowledge so as to become an efficient teacher (Recchia and Puig, 2011; Reoyo *et al.*, 2012) identify other relevant aspects such as the ability to awake interest in learning among students and the development of methodological competences, whereas Valdés and

Bolívar (2014) added the skills in designing teaching resources as well as teachers' communicative competences and information and communication technology (ICT) management. Furthermore, Sutherland, Howard and Markauskaite (2010) reference to the pedagogical training and placement period as decisive factors and the interactions with other education professionals.

Pre-service and in-service teachers' conceptions regarding their profession directly influence the development of their teaching practice and their commitment to this profession (Eirín Nemiña, García Ruso and Montero Mesa, 2009; Moses *et al.*, 2017). Thus, some teacher educators are afraid of the fact that the challenges of daily classroom practices may lead early career teachers to set aside their pre-conceptions once they face their real teaching practices (Hawley, 2010; McDonough, 2017) because of the transition shock they could suffer (Chong, 2011).

One of the most controversial questions in the investigations about teachers' initial thought is that of the stability of their beliefs and resistance to the influence of training interventions. In this sense, the pedagogical beliefs of future teachers are flexible and modifiable through influence of the training program (Clark, Byrnes and Sudweeks, 2015).

The results presented in this study are part of the project² being developed to help future secondary education teachers to explicit and discuss, in the classroom, the conceptions and attitudes related to aspects that may be useful to reflect on education and teaching activity during the initial teacher training process (Ezquerro, De-Juanas and Ulloa, 2014). The problems, which can be tackled around such a general theme, can be very broad since teacher professionalism is linked to aspects such as interest in teaching, teachers' professional profile, research activities, development of teaching competences, vision of secondary education level, teachers' professional problems and the role of motivation in professional development (Beijaard, Meijer and Verloop, 2004; Bender *et al.*, 2015).

Moreover, teacher professionalism goes further than the classical concept of this profession understood as an expert in a specific subject matter. It is a dynamic process of action and cooperation reflection, of inquiry and experimentation, where teachers learn that they teach because they learn (Demirkasimoglu, 2010). Professionalism does not mean the final state to which diverse occupations are directed, but rather it is a continuous process in pursuit of a useful and responsible exercise of each profession. This process requires specific attention in the field of teachers due to the wide range of responsibilities they have and the enormous challenges society places upon them. As adults immersed in the knowledge society, beyond the traditional role of transmitters of content, it is demanded that teachers act as guides of the knowledge of their students and the learning process (Darling-Hammond and Bensford, 2005).

Most of the research studies on the development of the professionalism of secondary education teachers focus on the field of lifelong learning (Korthagen, Loughran and Russell, 2006) and teacher training (Pro, Valcárcel and Blanco, 2005), but there are also investigations that point out the need to reflect

² This study is supported by the Research Plan of the University of Córdoba (Spain); and the FEDER funding Operational Programme in Andalusia.

on the professional development of teachers since their initial training (Pool, Reitsma and Mentz, 2013).

TEACHING MODELS

In line with the main interest of this study, it is necessary to mention the work of Solís *et al.* (2013). Its results present interesting connections between the curricular beliefs of students and the main didactic models reflected in the literature on initial teacher thinking (Fuentes, García and Martínez, 2009). They also find a scarce evolution both in their expectations about training and in their beliefs regarding education, from which the need to introduce methodological changes in the master's degree that favour the construction of a pedagogical knowledge adequate to the needs of current secondary education (Keeley, Christopher and Buskist, 2012).

As pointed out above, the different teacher training models are related to the diverse ways of conceiving education as well as to the varied aspects that are implicitly related to teaching (Subramaniam, 2013). Based on the proposals of authors such as Witte and Jansen (2015), the literature reveals diverse educational perspectives that are related to different models of teacher training (Prats, 2016).

On the one hand, the transmissive perspective — also known as traditional perspective — gives the whole prominence to the teacher, considering them as the expert and the only responsible for transmitting discipline (Richter *et al.*, 2013). Theoretical knowledge is prioritised, understanding pedagogical training as superficial and unnecessary, even presenting an obstacle to teacher education (Reoyo *et al.*, 2012). However, Recchia and Puig (2011) warn of the need to learn skills related to their pedagogical capacities, communication, empathy, working with others, reflectivity etc (Manso and Martín, 2014; Valdés and Bolívar, 2014).

On the other hand, the technical perspective seeks solutions to take them into practise without taking into account the diversity of students, teachers and family contexts (Imbernón, 2007). In this way, the technical perspective establishes a gap that inevitably implies a hierarchical relationship among those professionals who elaborate and decide the techniques to be applied (González, 2010).

The student-centred teaching model is considered as a possible solution to the problems derived from the academic and technical perspective. Dewey (1989), a pioneer in these practical approaches, established the need to unite practice and reflection when considering that only through this binomial will the future teacher be able to contrast their theories and perfect their knowledge (Conklin, 2012). The study of Buendía *et al.* (2011) is concluded by indicating the need to acquire disciplinary knowledge and pedagogical and didactic skills so as students can develop a critical thinking that allows them to reflect and look for different alternatives of resolution according to the characteristics of the students (Kopzhassarova *et al.*, 2016).

This student-centred tendency has been shaped by the development of a professional teaching profile in order to improve the learning process (Perales *et al.*, 2014), the command of ICT (Ramírez, Cañedo and Clemente,

2012), diversity management competences (Henley, 2014), the development of motivating competences and the promotion of collaborative work (León *et al.*, 2011).

These three teaching models, whose main beliefs about teaching professionalism are analysed in this study, coincide with previous investigations on teaching thinking (Fuentes, García and Martínez, 2009; Porlán and Martín, 2004; Solís *et al.*, 2013), since not only they point out the three of them but they also refer to a supplementary model called “Spontaneous or Activist Teaching Model”, which is not reflected in the beliefs analysed here. However, there are scholars who define two antagonistic models such as the transmissive and the technical ones (Gow and Gember, 1993; Rodríguez-Arteche and Martínez-Aznar, 2018; Wallace and Kang, 2004), and others that consider up to seven models (Samuelowicz and Bain, 2001) or the five models described by Kember (1997) and lately analysed in a review carried out by Hernández and Maquilón (2010). Given this variety of positions, many authors choose to consider only three teaching models that coincide with two opposing viewpoints on educational processes (traditional or transmissive *vs.* innovative or constructivist) and an intermediate one which is more ambiguous and integrate dual or ambivalent beliefs (Hugo and Sanmartí, 2003; Mellado, Blanco and Ruiz, 1999).

All in all, there is still a long path to walk regarding initial teacher training in order to provide future teachers with the main and necessary tools to implement teaching models different from the traditional one and lessen the distance between scientific and professional (pedagogical and practical) training (Lorenzo Vicente, Muñoz Galiano and Beas Miranda, 2015).

This paper presents the results of an empirical study, which focuses on these beliefs, trying to establish useful relationships among such ideas and the underlying educational models in order to be able to introduce reforms in the formative processes according to the current educational demands. This investigation highlights the importance of including activities that enable students reflect about their own beliefs regarding the teaching profession within the curriculum of pre-service secondary education teachers (Asensio and Ruiz, 2017; Solís *et al.*, 2013).

METHOD

OBJECTIVES

The main aim of this study is related to the need of progressing in educational research focused on teachers’ thoughts and the teaching profession. Specific objectives are:

- to study the extension of the beliefs regarding the teaching profession of the students enrolled in the master’s degree in secondary teacher training; and

- to know the existing relationship between students' beliefs and the main teaching models found in literature.

POPULATION AND SAMPLE

The population of this study is the whole group of students enrolled in the master's degree in secondary teacher training at the University of Córdoba (Spain) during 2014-2015 (44.6%) and 2015-2016 (55.4%) academic years. 94.1% of them have participated in this investigation, which means 361 students. They are between 20 and 25 years old (41.8%). In terms of gender, there is a slightly higher proportion of women (53.7%).

In order to describe the sample, participants have been gathered in four groups according to the areas of knowledge that also coincide with the different specialties of the master's degree, namely: Experimental Sciences (physics and chemistry, biology and geology, health science and sport); Instrumental Sciences (technology, design, computing and mathematics); Social Sciences (history, geography, business studies, tourism and counselling); and Humanities (foreign language, Spanish language and literature and Music) (Figure 1).

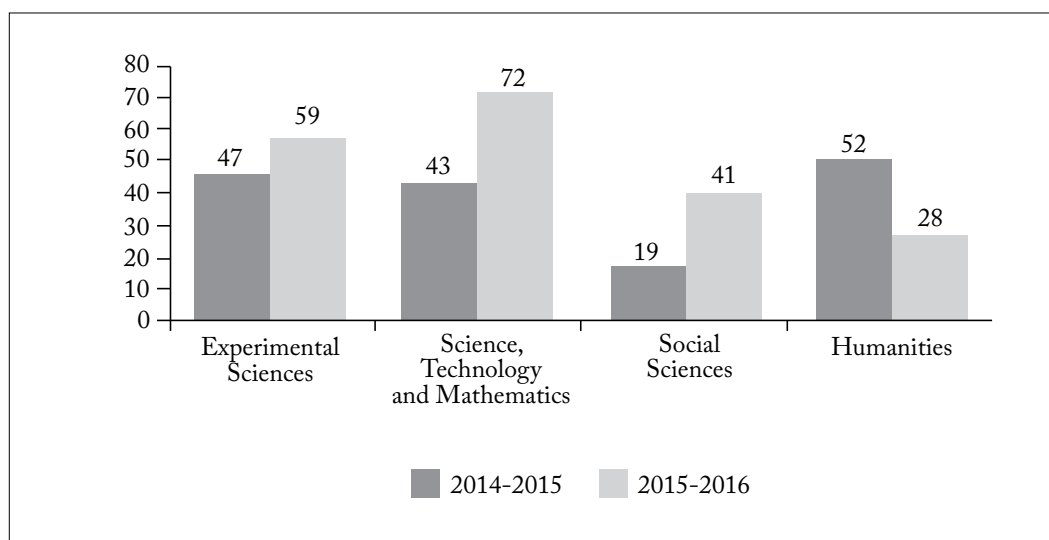


Figure 1 – Data sample distributed by area of knowledge and academic year.

Source: search database.

Authors' elaboration.

INSTRUMENT

A Likert-scale questionnaire was designed with a rating scale that includes five categories. The results of a previous qualitative research, based on open questions about teaching professionalism (Pontes, Serrano and Poyato, 2013), were taken into account to design this scale. The original questionnaire was validated through experts and a pilot study.

The questionnaire was made up of 17 variables, which distinguish between general data about the participants (age, gender and field of knowledge) and the other 14 variables, which aim to value to what extent students agree with different propositions regarding beliefs about the teaching profession.

The internal consistency of the instrument generates a Cronbach's alpha value of 0.806. A comparison of means among the groups of subjects corresponding to the different areas of knowledge (Kruskal-Wallis) was carried out. Firstly, this test was applied to the four groups without finding any significant difference. Then, the means were compared between the groups of students who belong to Experimental Sciences and Instrumental Sciences by using the Kolmogorov-Smirnov (K-S) and Mann-Whitney (M-W) tests. It did not show significant differences in the majority of the items either. Therefore, we included the participants of both groups in the macro-area of Science, Technology and Mathematics (STM). The same happened with Social Science and Humanities students so we put them together in the macro-area of Social Sciences and Humanities (SSH).

Then, a comparative study between STM and SSH sub-samples was carried out by applying the K-S test. Table 1 shows the inexistence of significant differences between STM and SSH sub-samples.

Table 1 – Mean values of items between Science, Technology and Mathematics and Social Sciences and Humanities groups.

	Variables						
S.T.	1	2	3	4	5	6	7
Z _(K-S)	.805	.456	.953	1.041	.422	1.566	.392
P	.535	.967	.324	.229	0.979	.014*	0.989
	Variables						
S.T.	8	9	10	11	12	13	14
Z _(K-S)	1.356	1.055	.552	.515	.390	1.689	.530
P	.059	.216	.921	.954	.998	.007**	.941

ST: Statistical Treatment; Z (K-S): Kolmogorov-Smirnov Z test.

Source: search database.

Authors' elaboration.

To know other characteristic of the instrument, a discriminant analysis was performed by classifying the subjects into three groups (one third for each group). The Kruskal-Wallis test shows significant differences between the subjects of the different levels. The ability to discriminate such subjects can be seen in Table 2. It shows the results derived from applying the K-S to the contrast of mean values of the items among the students at extreme levels I and III of this subscale, with

significant differences ($p^{**} < .001$) in all variables analysed. Therefore, we can consider that all items of the questionnaire have an adequate capacity for discrimination.

Table 2 – Mean values of items between level I and level III subjects.

	Variables						
S.T.	1	2	3	4	5	6	7
Z _(K-S)	3.586	3.912	3.017	3.199	2.630	3.475	3.276
P	.000	.000	.000	.000	.000	.000	.000
	Variables						
S.T.	8	9	10	11	12	13	14
Z _(K-S)	3.635	4.371	3.828	4.474	2.990	3.515	3.766
P	.000	.000	.000	.000	.000	.000	.000

ST: Statistical Treatment; Z (K-S): Kolmogorov-Smirnov Z test.
 Source: search database.
 Authors' elaboration.

DATA COLLECTION AND ANALYSIS

The data were collected at the beginning of the specific theoretical module of the master's degree, specifically in the subject of educational contexts and processes, which has a block that refers to teaching professionalism so it addresses contents regarding the teacher professional profile as well as the access to the teaching profession. Students answered voluntarily to the scale and were informed of the purpose of the study as well as the anonymity of their answers.

The data were coded as numerical data of an ordinal scale and we applied diverse statistical processing (frequencies, mean values, M-W and K-S tests, factorial analysis, relational analysis and cluster analysis). To do so, SPSS software package was used.

RESULTS

Results are presented according to this study's objectives. Moreover, it should be cleared up that after the previous statistical analyses (K-S and M-W), we have considered that all the subjects, regardless the area of knowledge in which they are enrolled in, are part of a representative sample of the population described above.

BELIEFS ON THE TEACHER PROFESSION

It is observed that there are some beliefs that are widely spread while others do not count with a high level of agreement (Table 3).

Table 3 – Results regarding the descriptive analysis about students' beliefs on the teaching profession.

Items	*Degree of agreement (%)					Level
	1	2	3	4	5	H,M,L
1. To be a teacher, what matters is to have a broad knowledge of the contents and teach them clearly	5.5	17.7	15.8	39.6	21.3	M
2. The teaching profession can be learned and improved with theoretical and practical training	1.9	3.3	10.5	39.9	44.3	H
3. Before being a teacher, it is necessary to acquire deep knowledge about psychology, pedagogy and didactics	4.7	11.4	16.3	38.0	29.6	H
4. Aspects such as authority and the ability to lead students cannot be acquired in a training course	14.1	26.6	10.8	26.9	21.6	L
5. The main goal of teacher education is to develop the ability to engage students in the learning process	0.8	9.1	19.7	46.0	24.4	H
6. Secondary education teacher is mainly a specialist in their subject and that training can only be acquired during their degree studies	20.5	27.4	12.7	28.8	10.5	L
7. To motivate students to learn is necessary to acquire some skills closely related to the teaching profession	2.8	10.8	16.6	41.0	28.8	H
8. The best teachers are people with the innate qualities to communicate and teach	11.1	30.2	12,5	32.7	13.6	L
9. Training must focus on learning how to plan lessons and master communication techniques in the classroom	7.8	24.1	15.8	37.1	15.2	M
10. Teacher training is only acquired through experience	12.2	22.4	15.0	32.4	18.0	L
11. Initial training should help teachers to develop a professional identity focused on educational problems	7.2	26.9	17.5	35.5	13.0	L
12. The main quality is the vocation but it is not acquired through pedagogical training courses	6.4	17.5	29.1	30.5	16.6	M
13. Currently, it is not easy to be a secondary education teacher, especially if you have not been trained before for this purpose	7.2	23.0	13.0	35.2	21.6	M
14. Any graduated student is able to acquire in a postgraduate course the necessary teacher training to properly carry out this task as well as the rest of functions required by the current secondary education trend	4.7	9.1	11.9	43.5	30.7	H

*Levels of agreement: 1 = Nothing; 2 = Little; 3 = Intermediate; 4 = Quite; 5 = Much.

Source: search database.

Authors' elaboration.

The response variable 4 is the one with the highest percentages compared with the other response variables. Minimum and maximum values range from 9% in item 4 on the acquisition of aspects such as authority or ability to lead and 46% in item 5 on the development of motivational techniques.

If we order these items in term of mean values, we can classify such ideas in three subcategories: beliefs with a low level of acceptance (L), with a medium level of acceptance (M) and with a high level of acceptance (H).

**RELATIONSHIP BETWEEN BELIEFS
ON THE TEACHING PROFESSION AND TEACHING MODELS**

First of all, an analysis of similarity coefficients and a partial correlation study among the variables, which aim to explore possible clusters of different ideas from the previous analyses, were carried out. We have found three sub-dimensions that gather ideas related to diverse teaching models described in the literature. Furthermore, we found a fourth sub-dimension, which includes more dispersed ideas that do not present any relation to these teaching models. Once the sub-dimensions were defined, a cluster analysis was performed to see whether there are groups of subjects that share or not such sets of ideas. In order to simplify the analysis, we grouped them by the extremes of the five response categories of the different items as follows: I = nothing or little agreement; II = intermediate agreement; III = quite or strongly agree.

Sub-dimension I: Transmissive Teaching Model (TrTM)

Table 4 shows the questionnaire’s items included in this sub-dimension (1, 6, 8 and 10) in descendent order according to the mean value of variable previously obtained.

The results show that two-fifths of the subjects that study this master’s degree seem to be largely identified with most of the ideas collected in the traditional teaching models.

Table 4 – Descriptive data and cluster analysis – Sub-dimension I (Transmissive Teaching Model) and Spearman’s Rho.

Grouped variables (TrTM)	I (Disagree)		II (Intermediate)		III (Agree)	
	Freq	%	Freq	%	Freq	%
1. To be a teacher, what matters is to have a broad knowledge of the contents and teach them clearly	84	23.3	57	15.8	220	60.9
10. Teacher training is only acquired through experience	125	34.6	54	15.0	182	50.4
8. The best teachers are people with the innate qualities to communicate and teach	149	41.3	45	12.5	167	46.3
6. Secondary education teacher is mainly a specialist in their subject and that training can only be acquired during their degree studies	173	47.9	46	12.7	142	39.3

Cluster Analysis in TrTM					
Cluster 1		Cluster 2		Cluster 3	
Freq	%	Freq	%	Freq	%
82	22.7	134	37.1	145	40.2

Spearman’s Rho				
	6	8	10	TrTM
1	0.154**	0.132*	0.108	0.471**
6		0.201**	0.203**	0.638**
8			0.170**	0.578**
10				0.580**

* p<0.05, ** p<0.01. Source: search database. Authors’ elaboration.

They consider it highly necessary to have a broad knowledge of the contents and to teach them clearly. They emphasise that the secondary education teacher is a specialist in their field. At the same time, they assume the need to acquire specific training for the practice of teaching, although they consider that training is acquired mainly through experience. On the other hand, we observe that a little less than a quarter of the students show little agreement with the ideas gathered in this model of teacher thought (cluster 1) and slightly more than a third of these subjects present a degree of intermediate agreement (cluster 2).

A correlation analysis between the variables grouped in this sub-dimension was performed and the global variable that binds them all (TrTM). The “Spearman’s Rho” correlation coefficients between these variables and the TrTM sub-dimension were obtained, finding high values (near or higher than 0.50) in the four cases and observing that such associations are quite significant ($p < 0.05$). Therefore, we can consider that the ideas grouped in this subscale show a moderate degree of internal consistency.

Sub-dimension II: Technical Teaching Model (TeTM)

The second sub-dimension grouped beliefs related to the Technical Teaching Model (TeTM) since they consider teacher education as a process, which mainly aims to acquire both theoretical and practical teaching techniques.

On the one hand, these results show that ideas related to TeTM are quite widespread. The majority of participants believe that the teaching profession can be learned and improved with theoretical and practical training, but they also consider that every graduated student can acquire the necessary teaching skills in the master’s degree.

On the other hand, slightly more than half of the surveyed students think that teacher training should focus on learning to plan teaching and mastering communication techniques in the classroom. Thus, they give great importance to the acquisition of technical skills. Cluster analysis shows that more than two-fifths of the students share all of these ideas with a high degree of agreement.

The results of the non-parametric correlation analysis between the variables grouped in this sub-dimension and the global variable that binds them all (TeTM), shows high values in the coefficients (higher than 0.57), and such associations are quite significant ($p < 0.05$) in all three cases. All in all, it leads us to consider that the ideas grouped in this sub-dimension have a high internal consistency level (Table 5).

Sub-dimension III: Student Centred Teaching Model (SCTM)

The third sub-dimension gathers beliefs with regards to a constructivist-teaching model that we have called Student Centred Teaching Model (SCTM). This model attributes importance to the development of professional identity and the need to acquire complete teaching training, which help to understand the psychological, pedagogical and didactic aspects linked to the learning process.

Table 5 – Descriptive data and cluster analysis – Sub-dimension II (Technical Teaching Model) and Spearman’s Rho.

Grouped variables (TeTM)	I (Disagree)		II (Intermediate)		III (Agree)	
	Freq	%	Freq	%	Freq	%
2. The teaching profession can be learned and improved with theoretical and practical training	19	5.3	38	10.5	304	84.2
14. Any graduated student is able to acquire in a postgraduate course the necessary teacher training to properly carry out this task as well as the rest of the functions required by the current secondary education trend	50	13.9	43	11.9	268	74.2
9. Training must focus on learning how to plan lessons and master communication techniques in the classroom	115	31.9	57	15.8	189	52.4

Cluster analysis in TeTM					
Cluster 1		Cluster 2		Cluster 3	
Freq	%	Freq	%	Freq	%
93	25.8	117	32.4	151	41.8

Spearman’s Rho			
	9	14	TeTM
2	0.176**	0.804**	0.567**
9		0.082	0.660**
14			0.571**

* p<0.05, ** p<0.01. Source: search database. Authors’ elaboration.

Every idea related to this SCTM are quite expanded. The majority of them consider that the main aims of teacher training are to develop the appropriate skills so as to engage students within the learning process and to acquire knowledge regarding psychology, pedagogy and didactic. Half of participants seem to identify themselves with this model, as seen in Table 6. About a quarter of surveyed students show an intermediate degree of identification (cluster 2), and the rest, which means another quarter, seem to disagree with the set of ideas gathered in cluster 1.

The results of non-parametric correlation analysis between the variables grouped in this sub-dimension (3,5,7 and 11) and the global variable that binds them all (SCTM) also show high values in “Spearman’s Rho” coefficients (higher than 0.58). Moreover, the associations are quite significant (p<0.01) in all four cases. Therefore, we can consider that the ideas grouped in this subscale have a high degree of internal consistency as a whole.

Table 6 – Descriptive data and cluster analysis – Sub-dimension III (Student Centred Teaching Model) and Spearman's Rho.

Grouped variables (SCTM)	I (Disagree)		II (Intermediate)		III (Agree)	
	Freq	%	Freq	%	Freq	%
5. The main goal of teacher education is to develop the ability to engage students in the learning process	36	10.0	71	19.7	254	70.4
7. To motivate students to learn is necessary to acquire some skills closely related to the teaching profession	49	13.6	60	16.6	252	69.8
3. Before being a teacher, it is necessary to acquire deep knowledge about psychology, pedagogy and didactics	58	16.1	59	16.3	244	67.6
11. Initial training should help teachers to develop a professional identity focused on educational problems	123	34.1	63	17.5	175	48.5

Cluster analysis in SCTM

Cluster 1		Cluster 2		Cluster 3	
Freq	%	Freq	%	Freq	%
91	25.2	89	24.7	181	50.1

Spearman's Rho

	5	7	11	SCTM
3	0.269**	0.389**	0.235**	0.609**
5		0.426**	0.184**	0.567**
7			0.187**	0.632**
11				0.664**

* p<0.05, ** p<0.01. Source: search database. Authors' elaboration.

Sub-dimension IV: Indefinite Student Teaching Model (ITM)

This last sub-dimension assembles beliefs that cannot be directly connected to any determine teaching model; therefore, they can be related to any teaching models explained before. Table 7 shows that more than half of the participants agree that nowadays being a teacher is not an easy task, especially if their degree qualification is not related to their field of knowledge (medicine, engineering, law, chemistry, history, etc.). Then, a similar proportion of subjects consider that the main quality has to do with vocation but it cannot be acquired through pedagogical training courses.

Table 7 – Descriptive data and cluster analysis – Sub-dimension IV (Indefinite Student Teaching Model) and Spearman’s Rho.

Grouped variables (ITM)	I (Disagree)		II (Intermediate)		III (Agree)	
	Freq	%	Freq	%	Freq	%
13. Currently, it is not easy to be a secondary education teacher, especially if you have not been trained before for this purpose	109	30.2	47	13.0	205	56.8
12. The main quality is the vocation but it is not acquired through pedagogical training courses	86	23.8	105	29.1	170	47.1
4. Aspects such as authority and the ability to lead students cannot be acquired in a training course	147	40.7	39	10.8	175	48.5

Cluster analysis in ITM

Cluster 1		Cluster 2		Cluster 3	
Freq	%	Freq	%	Freq	%
151	41.8	108	29.9	102	28.3

Spearman’s Rho

	12	13	ITM
4	0.181*	0.027	0.333**
12		0.002	0.273**
13			0.159*

* p<0.05, ** p<0.01. Source: search database. Authors’ elaboration.

There are other aspects, which are important for the teaching exercise such as the teacher’s authority or the ability to manage students’ work in the classroom. Around two fifth parts of the participants do not identify themselves with the ideas gathered within sub-dimension IV (cluster 1), but one third part does agree (cluster 3) and the rest are in an intermediate position (cluster 2). It is, therefore, a set of interesting but heterogeneous and dispersed ideas.

Finally, the results of non-parametric correlation analysis between variables in this sub-dimension and the global variable which bind all together (ITM), show moderate values in “Spearman’s Rho” coefficient (higher than 0.44) and the associate ones are significant in the three cases (p<0.05). Thus, we can consider that those grouped in this sub-dimension count with a satisfactory consistency level.

DISCUSSION AND CONCLUSIONS

This study has analysed pre-service secondary education teachers' beliefs regarding the teaching profession as well as the possible connections between diverse teaching models and these thoughts. It should be highlighted that there are three teaching models that gather most of the participants' beliefs, namely TrTM, TeTM and SCTM. However, there are three ideas that do not directly fit with any model.

In regard with the first objective of our study, we observe that students enrolled in the master's degree in secondary teacher training show an interest in the different aspects that the teaching profession entails. More specifically, the participants value the need to acquire a didactic and psycho-pedagogical training, which complements the disciplinary instruction. They give special importance to a methodological training, which provides them with competences to foster students' interest and motivation in the classroom (Prats, 2016; Recchia and Puig, 2011), design appropriate teaching materials, encourage classroom coexistence, improve the teacher communicative process and learn to work in teams (Reoyo *et al.*, 2012; Valdés and Bolívar, 2014).

The interest in acquiring an adequate teacher training contrasts with the results of previous studies that point out the existence of the formative deficiencies among future secondary education teachers (Serrano and Pontes, 2015; Solís *et al.*, 2013). These authors compare pre-service teachers' beliefs at the beginning of the teacher training program and at the end, observing few differences. Moreover, they appreciate that they point out the need to rethink this training. Other authors relate these needs to the persistence and resistance to changes in traditional beliefs about the teaching of future teachers, highlighting the need to promote appropriate interventions during initial training so that their beliefs about the teaching profession can change and evolve (Porlán and Martín, 2004). Moreover, these required changes might also motivate future Secondary teachers implementing innovative teaching methods in their daily practise (Lorenzo Vicente, Muñoz Galiano and Beas Miranda, 2015).

In this study, some of the most widespread beliefs about the teaching profession are related to some teaching models, such as the teaching-learning model based on the transmission and reception of knowledge (Fuentes, García and Martínez, 2009; Prats, 2016; Recchia and Puig, 2011). This relationship is revealed, in this study, through the importance that participants give to academic knowledge grounding that the teacher must have and the need to be a specialist in their subject as well as the communicative skills so as to properly teach every content (Recchia and Puig, 2011).

Furthermore, the Technical Model is also quite widespread among their conceptions. This model concedes more importance to disciplinary training, communication techniques and teacher practice to the detriment of the more strictly psycho-pedagogical formation. Therefore, we can conclude that a perceptible part of the participants considers that to be in secondary education, it is necessary to combine both theoretical (academic knowledge) and practical training (communication techniques and strategies).

However, we observe that one of the most widespread beliefs are linked to the SCTM, which focuses on the importance of methodological skills in order to organise classroom work and encourage the interest of secondary education students in the learning process (Ramírez, Cañedo and Clemente, 2012). It is relevant that despite the fact that participants show persistence to traditional education approaches, they are also theoretically identified with the beliefs related to SCTM, at least, along their initial training (Pontes, Serrano and Poyato, 2013). The existence of such beliefs can be taken as the starting point to build adequate professional knowledge, from the reflection on the teaching practice and the search for solutions to the problems of teaching and learning processes (Jones and Saye, 2018; Manso and Martín, 2014; Pro, Valcárcel and Blanco, 2005; Reoyo *et al.*, 2012), adapted to the different educational contexts (Henley, 2014; Valdés and Bolívar, 2014).

On the one hand, teaching models that describe pre-service teacher in their initial training do not correspond with rigid conceptual schemes due to the fact that a student can simultaneously maintain beliefs related to relatively different models (Hernández and Maquilón, 2010). Consequently, these initial thoughts can be modified according to the teaching strategies used by teacher educators as well as the activities proposed in the classroom such as reflexive activities and critical-thinking activities that engage pre-service teachers and enhance debates about the teaching profession (Rodríguez-Arteche and Martínez-Aznar, 2018). On the other hand, there is always a margin of ambiguity when it comes to making explicit the initial teaching thinking, especially if open questions are used (Serrano, 2013), so that it will not always be possible to characterize the cognitive beliefs of secondary education pre-service teachers in terms of closed and inflexible teaching models, which may explain the existence of undefined or ambivalent beliefs, such as the fourth model of this study (ITM). Although the beliefs included within ITM show a certain degree of internal relationship, they do not point to any defined teaching model in literature but rather an absence of well-defined educational approaches.

In this sense, we can conclude that beliefs regarding teaching models evolve through teacher training and experience (Mellado, Blanco and Ruiz, 1999) so it gives greater value to this study since one must always start from the initial knowledge to develop adequate teacher training curriculum that favour the exchange of ideas and the professional development as teachers (Rodríguez-Arteche and Martínez-Aznar, 2018).

Finally, these results could positively contribute to the transformative and adaptation process of education to new social demands and EHEA for the reason that it enables knowing in detail not only pre-service teachers' beliefs but also these thoughts can be related to the teaching methods, which, they could use in the near future. This way, through an effective training programme, these beliefs should be modified so they are more competent to carry out their profession. In this sense, the purpose of this study is to know better pre-service teachers' beliefs so as to introduce concrete changes in the teacher training curriculum that favour the development of a desirable professional thinking (Porlán and Martín, 2004) and adequate teaching competences (Perales *et al.*, 2014).

As has been shown, the information provided by the groups of participants may, therefore, be of great use when defining and designing proposals for new degrees. This information is also fundamental for the system to guarantee the quality of the educational programmes at different levels. The participants' opinions could assist in the continual improvement of the setting up of teaching and the reformulation of new objectives. Finally, the results presented in this paper belong to a wider research project which aims to help future secondary education teachers to explicit and discuss their conceptions and attitudes in the classroom related to aspects that may be useful to reflect on education and teaching activities during the initial teacher training process.

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4.3. ESTUDIO 1.2. CREENCIAS DOCENTES Y DESARROLLO DE LA IDENTIDAD PROFESIONAL EN LA FORMACIÓN INICIAL DEL PROFESORADO DE SECUNDARIA

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Este estudio tiene como objetivo general conocer las creencias del alumnado del MAES sobre las necesidades formativas para ejercer la docencia y cómo se relaciona tales aspectos con la construcción de la IPD.

Educational beliefs and the development of professional identity during secondary teachers' initial training

Creencias docentes y desarrollo de la identidad profesional en la formación inicial del profesorado de secundaria

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ABSTRACT:

The development of a Teacher's Professional Identity (TPI) is fundamental along student teachers' initial training that is influenced by the conceptions of those who aspire to be part of that profession. This study explores the beliefs of Secondary Education Teaching Master's degree students as regards the training they receive and the construction of their TPIs. The aspects that attract most interest are related to the curriculum, along with the capacity to motivate pupils and resolve conflicts in the classroom.

Keywords: Initial training; secondary education; educational beliefs; professional identity.

RESUMEN:

El desarrollo de la Identidad Profesional Docente es un pilar fundamental en el proceso de formación inicial del profesorado que se ve influenciado por las concepciones de quienes aspiran a tal profesión. Este estudio indaga las creencias del alumnado del Máster de Formación del Profesorado de Educación Secundaria sobre la formación que reciben y la construcción de la IPD. Los aspectos que suscitan mayor interés son las creencias curriculares, la capacidad por motivar al alumnado y resolver conflictos de aula.

Palabras clave: formación inicial; educación secundaria; creencias docentes; identidad profesional

1. Introduction

One of the principal challenges confronted by those who currently undertake Initial Secondary Education Teacher Training (ISETT) lies in ensuring that the academic programmes designed for them will prepare them for a continuously evolving educational reality (EURYDICE, 2013; OCDE, 2015). However, literature shows that teacher-training programmes do not always satisfy their students' expectations as regards their development

as educators (Murray, 2010; Hobson & Ashby, 2012; Cameron & Grant, 2017).

The professional profile of a Secondary Education Teacher has given rise to debates regarding the competencies that these professionals should acquire and develop during their period of training, along with the need to orientate this training towards the construction of a Teacher's Professional Identity (TPI) such that, after completing their initial training, they will identify more with and feel more committed to their profession (Manso Ayuso & Martín Ortega, 2014). According to Beijard, Meijer y Verloop (2004), it is, to a great extent, during ISETT that future educators forge their TPI, although it will continue to evolve throughout their professional career, in accordance with their beliefs, their teaching-learning contexts and the previous experiences that they have acquired (Boulton, 2014; Lorenzo Vicente, Muñoz Galiano & Beas Miranda, 2015).

In this respect, initial training models should place special emphasis on the professional identities of the teachers themselves, i.e. "specify which roles professionals are going to play as teachers and what can be realistic objectives in their daily work...and teachers should, moreover, provide a profile of their own styles that is appropriate for their personalities and their own ideas regarding teaching (Esteve, 2009, p. 20). If this does not occur, then teachers may fail professionally at an early stage that could directly affect the quality and excellence of their teaching and, as a consequence, the results of their pupils at that educational level (Hong, 2010). It is for this reason that Lenuta, Tomsa, Rebeaga and Apostol (2013) state that a teacher's initial training has a considerable effect on the construction of his or her TPI. There is obviously a strong relationship between people's educational beliefs before working in the profession and the effect that learning has on the way in which they develop their identities as teachers (Stenberg, Karlsson, Pitkaniemi & Maaranen, 2014). Swennen, Jones & Volman (2010) and Izadinia (2014) agree that the TPI is a social construct that is modelled by means of one's own educational experiences, the social vision shared by the profession and the initial training received. Olsen (2008) is of the opinion that a continually developing TPI is a conglomeration of the individual's prior points of view together with the integration of new knowledge and beliefs. Vloet and Van Swet (2010) similarly state that in a good training centre we should not forget the construction of the TPI owing to the significant impact that it will have on the quality of future teachers. We should, therefore, be conscious of the mark that initial training programmes and educational beliefs leave as regards not only the acquisition of contents, but also the construction of future teachers' TPIs.

1.1. Educational beliefs and the construction of the TPI

Teachers' educational beliefs are of great interest and are a supportive strategic framework for the continuous organisational and curricular changes that take place (Azcarate & Cuesta, 2012). Numerous studies showing the importance of knowing the professional aspects that concern trainee teachers at different stages have been carried out on this subject with the intention of improving these teachers' preparation (Soininen, Merisou & Korhonen, 2013).

In the context of the professional teacher, the term 'identity' refers to all those characteristics that converge to enable a professional to be produced (Salazar Noguera & McCluskey, 2017). Bearing the various educational beliefs in mind, Beijard, Verloop and Vermont (2000) define three main types of TPIs: the expert in material, the expert in didactics and the expert in pedagogy. The first of these is related to a more traditional concept of the educational function in which the teacher merely transmits contents in which s/he has a high level of expertise. The expert in didactics focuses on those types of teaching that are more instrumental and places special emphasis on the development and learning of the various learning models. This type of TPI is influenced by the teachers' perceptions of each approach and their feeling of responsibility and autonomy as regards putting them into practice. The last type of TPI is related to the fact that teaching cannot be simply reduced to a technical or instrumental action resulting in the students learning, but rather the need to evaluate the didactic side of the profession and ensure that it is related to the pedagogic side, with ethical and moral characteristics. With regard to this idea, in the research developed by Cantón, Cañón, Arias y Baelo (2015) concerning Trainee Secondary Education

Master's degree students' expectations as regards the construction of their TPIs, the majority of future teachers were of the opinion that their educational training should principally be focused on keeping them academically up to date as regards the teaching of the discipline itself (Martínez & Villardón, 2015), and that general pedagogic preparation was of less importance.

Izadina (2016) is, however, of the opinion that the construction of secondary teachers' TPI is determined by beliefs that manifest themselves in aspects such as: an interest in education; their perception of the development of educational competencies; their view of secondary education; the teachers' professional problems; the role played by motivation in professional development; how the learning process is interpreted; their evaluation of learning and the initiation of educative research, etc. As Williams (2010) points out, it is, therefore, necessary to know the future teachers' positions in these respects in order to be able to establish training programmes that will coincide with their demands, and these programmes will contribute to the reflexive construction of their TPIs. Chong, Ling and Chuan (2011) similarly maintain that, while the research-based discussion on TPI has focused on the beginnings of teachers' professional careers and on their progress during the course of those careers, little research has been carried out into this subject during the first years of initial teacher training, and even less so as regards the changes in depth and content that occur in student teachers' educational identities between starting and finishing their initial training programmes (Lorenzo Vicente, Muñoz Galiano & Beas Miranda, 2015; Martínez & Villardón, 2015). It is important to establish an initial understanding of future teachers' beliefs as regards teaching while they are undergoing their initial training and this is a fundamental principle if ISETT is to be improved (Chong & Low, 2009). Zivkovic (2016) likewise emphasises that the role played by teachers as regards concepts such as reflexion and self-evaluation is a significant factor in the formation of their TPIs.

It has, therefore, been recognised that educational beliefs as a part of the construction of the TPI play a significant role in the teacher's development (Atkinson, 2004; Trent, 2011) and suppose new challenges that will oblige initial training to be improved with regard to those aspects commented upon previously.

Studies on the TPI are, effectively, a fundamental aspect for ISETT, not only because it represents a training space in which students will develop into future professionals, but also because it is here that those identifying characteristics that will, in the near future, define them as teaching professionals will be constructed and reconstructed. This research is similarly oriented towards discovering the educational beliefs of trainee teachers, thus enabling us to focus on their own perceptions in order to understand their feelings towards the profession and the components that are linked to working in this profession, thereby allowing us to contribute towards improving ISETT.

2. Methodology

2.1. Objectives of the study

The general objective of this research was to discover ISETT Master's degree students' beliefs during their initial training process as regards what type of education they believe is required to enable them to practise their profession. Our specific objectives were the following:

- To identify the aspects of initial teacher training that most ISETT Master's degree students believe they should be taught.
- To discover the relationship among the various educational beliefs and the creation of the TPI.

2.2. Population and sample

The population being studied corresponded with the group of students enrolled on the ISETT Master's degree at the University of Cordoba in the academic years 2014-2015 (44.6%) and

2015-2016 (55.4%), comprising 361 students (94.1%). The majority of the students are between 20 and 25 years of age (41.8%), followed by a group of students of between 26 and 30 (34.6%) and, finally, those aged 30 and over (23.5%). With regard to gender, there is a slightly higher proportion of women (53.7%). In the case of knowledge areas, the sample was grouped in four macro-areas of knowledge: Experimental Sciences (Physics and Chemistry, Biology and Geology, Health and Sport Sciences) (31.5%), Instrumental Sciences (Technical Drawing, Computer Science and Mathematics) (30%), Social Sciences (History-Geography, Economics-Business Studies, Tourism, Work Training and Orientation, Educative Orientation) (20.4%) and Humanities (Foreign Languages, Spanish Language and Literature, Music) (18.1%).

2.3. Instrument

We created an ad hoc Likert-type questionnaire based on the theoretical antecedents focused on educational beliefs and their link to the construction of the TPI, with a five-point evaluation scale (Completely disagree, Disagree, Neither agree nor disagree, Agree and Completely agree). An inter-rater validation system comprising four experts (professors and professor-doctors from the University of Cordoba) was used to eliminate those questions that – on a Likert-type scale – obtained values of below four as regards the clarity and importance of the item. The questionnaire was tested on small sample of subjects (12), after which we verified its content and established the definitive instrument.

The final questionnaire was composed of 26 variables and divided into two sections. Section A concerned general data relating to the students (age, gender and Master’s degree specialist subject). Section B contained 23 propositions related to the ISETT Master’s degree students’ educational beliefs. The reliability of the questionnaire obtained a Cronbach’s alpha value of 0.909.

Furthermore, in order to verify whether the questionnaire provided similar results for different subsamples of the same population, we carried out a study in which we compared the means among the groups of subjects corresponding to the various knowledge areas (Kruskall-Wallis). Since we were unable to find any significant differences among the four groups, we used the K-S and M-W tests to check the mean values of these items between the students from the Experimental Sciences (SE) macro-area and those from the Technology and Instrumental (TAI) macro-area, and did not observe any significant differences. We, therefore, placed the subjects from both groups in the subsample of the Science, Technology and Mathematics (STM) macro-area. The same occurred with the groups of students from the Social Sciences (SS) area and the Humanities (HUM) area, and the subjects from both groups were consequently placed in the subsample of the Social Sciences and Humanities (SSH) macro-area.

A comparative study of the STM and SSH subsamples, during which the Kolmogorov-Smirnov (K-S) Z test was again applied to contrast the mean values of the items in this section of the questionnaire, is shown below. The Z values obtained after carrying out the K-S test are shown in Table 1. Note that there are no significant differences between the science (STM) and Arts (SSH) subsamples.

Table 1
Contrast of mean values obtained for STM and SSH groups

Variables	1	2	3	4	5	6	7	8
Z (K-S)	0.763	1.066	0.558	0.782	0.940	0.663	1.035	0.258
p	0.606	0.206	0.914	0.573	0.340	0.771	0.234	0.954
Variables	9	10	11	12	13	14	15	16
Z (K-S)	0.364	0.921	0.495	0.409	1.232	0.389	0.746	1.103

p	0.999	0.364	0.967	0.996	0.096	0.998	0.634	0.175
Variables	17	18	19	20	21	22	23	
Z (K-S)	0.953	1.015	0.584	1.354	1.216	1.007	1.277	
p	0.324	0.254	0.884	0.051	0.104	0.263	0.076	

The validity of the research instrument was analysed by carrying out a discriminant analysis of the various items in it. The subjects were classified in three groups containing similar numbers (a third in each group). The Kruskal-Wallis test, which was applied to the mean values of the variables contained in Section C of the questionnaire, showed the existence of significant differences among the subjects in the different levels.

The capacity to distinguish among these subjects can be appreciated in the data shown in Table 2, which illustrates that there are significant differences among the results obtained after applying the Kolmogorov-Smirnov (K-S) Z test to the contrast of the mean values of the items in Section C of the students in the opposing levels I and III of that sub-dimension ($p^{**} < 0.001$) in the case of all the variables analysed. It is, therefore, possible to consider that all the items included in the Section C of the questionnaire have a high level of discrimination.

Table 2
Contrast of means obtained for subjects from levels I and III

Variables	C1	C2	C3	C4	C5	C6	C7	C8
Z (K-S)	4.632	4.440	3.829	3.986	4.586	5.517	5.186	5.650
p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Variables	C9	C10	C11	C12	C13	C14	C15	C16
Z (K-S)	3.983	4.595	4.707	4.469	5.418	4.381	4.330	4.924
p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Variables	C17	C18	C19	C20	C21	C22	C23	
Z (K-S)	4.648	4.913	4.257	5.111	4.913	4.134	4.968	
p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

2.4. Data collection and analysis procedure

The data were collected at the beginning of the specific module of each of the ISETT Master's degree knowledge areas. These data have been codified as numerical data on an ordinal scale and various statistical treatments have been applied to them (frequencies and mean values, Mann-Witney and Kolmogorov-Smirnov tests, factorial analyses, relational analyses and cluster analyses).

3. Results

After carrying out the aforementioned analyses (K-S and M-W) we considered that all of the

subjects from the different specialties formed part of the representative sample of the population of ISETT Master's degree students at the UCO.

3.1. Educational aspects in greatest demand by ISETT Master's degree students

We carried out a relative frequency study (%) of the data provided by the 23 variables in the questionnaire (Table 3). We also carried out a complementary descriptive study of these variables (Table4). Upon grouping together those responses that had a significant level of agreement, adding up the percentages for levels 4 (agree) and 5 (completely agree), it is possible to consider the three different typologies in order to classify those aspects that are more or less in great demand at an educational level, bearing in mind the following criteria: (A) when more than 80% of the participants are in favour, (B) when between 80% and 60% of the participants are in favour and (C) when between 60% and 40% of the participants are in favour.

Table 3
Results of relative frequency analysis regarding educational requirements

<i>Variables - items</i> (categories à A B C)	<i>*Degree of Agreement Level (%)</i>				
	1	2	3	4	5
1. Organisation and structure of education system (C)	7.5	19.1	19.7	36.8	16.9
2. Functioning of a secondary education centre (C)	3.6	18.0	20.2	36.0	22.2
3. Educational Regulations and legislation (C)	11.1	23.5	18.8	36.0	10.5
4. Educational programming and design of curriculum (B)	3.0	12.2	13.6	39.9	31.3
5. Oral communication techniques and resources (B)	3.9	8.0	11.9	38.2	38.0
6. Teaching methodology and strategies (A)	0.0	5.0	9.7	38.8	46.5
7. Design of learning activities (A)	0.0	7.5	10.2	37.7	44.6
8. Pupil motivation techniques (A)	1.9	2.5	7.2	38.2	50.1
9. Educative applications of new technologies (B)	2.5	10.0	15.8	42.7	29.1
10. Didactic use of conceptual schemas and maps (B)	2.5	14.1	17.5	41.8	24.1
11. Evaluation techniques and instruments (B)	0.0	19.9	17.7	42.9	19.4
12. Creation of didactic units (A)	0.0	7.8	11.6	40.7	39.9
13. Characteristics of learning processes (C)	3.9	22.2	15.2	38.8	19.9
14. Pupils' cognitive and intellectual development (B)	4.2	16.3	18.8	42.1	19.1
15. Psychology for adolescents (B)	2.2	15.5	15.2	39.6	27.4

16. Attention to diversity and special needs (B)	1.9	12.7	17.5	43.2	24.7
17. Pedagogy for coexistence in the classroom and centre (B)	1.1	12.7	14.4	42.1	29.6
18. Educative orientation and tutorial action (B)	3.0	17.2	15.5	40.4	23.8
19. Group dynamics techniques (B)	2.8	14.4	15.5	37.4	29.9
20. Conflict resolution techniques (B)	0.0	11.1	13.0	41.0	34.9
21. Development of academic authority (B)	3.9	15.8	16.9	40.7	22.7
22. Overcoming professionally stressful situations (B)	3.6	12.2	21.9	35.5	26.9
23. Transversal education themes: health and development, education about the Environment (C)	4.4	21.3	16.6	32.7	24.9
*Degree of agreement levels: 1 = Completely disagree, 2 = Disagree, 3= Neither agree nor disagree, 4 = Agree, 5 = Completely agree					

Table 4
Other results derived from descriptive analysis

Variables->	1	2	3	4	5	6	7	8
Mean	3.37	3.55	3.11	3.84	4.01	4.27	4.19	4.32
Typ. Dev.	1.185	1.127	1.205	1.090	1.083	0.832	0.901	0.864
Variance	1.405	1.270	1.451	1.189	1.172	0.691	0.812	0.746
Variables->	9	10	11	12	13	14	15	16
Mean	3.85	3.71	3.62	4.13	3.49	3.62	4.13	3.49
Typ. Dev.	1.027	1.060	1.013	0.901	1.153	1.013	0.901	1.153
Variance	1.055	1.123	1.026	0.811	1.328	1.026	0.811	1.328
Variables->	17	18	19	20	21	22	23	
Media	3.87	3.65	3.77	4.00	3.63	3.70	3.52	
Typ. Dev.	1.017	1.111	1.110	0.962	1.114	1.101	1.202	
Variance	1.034	1.234	1.232	0.925	1.240	1.211	1.445	

The data regarding global percentages and the mean values of the items shown in Tables 3 and 4 makes it possible to deduce that the majority of the aspects included in the this study correspond with themes that are of great interest to trainee secondary school teachers

during their initial training, with high favourable global percentages. Upon considering the classification shown above, the educational beliefs that attract most attention (over 80% of the subjects were in agreement) are related to training in curricular planning, with particular emphasis on methodological aspects and the teacher's capacity to motivate the pupils and resolve conflicts in the classroom.

In the second category of educational beliefs (in which between 60% and 80% of the subjects were in agreement) the students believed that they would benefit from training in pedagogy and psychology, varying among the programming of teaching and the use of different resources, and the acquisition of skills in order to manage work in the classroom with the pupils (group dynamics), attention to diversity, orientation, and assessing special education needs.

Finally, the last category contains aspects that are of less interest than those mentioned above (between 40% and 60% of the subjects were in agreement), and here the students believed that training in development psychology and learning, in addition to aspects related to the organisation and functioning of the education system and legislation would be beneficial.

3.2. Relation among the various educational beliefs

The table above, which contains educational beliefs that have been classified according to the relative degree of interest in them, shows that each level includes needs of a different nature. We have, therefore, used other alternative statistical analyses (similarity, correlation and conglomeration studies) with the objective of finding other criteria regarding the grouping of the variables that will allow us to interpret them in a more appropriate manner. The 23 items analysed in this study comprise educational beliefs that are very close to the sphere of educational psychology and of pedagogic and didactic aspects. We have, therefore, first carried out a multi-dimensional scaling study of the 13 variables related to the field of pedagogy or general didactics, and we have also carried out a similar analysis of the other 10 variables related to the domain of educational psychology. The first analysis allowed us to distinguish 3 groups of variables related to formative aspects of the pedagogy domain and general didactics (GEA, GD and MR) and the two groups or sets of variables related to the aspects in the sphere educational psychology and classroom management (EPs and CM).

The descriptive analysis of these sub-dimensions was carried out by grouping the five response categories for the different items into three more extreme categories, for which the following levels were defined: I = Completely disagree; II = Intermediate agreement; III = Completely agree. Once these sub-dimensions had been defined, we carried out a cluster analysis in order to discover whether or not there were groupings of subjects in the sample who collectively shared these opinions.

3.2.1. Educational Beliefs regarding pedagogy and general didactics

- *General Educational Aspects (GEA)*

The first nucleus groups together the General Educational Aspects (GEA). Table 5 shows the items included from the questionnaire (2, 23, 1 and 3) and ordered in descending value of the mean values obtained for each variable in the descriptive analysis described above and the relative frequencies of those in favour of each idea. The lower part of this table shows the results obtained after carrying out the cluster analysis, in which the global opinions of the ISETT Master's degree students are grouped together in three groups according to the highest or lowest percentage of subjects who shared the opinions contained in this sub-dimension.

The results shown in the upper part of Table 5 indicate that the educational beliefs grouped together in the GEA sub-dimension are of moderate interest to the ISETT Master's degree students. There is more interest in the themes related to the functioning of the secondary centre, transversal educational and knowledge of the education system, while there is less interest in themes related to knowledge of educational regulations and legislation

The cluster analysis indicates that a third of the students coincide as regards their high

evaluation of these aspects (cluster 3), while a fifth of them do not coincide in their opinions concerning these themes (cluster1). The remaining subjects (almost half of the sample) have an intermediate degree of interest in the set of ideas contained in this nucleus (cluster 2).

Table 5
Descriptive data concerning GEA sub-dimension

Grouped Variables	I (disagree)		II (intermed.)		III (agree)	
	<i>Frequ.</i>	%	<i>Frequ.</i>	%	<i>Frequ.</i>	%
Items (Mean)						
2. Functioning of a secondary education centre (3.35)	78	21.6	73	20.2	210	58.2
23. Transversal education themes: health and development, education about the Environment,... (3.52)	93	25.8	60	16.6	208	57.6
1. Organisation and structure of education system (3.37)	96	26.6	71	19.7	194	53.7
3. Educational regulations and legislation (3.11)	125	34.6	68	18.8	168	46.5
Groupings for cluster analysis in GEA sub-dimension						
Group 1		Group 2		Group 3		
<i>Frequency</i>	%	<i>Frequency</i>	%	<i>Frequency</i>	%	
72	19.9	168	46.5	121	33.5	

The result of the correlation analysis (Spearman's Rho) reveals high levels of association and all the correlations are significant (to the level of $p < 0'01$). We, therefore, consider that the ideas grouped together in this sub-dimension have a notable degree of internal consistency.

- *Diverse aspects of General Didactics*

This sub-dimension contains the educational beliefs related to pedagogic training based on the General Didactics (GD) domain, such as the programming of teaching, the development of the curriculum, the design of didactic units, communication when teaching, and evaluation. Table 6 shows, ordered in decreasing order of importance, the items from the questionnaire included in this sub-dimension (4, 12, 5 and 11) and the descriptive data corresponding to the frequencies grouped as explained above, along with the results obtained from the cluster analysis.

The results show that the subjects surveyed place great importance upon being trained in aspects of a generally pedagogic nature, such as the creation of didactic units (over 4/5 of the sample, learning oral communication techniques (over 3/4 of the sample) and the programming of teaching (over 7/10). There was also an interest in learning to use techniques and designing evaluation instruments (over 3/5).

Note that over 2/5 of the students surveyed were in global agreement as regards the set of ideas grouped in the GD sub-dimension (cluster 3), and that a similar proportion of subjects partially agreed (cluster 2), while the remaining subjects (1/6 of the set) agreed with the ideas contained in this sub-dimension to a low extent (cluster 1).

The results of the correlation analysis showed that the associations among these variables are high and significant (to the level of $p < 0.01$) in all cases, such that the ideas grouped in this sub-dimension have a high degree of interdependence and internal consistency.

Table 6
Descriptive Data for GD sub-dimension

Grouped variables Items (Mean)	I (disagree)		II (intermed.)		III (agree)	
	<i>Frequ.</i>	<i>%</i>	<i>Frequ.</i>	<i>%</i>	<i>Frequ.</i>	<i>%</i>
12. Creation of didactic units (4.13)	28	7.8	42	11.6	291	80.6
5. Oral communication techniques (4.01)	42	11.6	44	12.2	275	76.2
4. Educative programming and design of curriculum (3.84)	55	15.2	49	13.6	257	71.2
11. Evaluation techniques and instruments (3.62)	72	19.9	64	17.7	225	62.3
Groupings for cluster analysis in GD sub-dimension						
Group 1		Group 2		Group 3		
<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>	
60	16.6	150	41.5	151	41.8	

- *Methodology and Resources (MR)*

The third sub-dimension contains aspects related to pedagogic or general didactic training, but concerns aspects closely related to the teaching methodology and the use of teaching resources, and particular interest was shown in developing active teaching and fomenting the pupil's interest.

The descriptive data and the results obtained from the cluster analysis are shown in Table 7.

Table 7
Descriptive data for the MR sub-dimension

Grouped variables Items (Mean)	I (disagree)		II (intermed.)		III (agree)	
	<i>Frequ.</i>	<i>%</i>	<i>Frequ.</i>	<i>%</i>	<i>Frequ.</i>	<i>%</i>
8. Pupil motivation techniques (4.32)	16	4.4	26	7.2	319	88.4
6. Teaching methodology and strategies (4.27)	18	5.0	35	9.7	308	85.3
7. Design of learning activities (4.19)	27	7.5	37	10.2	297	82.3
9. Educative applications of new technologies (3.85)	45	12.5	57	15.8	259	71.7
10. Didactic use of conceptual schemas and maps (3.71)	60	16.6	63	17.5	238	65.9
Groupings for cluster analysis in MR sub-dimension						
Group 1		Group 2		Group 3		
<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>	
31	8.5	139	38.5	191	52.9	

These results reflect a great interest in all the items from the questionnaire that are grouped together in this sub-dimension. Over 80% of the ISETT Master's degree students showed an interest in learning to use educative techniques that favour the motivation of secondary

school pupils (almost 9/10), discovering new teaching methods and strategies (almost 5/6) and learning to design learning activities (over 4/5). Of the strategies and resources of interest for the future secondary school teachers' initial training, we can highlight the educative applications of new information and communication technologies (almost 3/4) and the didactic use of knowledge representation techniques, such as conceptual maps and cognitive schemas (almost 2/3).

The cluster analysis denotes a higher broad consensus of agreement as regards all the ideas grouped in this sub-dimension, since more than half the subjects are in cluster 3 and less than 10% are in cluster 1, while the remainder (over 1/3) are in an intermediate position. This result coincides with the data derived from the correlation analysis, since the Spearman's Rho coefficients obtained are fairly high and all the associations are very significant (to the level of $p < 0.01$). The ideas grouped together in this sub-dimension, therefore, have quite a high degree of internal consistency.

3.2.2. Educational beliefs regarding Educational Psychology

- *Educational beliefs regarding Educational Psychology*

This sub-dimension contains the various beliefs related to Educational Psychology (EPs): intellectual development, adolescence, the learning process, educational orientation and tutorial action. Table 8 shows the items from the questionnaire included in this sub-dimension (15, 18, 14 and 13), ordered according to their average values, along with the descriptive data of these variables corresponding to the grouping of frequencies in three levels (I, II and III). It also includes the results derived from the cluster analysis after grouping the Master's degree students' global opinions according to the highest and lowest percentages of subjects who shared opinions.

Table 8
Descriptive data for the EPs sub-dimension

Grouped variables	I (disagree)		II (intermed.)		III (agree)	
	<i>Frequ.</i>	%	<i>Frequ.</i>	%	<i>Frequ.</i>	%
C15. Psychology for adolescents (3.75)	64	17.7	55	15.2	242	67.0
C18. Educative orientation and tutorial action (3.65)	73	20.2	56	15.5	232	64.3
C14. Cognitive and intellectual development of pupils (3.56)	74	20.5	66	18.3	221	61.2
C13. Characteristics of learning processes (3.49)	94	26.0	55	15.2	212	58.7
Groupings for cluster analysis in EPs sub-dimension						
Group 1		Group 2		Group 3		
<i>Frequency</i>	%	<i>Frequency</i>	%	<i>Frequency</i>	%	
67	18.6	153	42.4	141	39.1	

These results reflect that the trainee teachers have a great deal of interest in these themes, although the values obtained are not as high as those in the previous sub-dimension (methodology and resources). More specifically, there is a moderately high interest (between 2/3 and 2/5 of the subjects surveyed) in attaining knowledge related to the psychology of adolescents (over 2/3), educational orientation and tutorial action (almost 2/3), secondary

pupils' intellectual development (over 3/5) and understanding the nature of the learning process (almost 3/5).

The cluster analysis indicates that two fifths of the subjects agree to a great extent with the set of ideas grouped in EPs (cluster 3), over two fifths of the sample partially agree with them (conglomeration 2) and a little less than a fifth of the ISETT Master's degree students do not agree with the ideas in this sub-dimension to any great extent (cluster 1).

- *Classroom management*

This concerns aspects related to the themes of educational psychology that have a particular relationship with classroom management (CM) and the educational competencies or personal qualities that a teacher should have in order to favour coexistence and respect, organise a good working environment in the class, foment teamwork, resolve possible conflicts and overcome stressful situations that may occur in the classroom (Table 9).

The results shown in the upper part of Table 9 show that the themes related to psychology of the greatest interest to the students are those that have a closer connection to the real management of educational processes in the classroom. More specifically, there is quite a high amount of interest in learning techniques with which to avoid conflicts (over 3/4) and to favour coexistence (almost 3/4), discovering techniques related to group dynamics (over 2/3), knowing how to deal with the pupils' diversity and discovering who has special education needs (2/3), learning how to overcome stressful situations and maintaining intellectual and academic authority in the classroom (almost 2/3).

The cluster analysis corresponding to this sub-dimension indicates that around 2/5 of the students strongly agree with the set of ideas grouped in this category (cluster 3) and that a similar proportion of subjects partially agree (cluster 2). The remaining students, i.e. a fifth of them, are more inclined to disagree with the ideas contained in this sub-dimension (cluster 1).

Table 9
Descriptive data for the CM sub-dimension

Grouped variables	I (disagree)		II (intermed.)		III (agree)	
	<i>Frequ.</i>	<i>%</i>	<i>Frequ.</i>	<i>%</i>	<i>Frequ.</i>	<i>%</i>
Items (Mean)						
C20. Conflict resolution techniques (4.00)	40	11.1	47	13.0	274	75.9
C17. Pedagogy for coexistence in classroom and centre (3.87)	50	13.9	52	14.4	259	71.7
C19. Group dynamics techniques (3.78)	62	17.2	54	14.9	245	67.9
C16. Attention to diversity and special needs (3.76)	53	14.7	66	18.3	243	67.3
C22. Overcoming professionally stressful situations (3.70)	57	15.8	74	20.5	229	63.4
C21. Development of academic authority (3.63)	71	19.7	65	18.0	225	62.3
Groupings for cluster analysis in the CM sub-dimension						
Group 1		Group 2		Group 3		
<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>	
70	19.3	147	40.7	144	39.9	

The correlation analysis of the variables grouped in this sub-dimension indicates that all the associations are high and significant (to the level of $p < 0.01$) and that the themes that are of interest to the subjects which are grouped in this sub-dimension have a high degree of interdependence and internal consistence.

4. Discussion

The setting up of the Master's degree in Secondary Education Teacher Training in Spain in the last few years has been related to the need to transform the ISETT in order to have teachers who are better prepared and qualified to provide education in the 21st Century, but this has generated a lot of expectations about the new teaching model that has still, in many respects, not been suitably developed (Cantón et al., 2015).

With regard to the first objective considered, it is possible to state that the results of the descriptive analysis indicate that the future teachers have quite a high amount of interest in certain beliefs related to ISETT (Azcarate & Cuesta, 2012) and, therefore certain expectations regarding their training that are not fulfilled, as is pointed out by Murray (2010), Hobson & Ashby, (2012) and Cameron & Grant (2017).

The intermediate level of interest includes an interest in training in pedagogy and psychology. The same interest level includes the incorporation of skills with which to manage classroom work, highlighting the use of strategies to improve group dynamics. It also includes formative requirements related to diversity, orientation and assessing special education needs. These ideas coincide with the concepts described by Beijaard, Verloop y Vermunt (2000) and their classification of the didactic and pedagogic TPI.

The last classification level as regards training requirements, in which the subjects showed relatively less interest than the two previous levels, is related to the organisation and functioning of the education system and legislation. As has already been stated in literature (Cantón et al., 2015), students have educational lacks related to the organisation and functioning of the education centre during the initial training process.

With regard to the second objective, the initial educational beliefs that are a priority for future teachers constitute a wide set of requirements that are interdependent on each other and which appear to be grouped in two principal nuclei of different natures.

The first of these nuclei, which is focused on the pedagogy and general didactics domain, has three dimensions (Beijaard, Verloop y Vermunt (2000)). The first concerns aspects of general education and almost half of the population partially agreed with the set of ideas contained in this dimension. That is to say, the students surveyed are moderately interested in obtaining knowledge regarding current regulations and legislation, the functioning of secondary education centres and the structure of the education system.

The second dimension in the first nucleus contains the beliefs related to aspects of general didactics, i.e. those concerning training in psycho-pedagogical matters, the design of didactic units and the interest in learning to use evaluation techniques and instruments (Zorkovic, 2016). In our case, a third of the students coincided in their high evaluation of these aspects, and almost half of the future teachers stated an intermediate degree of interest in this set of ideas.

The third dimension is focused on educational beliefs regarding teaching methodologies and the use of educational resources, with a particular interest in developing active teaching that will foment the pupils' motivation. Of the most highly valued strategies and resources we can highlight the application of new information and communication technologies to education and the use of conceptual maps and cognitive schemas for the representation of knowledge. On this occasion, the future secondary school teachers agreed more unanimously as regards this dimension, thus justifying the need to include these aspects in ISETT.

With regard to the second nucleus, which concerns training requirements as regards psychology in education, the requirements are grouped in two dimensions. The results showed that the trainee teachers had a moderate amount of interest in the first dimension, which is related to aspects linked to educational psychology, although the values were not as

high as those obtained for the previous dimension (methodology and resources). Two thirds of the students have a moderately high interest in acquiring knowledge regarding the psychology of adolescents, while a smaller proportion highlight learning contents linked to orientation and tutoring. The second dimension contains aspects concerning the sphere of psycho-pedagogical training, which is closely related to classroom management and the educational competencies or personal qualities that the teacher should have in order to favour coexistence and respect, organise a good work atmosphere in the class, foment teamwork, resolve possible conflicts and overcome stressful situations that may arise in the classroom, all of which is very similar to what is stated by Izadina (2016). They specifically have a great interest in learning conflict-solving techniques and those that will favour coexistence. Two thirds of the population strongly agree with this set of requirements, which also includes training in attention to diversity.

4.1. Conclusions

The findings of this study may have implications when preparing the curricular design of ISETT. The need to guarantee clear links between theoretical contents and practical knowledge related to the construction of TPI is a key aspect as regards producing a quality teacher. The question that our study now poses is: how can attain this transition? It is obvious that teacher-training programmes should review not only the content taught, but also the different stages of identity that are, and will be, present during teachers' careers. It has been shown that learning to teach is not limited to merely cognitive or technical knowledge, as is pointed out by Cantón, Cañón, Arias y Baelo (2015). Future teachers are obliged to work with the perspectives that they have of themselves, and how they project them in the workplace in order to construct and forge their own individual identities on the basis of the reflection and self-evaluation that, according to Zirkovi (2016), are the principle means to improve the TPI. These perspectives go further than technical ideas concerning work and are, in fact the equivalent to a new dynamic, professional and educational ego (Olsen, 2008). Some of the results obtained in this study are interesting from this perspective, since many of the students' educational beliefs are related to the need to improve their training in practical aspects that will make a relative contribution towards the development of their TPI. However, it should be recognised that it is still necessary to improve these teachers' training (Murray, 2010; Hobson & Ashby, 2012). It is obvious that growing globalisation is a phenomenon that will have a direct impact on teacher training, thus leading to the need to make significant changes as regards teachers' tasks and initial training programmes. The conclusions of this study pose new relevant challenges for ISETT programmes as regards the construction of the TPI. It is necessary to take formative action that will allow the students to work with their own sources of professional identity, i.e. to pay attention to the set of social, personal, scholastic and religious experiences that have, among others given rise to the way in which they view themselves. Furthermore, as is stated by Zirkovic (2016), there is a need to provide reflexive experiences, thus favouring the specification of the knowledge, beliefs and feelings implied in these conceptions of identities: formative spaces for reflection that will enable students to get to know themselves. Finally, it is necessary to point out that the results of this research should be viewed with caution owing to possible methodological limitations related to the study design. However, we consider that the information contained in it could serve as a basis on which to develop other more complex analyses and carry out more thorough research processes that will contribute to a better knowledge of the educational expectations and demands of future trainee secondary school teachers as a necessary aspect to favour the gradual improvement of ISETT.

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4.4. ESTUDIO 1.3. ¿HASTA QUÉ PUNTO LOS FUTUROS DOCENTES SE SIENTEN PREPARADOS PARA ENSEÑAR? UN ESTUDIO DE CASO EN EL MÁSTER UNIVERSITARIO EN FORMACIÓN DEL PROFESORADO DE EDUCACIÓN SECUNDARIA

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Este estudio tiene como objetivo general explorar y analizar el nivel de desarrollo de las competencias adquiridas por el alumnado del máster de educación secundaria durante su formación inicial.



To what extent do preservice teachers feel ready to teach? A case study in the Master's Degree in Teaching in Secondary Education

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ABSTRACT

Teacher-training programs around the world, and especially in Europe do not specify in detail the capacities that future professionals should acquire, so it brings about a great discussion among educators, researchers and teachers. The main objective of this study is to know and evaluate the level of competence development acquired by future Secondary Education teachers during their initial training. The self-evaluation of 353 students was carried out using a Likert-scale questionnaire made up by 13 variables gathered into three dimensions namely social competence, academic competence and personal competence. R Software, InfoStats and SPSS v.25 software were used in order to analyze the data collected. Confirmatory factorial analyses and linear mixed modelling were applied to identify factors affecting the acquisition of competences. The students' area of knowledge and their employment situation were key factors in the development of academic and social competences, while the personal dimension was affected only by the area of knowledge. These results obviously show that there are some competences whose level of development could be improved, and we have also identified some weaknesses in the development of certain competences. In addition, these data have allowed us to assess the strengths and weaknesses of the initial teacher-training curriculum.

Key words: Basic skills, initial teacher training, secondary education, students' perceptions, curriculum.

¿Hasta qué punto los futuros docentes se sienten preparados para enseñar? Un estudio de caso en el Máster Universitario en formación del profesorado de educación secundaria

RESUMEN

Los programas de formación del profesorado en todo el mundo, y especialmente en Europa, no especifican en detalle las capacidades que deberían adquirir los futuros profesionales, por lo que provoca un gran debate entre educadores, investigadores y docentes. El objetivo principal de este estudio es conocer y evaluar el nivel de desarrollo de las competencias adquiridas por futuros docentes de Educación Secundaria durante su formación inicial. La autoevaluación de 353 estudiantes se realizó mediante un cuestionario en escala Likert con 13 variables agrupadas en tres dimensiones: competencia social, académica y personal. Se utilizó R, InfoStats y el software SPSS v.25 para analizar los datos recogidos. Se aplicaron análisis factoriales confirmatorios y modelos lineales mixtos para identificar los factores que afectan a la adquisición de competencias. El área de conocimiento de los estudiantes y su situación laboral fueron factores clave en el desarrollo de las competencias académicas y sociales, mientras que la dimensión personal solo se vio afectada por el área de conocimiento. Estos resultados muestran que existen algunas competencias cuyo nivel de desarrollo se podría mejorar. Asimismo, estos datos nos han permitido evaluar las fortalezas y debilidades del plan de estudios de la formación inicial docente.

Palabras clave: Competencias básicas, formación inicial, educación secundaria, percepciones del alumnado, currículum.

1. Introducción

The European Higher Education Area (EHEA) suggested the need to critically think and analyze the teaching models at the universities in order to enhance competence-based teaching and learning approaches (Qazi, Ali & Tehseen, 2014; Rivilla, Ruiz-Cabezas, Navio & Domínguez, 2019). However, this guidance has not been similarly implemented in all European countries. In the field of teacher education, differences are also identified in this regard. Initial teacher education differs depending on the education level at which prospective teachers are intending to work. In some countries, there is a tendency to employ initial simultaneous training models for Secondary School teachers (Eurydice, 2013; 2018). This model is characterized by the fact that science and pedagogy are trained at the same level, time and given the same treatment. It means that disciplinary content knowledge and pedagogical studies are taught alongside throughout a long preservice education stage following an integrated approach (Dinçer & Bikmaz, 2020). However, Spain opted for a consecutive training model (Table 1) (Gómez, Aranda & Santos, 2017). This variant focuses mostly on pedagogy training that follows previously disciplinary content degree studies. Therefore, future teachers have already achieved “an academic degree in a specific discipline related to subjects taught in schools” (Zuzovsky & Donitsa-Schmidt, 2017, p. 3).

Table 1. Training models for Compulsory Secondary Education teachers

Simultaneous models	Consecutive or successive models	Both
Germany, Belgium, Czech Republic, Denmark, Slovakia, Estonia, Finland, Holland, Hungary, Latvia, Poland, Rumania, Sweden	Bulgaria, Cyprus, Spain, France, Greece, Italy, Liechtenstein	Austria, Slovenia, Ireland, Island, Lithuania, Norway, United Kingdom

Source: Eurydice (2013, 2017).

Independently of the model followed, all countries accept the need for specific training of a professional and practical nature, and no longer support the idea that having an in-depth knowledge of the scientific content is enough to teach in Secondary Schools (Coronado, López, Oliva & Montilla, 2018; Klaus, Matanovic, Werner & Wernke, 2018). However, consecutive models bring about some drawbacks related to the construction of teachers’ professional identity for the reason that they usually come from a professional background (e.g., music, nursing, chemistry, economic) so they feel “strongly identified with their (former) professions” (Van Lankveld, Schoonenboom, Volman, Croiset & Beishuizen, 2017, p. 328). Thus, preservice teachers in consecutive training models may see themselves as professionals rather than teachers (expert becomes novice) and they undervalue the need to learn teaching strategies, resources and issues regarding coexistence, values, etc.

In this context, one of the challenges confronted by this prior initial training is to ensure that the curriculum of teacher education programs provides their students and graduates with appropriate training that is adapted to the continuously evolving reality of schools (OCDE, 2016). However, current education debates as well as research literature on this topic (e.g. Ramos, Tosina, Elorrieta & Iglesias, 2020) indicate that consecutive initial

teacher-training programs do not always fulfil these expectations because this model provides a less integrated learning experience and it brings about a briefer period of being in contact with the real context, so its socialization experience with future colleagues is poorer although it is considered as one of the most influencing factors in their professional development (Barbre, 2018; Wilks, Snow, Lasczik & Bowling, 2019).

In order to strengthen initial teacher education, it is necessary to develop a diagnosis. The setting up and development of the Master’s Degree in Secondary School Teacher Training in Spain makes it possible to explore the current situation and attempt to evaluate the fulfilment of its objectives, in addition to identify those challenges that still need to be resolved in this consecutive training model. As pointed out by Bahia, Freire, Estrela, Amaral and Espírito (2017), this training model may make it difficult to achieve quality teachers and, as a consequence, ensure that pupils learn. It may also lead to a situation in which those who have been trained using this model are less competitive in other systems for the reason that in the simultaneous training ones their vocation and commitment with the teaching profession could be stronger (Bennett, 2019).

As stated by Bolívar and Domingo (2016), and Darling-Hammond (2017) in Spain, there is a lack of systematic research regarding the professional development of teachers and competences. This research is also lacking as regards the importance of verifying whether there are personal or contextual variables that have a direct influence on their development of those competences. These aspects are dealt with in the present study.

1.1. Initial teacher training and the development of competences

Muñoz, Rodríguez and Luque (2019) state that the initial training will determine their professional identity, the development of their professional competences and their commitment to the profession. In Spain, this training corresponds with the Secondary Education Master’s Degree (SEMD) and the curriculum follows a competence-based learning.

In literature, González and Wagenaar (2006) defined a competence-based model on the interpersonal competences related to social skills, such as the capacity for communication, interaction and cooperation. The systematic competences require the prior acquisition of instrumental and personal competences, since they demand the abilities and skills associated with self-learning, creativity and the capacity to adapt to new contexts. This classification of competences is, to a great extent, in line with the results obtained in the research carried out by Authors (Amor Almedina & Serrano Rodríguez, 2018), which concludes that the set of generic competences can be gathered into four dimensions: academic, social, interpersonal and instrumental competences. In this respect, the Eurydice Report (2014) highlighted the need to improve teacher training in the field of social and interpersonal skills. The study carried out by Muntaner, Vidal, Sése and Palau (2017), meanwhile, dealt with the need to improve the development of the social, emotional and personal competences.

As a set, teachers’ competences have a crucial impact on students’ learning processes (De Jager, Coetzee, Maulana, Helms-Lorenz & van de Grift, 2017; Diacopoulos & Butler, 2020). However, most of the studies has placed the focus on their definition and classification (Tynjälä, Virtanen, Klemola, Kostiaainen & Rasaku-Puttonen, 2016), but up to the moment, few publications have shown concern on evaluation of the acquisition of these abilities (Martínez & Sánchez, 2018; Özcan & Gerçek, 2019), so this study is one of the first to evaluate the level of competence-development among preservice Secondary Education teachers.

1.2. Associated factors

As stated at the beginning of this paper, there is an increasing trend as regards the appearance of studies concerning the quality of teacher training (Chuo-Chun & Huisman, 2017). In the majority of these studies, there is a significant correlation between the skills acquired by teaching professionals during their early training and the quality of their teaching features (Blömeke, Busse, Kaiser, König & Suhl, 2016; Buff, 2014). In this respect, Green (2015) indicated that the achievements attained during training processes have an effective relationship with their prior experiences as students. However, more recent research (Viciano & Mayorga, 2017) warned that previous work experience in educational contexts has a greater positive effect on the development of professional competences.

With regard to the individual factors that may be influencing secondary school teachers' initial training, Chang and Lo (2016) stated that the principal conditioners were gender and age. In the same line, the recent study carried out by Authors (Pérez Gracia, Serrano Rodríguez & Pontes Pedrajas, 2019) showed that gender was responsible for the greatest number of differences in the group. However, Kapitanoff and Pandey (2017) stated that the differences between genders are not clear and that it is necessary to explore this subject in greater depth.

Furthermore, the majority of teachers complete their initial training with similar levels of achievement, although the principal differences are the consequence of their age or their work-related state (Ibarra & Barbulescu, 2010). Bearing in mind the knowledge area, the results obtained in the research carried out by Martín and Molina (2017) revealed that this prior disciplinary training was a conditioner in the development of pedagogic competences.

In the study carried out to compare novice secondary school teachers in Australia and Spain who had been subjected to different initial training models (simultaneous and consecutive, respectively) (Salazar & McCluskey, 2017), the Spanish teachers recognized the importance of training as regards the content of the material (disciplinary training), unlike the Australian participants who valued their pedagogic training. This study demonstrated that the training model followed is a conditioning factor as regards professional learning and the development of teachers' identities.

Bearing the aforementioned factors in mind, the general objective of this research was to know and evaluate the level of competence development acquired by future Secondary Education teachers during their initial training. Three specific objectives stem from the previous general objective:

- To analyze the factorial structure of the scale and its appropriateness as regards evaluating the general competences in secondary school teachers' initial training.
- To discover future secondary school teachers' scope as regards their level of development of the set of competences defined on the scale.
- To identify the factors that affect the results and to discover whether there are any differences among the groups of variables defined on the scale (academic, social and personal).

2. Methodology

2.1. Participants

The participants in this study were 353 students enrolled on the Master's Degree in Secondary School Teacher Training in two academic years (2015-2017). The majority of the participants were studying at the University of Cordoba (78%). Only 13% were from other universities in Andalusia, followed by 7% from other Spanish universities and 2% from universities in other countries. The

average age of the participants was 25.9, 53.8% of whom were women and 46.2% of whom were men.

Table 2.

Distribution of the sample according to the field of knowledge and the academic year

Field of knowledge	2015-2016 Freq.	2016-2017 Freq.	Total
Experimental and Health Sciences	46	89	135
Technology	19	24	43
Social Science	17	13	30
Humanities	46	57	103
Art	14	28	42
Total	142	211	353

2.2. Instrument

In order to attain the objectives of this research, a questionnaire, namely the *Degree of development of general competences on a Secondary Education Master's Degree Training* was designed. Defining the competences that should form part of an initial teacher-training program is a point of disagreement and criticism among various authors (Tang, Wong & Cheng, 2016; Tynjälä et al., 2016). The questionnaire was, therefore, developed by considering the competences defined in the aforementioned Master's Degree for the entirety of Spain, assuming that the interest in this research lies in discovering the current development of this training plan.

The instrument includes two different blocks with their corresponding variables (table 3): i) Block A gathers information regarding sociodemographic and personal data; and ii) Block B covers all the items regarding the competences. It contains 13 Likert-scale variables with five possible responses (1 to 5) that reflect the degree of competence development. Considering literature (Muntaner et al., 2017), they have been organised according to three dimensions namely academic, social and personal.

Table 3.

Structure of the instrument

BLOCK A	
Variable	Description
Age	Age of the participant. It is not organised by range, but it is a numeric variable.
Sex	Sex of the participant. They choose between man, woman and other.
Year when they finished their degree studies	Date when they graduated in their degree studies at university. They write down the year.
Field of knowledge	Open question where they indicate their field of expertise.
Employment status	They choose from the following options: (a) currently working in a position linked to my studies; (b) currently working in a position not linked to my studies; (c) Unemployed; (d) studying for a competitive public examination.
Previous experience	They indicate whether they have previous experience in education.

BLOCK B	
Dimensions	Description
Academic competences	Items included in this dimension refer to knowledge of the curriculum and current education policies, and teaching-learning process. Variables 1, 2, 3, 4, 9 and 10.
Social competences	These items have to do with mentoring, communication, conflict resolution and equality. Variables 5, 7, 8 and 13.
Personal competences	This dimension gathers items connected to the ability to engage families and students and promote critical thinking. Variables 6, 11 and 12.

In order to test the reliability of the questionnaire, a Cronbach’s alpha coefficient was applied to the whole questionnaire and to each of the dimensions (Table 4).

Table 4.
Cronbach’s alpha coefficient

Dimension	Cronbach’s alpha values
Academic Competence	.841
Social Competence	.813
Personal Competence	.805
Whole questionnaire (I, II y III)	.923

2.3. Procedure and analysis

The data were collected through the use of the online teaching and learning platform, namely Moodle, at the end of each academic year.

A Factorial Confirmatory Analysis (FCA) was then carried out to discover whether the items in the questionnaire were grouped according to the theoretical structure previously defined (social, academic and personal dimensions). This was done by employing Structural Equation Modelling “SEM” (Fox, Nie & Byrnes, 2016) in order to reduce the number of observed variables to a smaller number of latent variables using R 3.0.1 statistical software.

A Confirmatory Factorial Analysis (CFA) was then applied to discover whether the variables in the questionnaire could be naturally split into the three groups: Academic, Social and Personal. A Confirmatory Factorial Analysis (CFA) is a kind of Structural Equation Modelling (SEM) methodology (Fox et al., 2016). SEM can be used to reduce the number of observed variables to a lower number. The CFA was calculated by applying the R package denominated as “sem”, for SEM analysis and R Software version R 3.0.1.

With regard to the second objective, a descriptive analysis was carried out using SPSS software.

Finally, it was necessary to determine the relationships among the different dimensions with their corresponding explanatory factors. We developed three Linear Mixed Models (LMM), namely an academic model (Model 1), a social model (Model 2) and a personal model (Model 3). The fixed factors in all of them were gender (2 levels), age range (3 levels), knowledge area (5 levels) and employment situation (7 levels), whereas the academic level

was considered as a random factor. Normal distribution and an identity binding function were used in all the models.

The most appropriate models were chosen by comparing the Akaike Information Criteria (AIC) (Burnham & Anderson, 2002) and using a retroactive procedure (Zuur, Leno, Walker, Saveliev & Smith, 2009). In particular, we compared the AIC for small sample sizes (AICc value) in each candidate model versus the best model (with the lowest AICc). As a general rule, $\Delta i < 2$ suggests that the candidate model has an explanatory power similar to the best a priori model (Burnham & Anderson, 2002). The Fisher’s Least Significant Difference test (LSD test) for the comparisons of the means estimated within a mixed analysis was then developed to test and illustrate the differences among the levels of categorical variables. Statistical analyses were performed using InfoStats software.

3. Results

3.1. Factorial structure of the scale

As can be observed in Figure 1, all the variables included in the predefined categories are significant ($\chi^2 = 321.18$; $DF = 62$; $p < .001$). The $AIC = 379.18$ and $BIC = -42.55$ are used to select the best fitting. The distribution of normalized residuals is ranked from 1st Q: -.65 (Min: -1.55) and 3rd Q: .46 (Max: 3.62). All the standardized factor loadings were above .5, with the exception of the errors. The summary parameters for goodness of fit show that the data fit very well (RMSEA index = .108; Bentler-Bonett NFI = .88; Tucker-Lewis NNFI = .87; Bentler CFI = .90). In conclusion, the information regarding the variables can be summarized in the three latent factors.

The factor saturations are between a minimum of .37 (V2. Plan, develop and evaluate the teaching-learning process by enhancing educational processes that facilitate the acquisition of

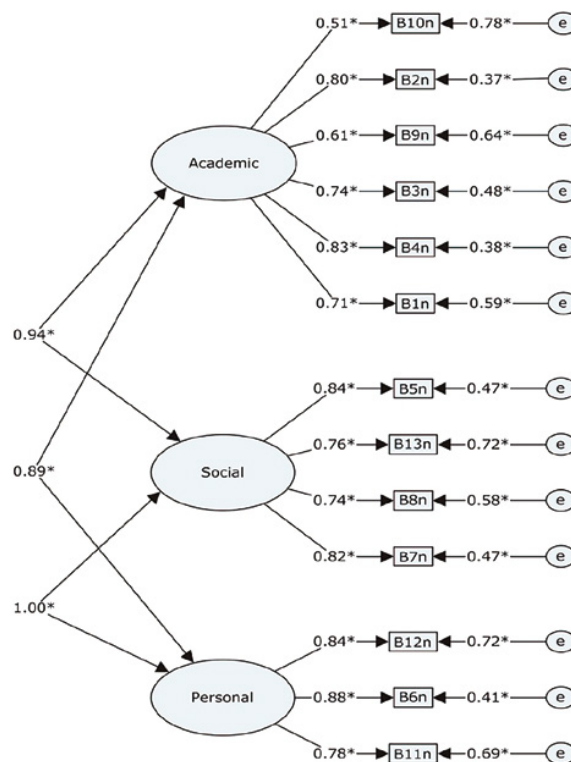


Figure 1. Factorial solution of the scale

skills.) and a maximum of .78 (V10. Know and analyze the historical features of the teaching profession, its current situation, perspectives and interrelation with the social reality.). All loads were higher than the values accepted as indicators of adequate consistency (> .30).

The variable that best fits with the personal dimension is V6 (Acquire strategies in order to encourage the student's effort and promote their ability to learn for themselves and with others), with a value of .88, compared to V11 (Inform and advise families regarding the teaching and learning process and the personal, academic and professional orientation of their children), which obtained a value of .78. Within the social dimension, the variable with the highest value (.84) is V5 (Design and promote learning contexts, paying particular attention to equity, emotional and educational values and equal opportunities between men and women), compared to V8 (Design and carry out formal and non-formal activities; develop mentoring functions; take part in the evaluation; research and innovate), which obtained a value of .74.

Finally, the variable with the highest factorial load in the academic dimension is V4 (Settle the curriculum; develop and apply both group and personalized teaching methods adapted to the diversity of the students), with a value of .83, compared to V10 (Know and analyze the historical features of the teaching profession, its current situation, perspectives and interrelation with the social reality), which obtained a value of .51.

The standard residuals are distributed according to Table 5. All the loads of standardized factors were higher than .5, with the exception of the errors. The summary parameters for goodness of fit show that the data fit very well. To conclude, the information regarding the 13 variables can be summarized in the three latent factors.

Table 5. Distribution of normalized residuals of fitted SEM models

Min	1 st Q	Median	Mean	3 rd Q	Max
-1.55	-.65	.00	.04	.46	3.62

3.2. Level of development of the competences

First of all, it is presented the organization of the different variables into the three dimensions (academic, social and personal) with their corresponding values (table 6).

The first dimension includes six variables related to academic issues. According to the mean values of each item, they are presented organised from the one with the highest degree of development to the least developed during the Master's Degree:

- V9: Know the regulations and the institutional organization of the educational system, along with the quality improvement models that are suitable for educational centers.
- V3: Search for, obtain, process, and communicate information (oral, printed, audiovisual, digital or multimedia), transform it into knowledge and apply it, showing a proper management of ICT and mastery of a second language in communicative processes.
- V1: Know the curricular contents of the subjects related to each teaching specialization.
- V2: Plan, develop and evaluate the teaching-learning process by enhancing educational processes that facilitate the acquisition of skills.
- V10: Know and analyze the historical features of the teaching profession, its current situation, perspectives and interrelation with the social reality.

- V4: Settle the curriculum; develop and apply both group and personalized teaching methods adapted to the diversity of the students.

The second dimension includes four items related to the social aspects of education:

- V13: Promote and guarantee respect for human rights and the principles of universal accessibility, equality, non-discrimination and the promotion of democratic values and a culture of peace.
- V5: Design and promote learning contexts, paying particular attention to equity, emotional and educational values and equal opportunities between men and women.
- V7: Know the interactive and communicative processes in the classroom, master the social skills which are necessary to promote learning and coexistence in the classroom, and address problems of discipline and conflict resolution.
- V8: Design and carry out formal and non-formal activities; develop mentoring functions; take part in the evaluation; research and innovate.

Finally, the third dimension includes three items related to personal aspects:

- V6: Acquire strategies in order to encourage the student's effort and promote their ability to learn for themselves and with others.
- V11: Inform and advise families regarding the teaching and learning process and the personal, academic and professional orientation of their children.
- V12: Encourage critical, reflective, entrepreneurial spirit and active job-seeking habits.

Table 6. Results of the descriptive analysis

Variables	Academic Dim.	
	Mean	Stand. Dev.
V.1. Know the curricular contents of the subjects related to each teaching specialization.	3.40	1.042
V.2. Plan, develop and evaluate the teaching-learning process by enhancing educational processes that facilitate the acquisition of skills.	3.35	1.003
V.3. Search for, obtain, process, and communicate information (oral, printed, audiovisual, digital or multimedia), transform it into knowledge and apply it, showing a proper management of ICT and mastery of a second language in communicative processes.	3.41	1.014
V.4. Settle the curriculum; develop and apply both group and personalized teaching methods adapted to the diversity of the students.	3.15	1.029
V.9. Know the regulations and the institutional organization of the educational system, along with the quality improvement models that are suitable for educational centers.	3.44	1.004
V.10. Know and analyze the historical features of the teaching profession, its current situation, perspectives and interrelation with the social reality.	3.31	1.020

Variables	Social Dim. (3.22)	
	Mean	Stand. Dev.
V.5. Design and promote learning contexts, paying particular attention to equity, emotional and educational values and equal opportunities between men and women	3.19	1.087
V.7. Know the interactive and communicative processes in the classroom, master the social skills which are necessary to promote learning and coexistence in the classroom, and address problems of discipline and conflict resolution.	3.19	1.066
V.8. Design and carry out formal and non-formal activities; develop mentoring functions; take part in the evaluation; research and innovate.	3.13	1.063
V.13. Promote and guarantee respect for human rights and the principles of universal accessibility, equality, non-discrimination and the promotion of democratic values and a culture of peace.	3.37	1.139
Variables	Personal Dim. (3.03)	
	Mean	Stand. Dev.
V.6. Acquire strategies in order to encourage the student's effort and promote their ability to learn for themselves and with others	3.17	3.17
V.11. Inform and advise families regarding the teaching and learning process and the personal, academic and professional orientation of their children	3.03	3.03
V.12. Encourage critical, reflective, entrepreneurial spirit and active job-seeking habits.	2.92	2.92

3.3. Factors that affect each dimension and differences among them

With regard to the factors that affect the academic dimension (Model 1), the best model maintains only two variables, namely field of knowledge and employment status (Table 7). The post-hoc Fisher test shows significant differences among the different fields of knowledge, in which Art is clearly separated from Humanities, Technology and Experimental Sciences (Fig. 2), whereas in the

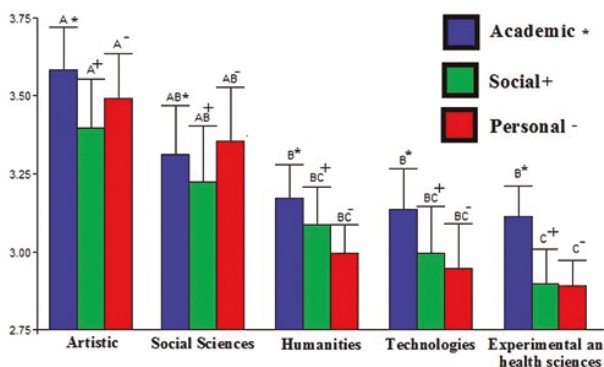


Figure 2. Post-hoc Fisher test according to fields of knowledge in each dimension

case of employment status, unemployed students are distinctly separate from the other groups (Fig. 3).

Furthermore, in the case of the social dimension (Model 2), the best model follows the same pattern as in the previous case, retaining only 2 parameters. In this case, the post-hoc test shows a clear distinction between Artistic training and Experimental and Health Sciences while, with regard to the employment status, it again shows two groups and a third group between the two previous ones that coincides with those who study competitive exams to become Secondary School teachers (Fig. 3).

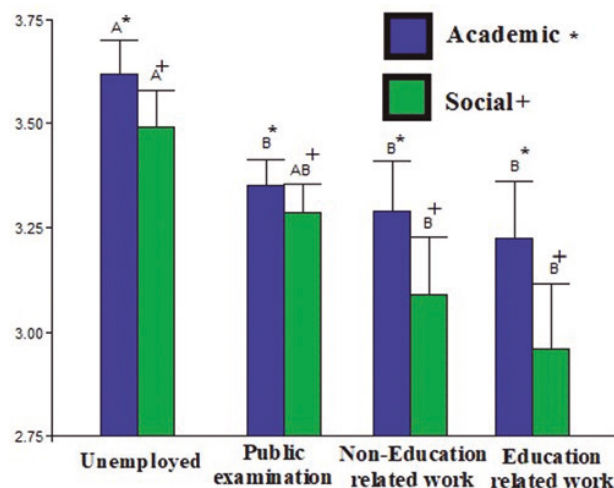


Figure 3. Post-hoc Fisher test according to employment status in each dimension.

Finally, the model related to the personal dimension (Model 3) is affected only by the field of knowledge (Table 7). The post-hoc test shows clear differences between Art and Experimental Sciences. Moreover, Social Sciences are closer to Art while Humanities and Technology are closer to Experimental Sciences.

Age, previous experience in other contexts and previous experience in educational contexts were also included as factors, but none of them had any relationships with the dimensions.

Table 7.

Chi-square, P-values and coefficients of the variables included in the best models explaining the academic dimension (Model 1), social dimension (Model 2) and personal dimension (Model 3)

Var.	Chi-square	df	P	Coefficient ± E.S.
Academic dimension (Model 1)				
Interc.	3298.48	1	<.001	3.14 ± .14
Field of knowledge	3.73	4	<.01	2 = .07 ± .1; 3 = .21 ± .15; 4 = .01 ± .13 5 = .48 ± .13
Employment status	3.83	3	.01	2 = -.07 ± .18; 3 = .06 ± .13; 4 = .33 ± .14
Social dimension (Model 2)				
Interc.	2457	1	<.001	2.86 ± .15
Field of knowledge	3.43	4	<.01	2 = .2 ± .15; 3 = .34 ± .17; 4 = .09 ± .15 5 = .51 ± .15
Employment status	3.97	3	<.01	2 = -.13 ± .21; 3 = .20 ± .15; 4 = .40 ± .16
Personal dimension (Model 3)				

Var.	Chi-square	df	P	Coefficient ± E.S.
Interc.	2875.23	1	<.001	2.89 ± .08
Field of knowledge	4.32	4	<.01	2 = .1 ± .12; 3 = .46 ± .19; 4 = .05 ± .16 5 = .6 ± .17

4. Discussion

4.1. Factorial structure of the scale

We studied the internal structure using the FCA, since it provides an appropriate statistical framework with which to evaluate the validity and reliability of each item rather than focusing only on global evaluations. This was done by gathering the 13 items in the questionnaire together in a structure made up of three dimensions. This classification coincides with other authors' groupings (Amor Almedina & Serrano Rodríguez, 2018; González & Wagenaar, 2006).

In short, this scale as a whole fulfils the premises proposed by de Jager et al (2017) which indicates that it is essential for initial training to contemplate teaching skills not only on the academic plane, but also at a personal and social level.

4.2. Level of development of the competences

From a general perspective, the students positively assessed (about 50%) the development of general competences such as. We also observed that future teachers consider it important to achieve a good level of learning in training aspects related to the specific didactic treatment of the contents, which also partially coincides with the results obtained in other studies (e.g. Martínez & Sánchez, 2018).

Upon analyzing the first of the dimensions on the scale, it will be noted that the personal dimension included variables related to engage students and families as well as guide them enhancing critical thinking and attitudes. In this respect, it is extremely important for future teachers to begin developing their teachers' professional identity as soon as possible, since it is necessary for them to have a sense of belonging to this profession. This will consequently allow them to deal with tasks such as encouraging students, understanding the roles of families, or searching for jobs as teachers (Virta et al., 2019). Furthermore, this idea leads to a debate about the different way in which pre-service teachers construct their professional identity depending on whether they have been trained following a consecutive or parallel training systems.

When teachers are competent in terms of personal and emotional issues, their teaching is more effective (Muntaner et al., 2017). Nonetheless, unlike that which occurred in the research carried out by Buff (2014), whose results showed that the development of emotional competences by teachers improves students' learning, the participants in this study placed less importance on this dimension when compared to the academic and the social dimensions.

The social dimension incorporates variables related to communicative processes in the classroom, conflict resolution and mentoring functions. In general, these variables are related to activities that promote respect, diversity and cooperation among students. Previous studies (e.g., Barbre, 2018) emphasize the importance of promoting the acquisition of social, decision-making and leadership skills and of stimulating creativity and management, in addition to developing other competences.

For teachers, as was stressed in the Eurydice Report (2014, 2017), this condition is necessary to ensure that education fosters the development of social and civic competences among

students, along with other cross-curricular competences: those regarding learning to learn, autonomy and initiative. This would be a possible explanation for the higher mean values of these items (mean 3.21) with respect to the items included in the personal dimension (mean 3.04).

Finally, the academic dimension includes variables directly connected to contents and theoretical teaching. However, this dimension may affect others (such as the personal dimension), since previous studies have stated that university students from diverse fields of knowledge have different emotional abilities (Muntaner et al., 2017). It is, therefore, important to consider each student's field of knowledge when assessing the development of competences. In addition, the items included within the academic dimension attained the highest values (mean 3.34), and this, therefore, coincides with that previously stated regarding the students' passive role. Nonetheless, it is a complex process to move from a teacher-centered model to a student-centered one (Wilks et al., 2019).

4.3. Factors affecting the development of dimensions

With regard to the level of development of the teaching competences within initial training, we have found little information concerning the factors that may affect the acquisition of these competences. In this study we have, therefore, attempted to explore the influence of certain parameters, such as each student's field of knowledge, in greater depth. It would appear that this variable significantly influences the development of teaching competences, since Martín and Molina (2017) found that graduates from different areas attribute different scores to the teaching competences acquired, as a result of, among other things, the quality of their teachers. The results of these authors coincide with those obtained in our study, which show that the area regarding the Arts obtained a higher score in the three dimensions analyzed, followed by those of Social Sciences, Humanities, Technologies and Experimental and Health Sciences.

Furthermore, as Ibarra and Barbulescu (2010) have indicated, employment status was significantly related to the academic and social dimensions, but not to the personal dimension. Our results indicate that the unemployed students were the group with the highest scores in both dimensions. These data allow us to conjecture that those who are unemployed invest more time in their training during the Master's Degree and the desire to obtain employment, therefore, becomes a motivation to achieve better results. On the contrary, and as stated by Izadinia (2016), the group of students who were in some respect involved in the teaching profession had possibly already acquired certain competences and did not, therefore, assume that they had gained them whilst studying for their Master's Degree. They consequently had fewer expectations of the program and different demands as regards their future requirements.

Additionally, Kapitanoff and Pandey (2017) discuss the existence of social stereotypes that may be marked by the progressive feminization of teaching. Gender was not, however, a factor in our study, unlike the results obtained in the research carried out by Chang and Lo (2016) and Authors (Pérez Gracia, Serrano Rodríguez & Pontes Pedrajas, 2019). Finally, and unlike that which occurred with authors such as Green (2015), Chang and Lo (2016) and Viciano and Mayorga (2017), age and previous experience in other educational contexts were not significant factors in our model.

5. Conclusions

Our results show that there are some competences whose level of development could be improved, and we have also identified

some weaknesses in the development of others, which have already been pointed out in previous studies (e.g. Tang et al., 2016). As it is stated by Bahia et al (2017), we believe that these facts provide a basis on which we should reflect on so as to improve the quality of teaching on this Master's Degree and its curriculum. Moreover, it is also necessary to expand educational research into initial teacher training in an attempt to discover how aspects such as the organization of the Master's Degree, the teacher's role, the contents of diverse subjects, the strategies and resources, and the evaluation of the training process may influence the development of those practical competences that are considered most relevant for those employed in the teaching profession (Chuo-Chun & Huisman, 2017; Wilks et al., 2019). We are conscious that, as stated by Gómez et al (2017), there is no one single profile of competences, but we do consider that it is necessary to discover the influence that these competences have on the teaching profession as regards their development.

Therefore, this study has the potential to rethink the curriculum and enrich the change required in planning with the objective of guaranteeing an adequate competence development level and the construction of TPI. However, it also leads us to discuss and reflect on how to train preservice teachers to prevent the professional identity crises they may suffer during their first years of professional development (Schwartz & Dori, 2020) and study the strengths and drawbacks that consecutive and successive training models could bring about on this regard.

It seems that these crises are more frequent in consecutive training models (Schaefer & Clandinin, 2019), as the one used in Spanish institutions, so this research may contribute to analyze in depth initial teacher education curriculum and reinforce TPI development along with the competences mentioned before.

Finally, it is important to recall that this information is the result of self-perceptions, which shows that self-reflection and self-evaluation allow teachers to recognize their own strengths and limitations in their professional development (Núñez, 2016). Furthermore, the participants' subjective viewpoint (perceptions) may be a limitation of this study for the reason that there are sometimes varied perceptions about the same reality, so it means that applying the same instrument in a different context may lead to other results. However, according to Gutiérrez and Cabrero (2016), it is an advantage to start by knowing first-hand how participants self-perceive the level of their competences.

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4.5. ESTUDIO 1.4. RESPETO E IGUALDAD DE GÉNERO EN LA FORMACIÓN INICIAL DOCENTE

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Este estudio tiene como objetivo general conocer cómo valora el alumnado del máster de profesorado de educación secundaria la formación adquirida en el MAES y la importancia atribuida al desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

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RESPECTO E IGUALDAD DE GÉNERO EN LA FORMACIÓN INICIAL DOCENTE

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Resumen

Se presentan los resultados del análisis de las opiniones de 353 estudiantes del Máster de Formación del Profesorado de Educación Secundaria de la Universidad de Córdoba (España) sobre la competencia transversal centrada en planificar espacios de aprendizaje que favorezcan el respeto y la igualdad de género. Mediante un cuestionario escala Likert se han recogido las aportaciones con relación al nivel de desarrollo y la importancia atribuida a tal competencia. Los resultados muestran la existencia de diferencias entre géneros y macro-áreas de conocimiento en el caso del nivel de desarrollo adquirido. Consideramos que es necesario profundizar en los factores que propician estas diferencias y en la evolución de los distintos estilos de aprendizaje por titulación universitaria y género. Esto permitiría una mayor comprensión de los modos de aprendizaje del alumnado y como consecuencia, una mejora de su proceso formativo.

**RELACIONES DE GÉNERO • FORMACIÓN DEL PROFESORADO •
COMPETENCIA PROFESIONAL**

GENDER RESPECT AND EQUALITY IN THE INITIAL TEACHER TRAINING

Abstract

This paper presents the results of the analysis of the opinions of 353 students enrolled in the Master's degree in Secondary Education Teacher Training at the University of Córdoba (Spain) regarding cross-curricular competences focused on organizing learning spaces that promote gender respect and equality. Through a Likert scale questionnaire, data have been collected in relation to the level of development and the importance conferred to each competence. The results show differences in terms of gender and macro-areas of knowledge in the case of the level of development. We believe that it is necessary to study in depth the factors that favor these differences as well as the evolution of the diverse learning styles by university degree and gender. This would allow a greater understanding of the learning methods of the students and therefore, an improvement of their training process.

GENDER RELATIONS • TEACHER TRAINING • PROFESSIONAL COMPETENCE

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RESPECT ET ÉGALITÉ DES SEXES DANS LA FORMATION INITIALE DE L'ENSEIGNEMENT

Résumé

Les résultats de l'analyse des opinions de 353 étudiants du Master en formation à l'enseignement secondaire de l'Universidad de Córdoba (Espagne) sur les compétences transversales axées sur la planification d'espaces d'apprentissage favorisant le respect et l'égalité des sexes sont présentés. Un questionnaire à l'échelle de Likert a permis de collecter des contributions relatives au niveau de développement et à l'importance attribuée à cette compétence. Les résultats montrent l'existence de différences entre les genres et les macro-domaines de connaissance dans le cas du niveau de développement acquis. Nous pensons qu'il est nécessaire d'étudier en profondeur les facteurs qui favorisent ces différences et l'évolution des différents styles d'apprentissage en fonction du diplôme universitaire et du sexe. Cela permettrait une meilleure compréhension des méthodes d'apprentissage des étudiants et, par conséquent, une amélioration de leur processus de formation.

RELATIONS DE GENRE • FORMATION DES ENSEIGNANTS • COMPÉTENCE PROFESSIONNELLE

RESPEITO E IGUALDADE DE GÊNERO NO ENSINO DA FORMAÇÃO INICIAL

Resumo

São apresentados os resultados da análise das opiniões de 353 alunos do Mestrado de Formação dos Professores de Ensino Médio da Universidade de Córdoba (Espanha) sobre competência transversal focada no planejamento de espaços de aprendizagem que promovam o respeito e a igualdade de gênero. Através de um questionário na escala Likert, foram coletadas contribuições em relação ao nível de desenvolvimento e à importância atribuída a tal competência. Os resultados mostram a existência de diferenças entre gêneros e macro-áreas de conhecimento no caso do nível de desenvolvimento adquirido. Acreditamos que é preciso aprofundar a investigação sobre os fatores que favorecem essas diferenças e a evolução dos diferentes estilos de aprendizagem por nível universitário e gênero. Isso permitiria uma maior compreensão dos métodos de aprendizagem dos alunos e, assim, uma melhoria de seu processo formativo.

RELAÇÕES DE GÊNERO • FORMAÇÃO DE PROFESSORES • COMPETÊNCIA PROFISSIONAL

EL BANCO MUNDIAL, EN SU INFORME ANUAL SOBRE EL DESARROLLO DE LA EDUCACIÓN, destaca entre sus prioridades actuales garantizar y promover oportunidades de aprendizaje que favorezcan la igualdad de género, además de la mejora de la Educación Superior y la formación del profesorado (WORLD BANK, 2018).

Según Severiens y Ten Dam (1994) los trabajos sobre educación y género se vienen planteando desde la década de los setenta. Sobre todo, aportes centrados en cómo influye el género en el fracaso escolar, la elección y éxitos de los estudios, los estilos y los enfoques de aprendizaje (MILLER; FINLEY; MCKINLEY, 1990; WILSON; SMART; WATSON, 1996; LEDER; FORGASZ, 2018). Sin embargo, el tema de la influencia del género en el diseño de prácticas de aprendizaje que favorezcan el respeto y la igualdad de género (GARCÍA *et al.*, 2011) ha sido un tema poco estudiado en la literatura.

Desde este contexto, nos surgen dos inquietudes que abordamos en este estudio; por un lado, la preocupación por la formación inicial del profesorado en género; de otro lado, las creencias y actitudes que manifiesta el alumnado sobre la competencia transversal centrada en diseñar y desarrollar espacios de aprendizaje que favorezcan el respeto y la igualdad de género. Distinguiendo entre el nivel de desarrollo y la importancia que se les concede a tales competencias para el desarrollo de la profesionalidad docente.

Es importante recordar que en los planes de estudios universitarios se recogen indicaciones muy específicas sobre la inclusión de la perspectiva de género en la formación básica del alumnado. Por tanto, desarrollar este tipo de investigaciones permitirá analizar las fortalezas y debilidades del proceso actual de formación inicial docente del profesorado de secundaria, y con ello, la posibilidad de elaborar propuestas curriculares bien fundamentadas, que ayuden a mejorar la FIPS en el futuro.

EL ESPACIO EUROPEO DE EDUCACIÓN SUPERIOR Y LA FORMACIÓN INICIAL DEL PROFESORADO DE SECUNDARIA

A nivel internacional y nacional se evidencia un profundo interés en la formación inicial del profesorado y el desarrollo de la Identidad Profesional Docente (IZADINIA, 2016; LORENZO VICENTE; MUÑOZ GALIANO; BEAS MIRANDA, 2015; LE HUU NGHIA; NGOC TAI, 2017; FERRADA; VILLENA; DEL PINO, 2018). Aunque como indican Day y Gu (2012), la formación del profesorado de secundaria basada en el desarrollo de competencias docentes es un reto complicado para los formadores del profesorado.

En el estudio de Sánchez, López y Fernández (2010) mostraron la importancia de las competencias transversales en todas las titulaciones universitarias. Según Zabalza (2011), la inclusión de competencias transversales en todos los itinerarios educativos universitarios ha demostrado ser tremendamente valiosa para la educación integral de los y las estudiantes e implica una gran relevancia para los y las profesionales, ya que facilita su integración y participación en el mercado laboral. Es deber de los y las docentes integrar las competencias transversales correspondientes a cada materia en sus actividades educativas para facilitar el desarrollo de su alumnado (VILLA; POBLETE, 2011).

De acuerdo con Arribas, Manrique y Tabernero (2016) es vital llevar a cabo un análisis en profundidad de las competencias adquiridas para poder evaluar y mejorar la empleabilidad de los graduados y las graduadas. Como tal, en el documento sobre las políticas docentes de la UNESCO (2017), se presta especial atención a la formación docente de calidad y en particular, a la preparación inicial de maestros y maestras y docentes de secundaria. Concretamente, se definen políticas encaminadas a la evaluación del profesorado y como tal, a la regulación de programas formativos que incluyan el conjunto de competencias transversales definidas (GONZÁLEZ; WAGENAAR, 2006).

DISEÑAR Y DESARROLLAR ESPACIOS DE APRENDIZAJE QUE FAVOREZCAN EL RESPETO Y LA IGUALDAD DE GÉNERO

Partiendo de la idea generalizada, como indica Forbes y Davis (2010), de que es imprescindible conocer las actitudes de los y las docentes en formación y en ejercicio, ya que la introducción de innovaciones educativas se encuentra condicionada por las actitudes de este colectivo hacia el conocimiento de qué enseñar y cómo. Podemos encontrarnos que actitudes negativas del profesorado hacia el desarrollo de cualquier competencia en su alumnado conlleva una

disminución en el tiempo que se dedica a esta frente a otras de un mayor nivel de seguridad.

En relación con lo anterior, Goldman y Warren (1973), Watkins y Hattie (1985) y Delgado y Prieto (1993), entre otros, señalaron que las diferentes carreras universitarias plantean contextos de aprendizaje heterogéneos y como consecuencia, distintos tipos de conductas y enfoques de aprendizaje diferentes. Sin embargo, en ninguno de estos estudios se incluyen diferencias de género. Por el contrario, en la investigación de Cano (2000) se concluye la existencia de una relación significativa entre el género del alumnado y la interpretación que se realiza de las estrategias y estilos de aprendizaje, así como la influencia ejercida por el tipo de carrera estudiada. En esta misma línea, encontramos el estudio desarrollado por Harlen (2015), donde se muestran que esas actitudes están en parte condicionadas por las experiencias previas durante su formación anterior, influyendo en su concepción y en cómo abordarla en un futuro próximo en el aula.

De igual forma, González (2016) afirma que la resistencia del profesorado a los temas de género es consecuencia de su ausencia en la preparación inicial recibida. El profesorado no es consciente y no valora la importancia de su influencia y de la proyección de sus creencias con respecto al género en su práctica docente. Esen (2013) concluye su investigación haciendo hincapié en que esta resistencia a la inclusión de nuevas estrategias que alberguen la igualdad de género en clase desaparecería si las políticas de formación docente incluyeran la sensibilidad de género en el marco de un docente de calidad, asegurándose que las instituciones educativas cumplan con estos criterios.

De manera más concreta, en el estudio desarrollado por Walton y sus colaboradores (2018) sobre los enfoques pedagógicos y las estrategias utilizadas por los y las futuras docentes en formación sobre justicia social y relacionadas con el género, la raza, la sexualidad, las necesidades educativas especiales, el estatus socioeconómico y la religión, se concluye que todavía hay una escasa formación en estos contenidos y se destaca la necesidad de seguir reforzando la formación con programas que aborden la enseñanza para la justicia social con prácticas pedagógicas relacionadas con la igualdad de género (UKPOKODU, 2016). Resultados muy en consonancia con los aportes de García, Sala, Rodríguez y Sabuco (2013), donde destacan la necesidad de una capacitación profesional para abordar, desde la educación, una cultura de género inmersa desde la práctica y los contextos escolares.

A pesar de todo, algunos investigadores han sugerido que las diferencias de género podrían ser el resultado de diferentes actitudes hacia la situación de la prueba (por ejemplo, ansiedad ante la prueba o evitación del rendimiento) en lugar de diferencias reales en el conocimiento o la competencia (LINDBERG *et al.*, 2010; HANNON, 2012). En esa misma línea, Leder y Forgasz (2018) discuten cómo el formato y el propósito de la evaluación influye en los resultados finales del alumnado de acuerdo con el género.

Finalmente, como demuestran Díaz de Grenu y Anguita (2017) en el ámbito de la formación del profesorado existe un sesgo de género en los discursos y prácticas del profesorado, que, como consecuencia, refuerzan la desigualdad. La práctica docente en torno al género responde en su mayoría a inquietudes que ponen de manifiesto las mujeres en el diseño de sus programaciones. Por ello, todo el profesorado debería pasar por un proceso de autorreflexión y toma de conciencia de sus prácticas como prevención contra esa ceguera de género (REBOLLO CATALÁN; VEGA CARO; GARCÍA-PÉREZ, 2011).

DISEÑO METODOLÓGICO

OBJETIVOS

De forma global, la finalidad de la presente investigación ha sido conocer cómo valora el futuro profesorado la formación adquirida y la importancia atribuida a diseñar y desarrollar espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

De manera más concreta, se establecieron los siguientes objetivos específicos:

1. Conocer las ideas previas del alumnado sobre el nivel de desarrollo y la importancia atribuida a tal competencia en relación con el conjunto global de competencias transversales.
2. Analizar la relación entre la importancia atribuida y el nivel de desarrollo adquirido en dicha competencia.
3. Determinar la influencia de factores como el género, la edad y el área de conocimiento.

Participantes

En este estudio participaron una muestra total de 353 estudiantes procedentes de los cursos académicos 2011-2013, lo que supuso el 92% de la población que accedió al Máster de Formación del Profesorado de Secundaria en la Universidad de Córdoba (España). El rango principal de edad oscila entre los 20-25 años (43,9%), seguido del rango de edad 26-30 (36,5%) y el resto (19,6%) se corresponde con alumnado de edad superior a 30 años. En relación al género, el 53,8% de las aspirantes a futuras docentes son mujeres.

En la Tabla 1 podemos ver la distribución de los y las participantes según el área de conocimiento de acceso al MAES: Ciencias Experimentales (Física y Química, Biología y Geología, Ciencias de la Salud y el Deporte), Ciencias Instrumentales (Tecnología-Dibujo, Informática y Matemáticas), Ciencias Sociales (Historia-Geografía, Economía-Empresa-Comercio, Formación y Orientación Laboral, Orientación Educativa) y Humanidades (Idioma Extranjero, Lengua y Literatura Española y Música)

TABLA 1
DISTRIBUCIÓN DE LA MUESTRA SEGÚN ÁREAS DE CONOCIMIENTO

ÁREA DE CONOCIMIENTO	FRECUENCIA	PORCENTAJE
Ciencias Experimentales(CE)	135	38,2
Ciencias Instrumentales (CI)	85	24,1
Ciencias Sociales (CS)	30	8,5
Humanidades (HUM)	103	29,2
Total	353	100,0

Fuente: Elaboración propia.

Instrumento

Para el desarrollo de la investigación se diseñó un cuestionario escala Likert con una escala de valoración que incluye cinco categorías posibles que oscilan desde 1 (mínimo) a 5 (máximo). El cuestionario se organiza en una sección inicial de datos generales (edad, género, año de finalización de estudios y especialidad del máster) y el resto de las preguntas siguientes aparecen distribuidas en tres secciones centradas en valorar: las expectativas de los objetivos, las competencias generales y las competencias establecidas para el prácticum en el MAES. El cuestionario pasó por un proceso de validación conceptual, de comprensión y de constructo, alcanzando un grado muy elevado de fiabilidad interna (Alfa Cronbach 0,956) (SERRANO; PONTES, 2015).

Centrándonos en el objetivo de esta investigación, en la Cuadro 1 se recoge el conjunto de competencias transversales previstas para el MAES (ESPAÑA, 2007) donde se incluye la competencia: Diseñar y desarrollar espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

CUADRO 1
COMPETENCIAS TRANSVERSALES MAES

ÍTEMS	ENUNCIADO
1	Conocer los contenidos curriculares de las materias relativas a la especialización docente correspondiente.
2	Planificar, desarrollar y evaluar el proceso de enseñanza y aprendizaje.
3	Buscar, obtener, procesar y comunicar información (oral, impresa, audiovisual, digital o multimedia), acreditando un manejo adecuado de las Tics y el dominio de una segunda lengua en los procesos de comunicación.
4	Concretar el currículo que se vaya a implantar en un centro docente, desarrollando y aplicando metodologías didácticas tanto grupales como personalizadas, adaptadas a la diversidad de los estudiantes.
5	Diseñar y desarrollar espacios de aprendizaje que favorezcan el respeto y la igualdad de género.
6	Adquirir estrategias para estimular el esfuerzo del estudiante y promover su capacidad para aprender por sí mismo y con otros.
7	Conocer los procesos de interacción y comunicación en el aula, para fomentar el aprendizaje y la convivencia en el aula, y abordar problemas de disciplina y resolución de conflictos.
8	Diseñar y realizar actividades formales y no formales.
9	Conocer la normativa y la organización institucional del sistema educativo.

(Continua)

(Continuação)

ÍTEMS	ENUNCIADO
10	Conocer y analizar las características históricas de la profesión docente.
11	Informar y asesorar a las familias acerca del proceso de enseñanza y aprendizaje y sobre la orientación personal, académica y profesional de sus hijos.
12	Fomentar el espíritu crítico, reflexivo, emprendedor y los hábitos de búsqueda activa de empleo
13	Favorecer y garantizar el respeto a los Derechos Humanos y a los principios de accesibilidad universal, igualdad, no discriminación y fomento de los valores democráticos y de la cultura de paz.

Fuente: España (2007).

Procedimiento y análisis de datos

La recogida de datos se realizó mediante la plataforma Moodle en un seminario virtual incluido en el módulo de “Practicum”. Estos datos se han codificado y se han aplicado varios tratamientos estadísticos con ayuda del paquete informático SPSS V.22.

Como se ha anticipado, en este estudio solo se procedió a evaluar la competencia sobre el diseño y desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género, a través de sus dos subcategorías: nivel de desarrollo alcanzado durante la formación recibida y la importancia que los futuros docentes atribuyen a tal competencia. Para conocer en qué nivel valora el alumnado el desarrollo adquirido y la importancia atribuida a esta competencia, se aplicaron pruebas descriptivas.

En segundo lugar, se realizó un análisis de correlación (Pearson) para calcular si existe una relación entre los valores que los alumnos asignan a la importancia y el nivel de desarrollo atribuido al diseño y desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

Finalmente, con el objetivo de evaluar si existen diferencias en la percepción que el alumnado tiene sobre la importancia y el nivel de desarrollo adquirido en esta competencia entre género, edad y área de conocimiento, se utilizaron dos análisis de la varianza (ANOVA). Este análisis permite evaluar las diferencias en el valor de las variables respuestas: importancia y nivel de desarrollo (5 niveles) en función de los factores a evaluar: género (2 niveles), edad (3 niveles) y macro-área del conocimiento (2 niveles). En este análisis solo se incluyeron los factores fijos, ya que es confuso comparar la importancia relativa de las interacciones en una ANOVA multifactorial cuando hay más de un factor significativo encontrado (GRAHAM; EDWARDS, 2001). En ambos, se utilizó la prueba de diferencia mínima significativa de Fisher (prueba de LSD) para verificar las diferencias entre el nivel de las variables categóricas y para ilustrarlas. Los análisis estadísticos se realizaron empleando el software InfoStats (BALZARINI *et al.*, 2002).

RESULTADOS

A continuación, presentamos los resultados de acuerdo a los objetivos específicos planteados en el estudio.

IDEAS PREVIAS SOBRE EL NIVEL DE DESARROLLO Y LA IMPORTANCIA ATRIBUIDA

Con objeto de simplificar el análisis descriptivo se ha realizado una agrupación por los extremos de las cinco categorías de respuesta de los diferentes ítems, definiendo los siguientes niveles: I (nada o poco de acuerdo), II (acuerdo intermedio) y III (bastante o muy de acuerdo).

Como podemos observar en la Tabla 2, existe un acuerdo bastante elevado entre el alumnado del Máster MAES en cuanto a valorar como importantes todas las competencias transversales de su formación. Son valores medios que oscilan entre 3,75 (ítem 10) y 4,48 (ítems 2 y 6). Sin embargo, en relación al nivel de desarrollo que el alumnado percibe haber adquirido durante su formación, existe una mayor heterogeneidad de opiniones. Los niveles medios son más bajos que en la importancia atribuida. Unos valores medios que oscilan entre 2,92 (ítem 12) y 3,44 (ítem 9).

TABLA 2
ANÁLISIS DE FRECUENCIAS SOBRE EL NIVEL DE DESARROLLO Y LA IMPORTANCIA ATRIBUIDA

Nivel de desarrollo	Competencias transversales												
	1	2	3	4	5	6	7	8	9	10	11	12	13
I (Nada)	17,8	17,3	18,7	22,9	26,1	24,6	26,3	28,3	16,4	21,0	28,7	36,8	21,8
II (intermedio)	35,4	37,4	32,3	42,2	33,7	38,8	34,3	34,0	37,9	35,7	33,1	31,2	33,4
III (bastante)	46,7	45,3	49,0	34,8	40,2	36,5	39,4	37,7	45,6	43,3	34,2	32,0	44,8
Media	3,4	3,4	3,4	3,2	3,2	3,2	3,1	3,4	3,3	3,0	2,9	3,4	
Desviación	1,04	1,00	1,01	1,03	1,09	1,08	1,07	1,06	1,00	1,02	1,14	1,20	1,14

Importancia atribuida	Competencias transversales												
	1	2	3	4	5	6	7	8	9	10	11	12	13
I (Nada)	3,1	3,0	2,8	2,5	3,7	3,7	4,8	4,8	4,8	9,1	3,4	5,4	2,8
II (intermedio)	9,6	7,1	11,3	10,5	13,3	6,2	6,2	11,0	15,9	30,3	12,2	13,9	10,2
III (bastante)	87,3	89,9	85,8	87,0	83,0	90,1	89,0	84,1	79,3	60,6	84,4	80,7	87,0
Media	4,5	4,5	4,3	4,4	4,3	4,5	4,4	4,2	4,2	3,8	4,3	4,3	4,4
Desviación	0,85	0,79	0,81	0,81	0,89	0,81	0,85	0,87	0,89	0,96	0,83	0,97	0,83

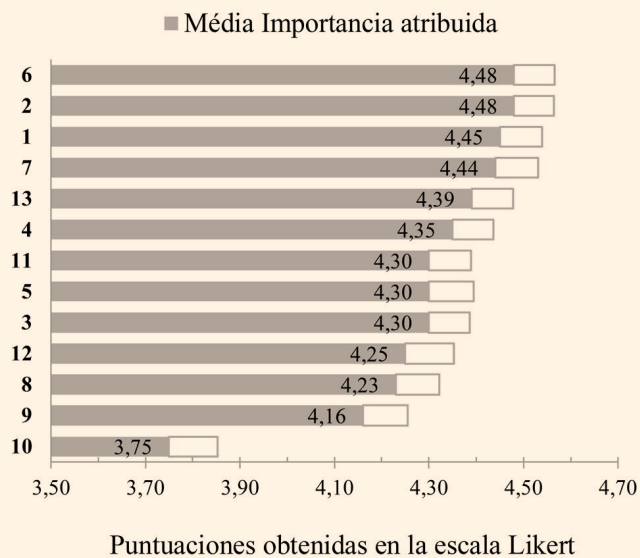
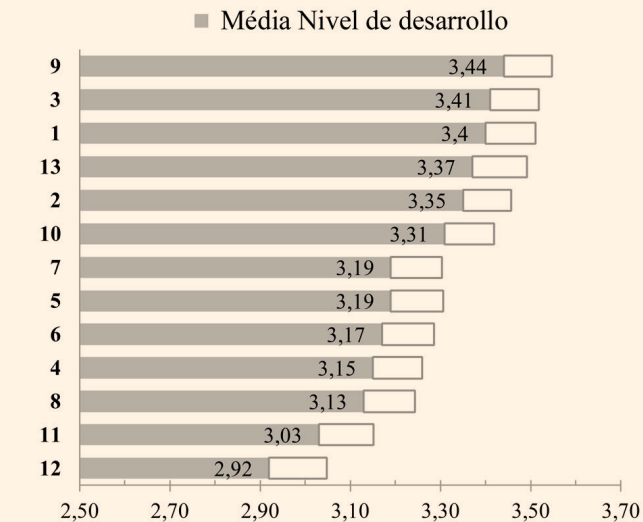
Fuente: Elaboración propia.

De acuerdo al primero de los objetivos específicos planteados (conocer las ideas previas del alumnado sobre el nivel de desarrollo y la importancia atribuida a tal competencia en relación con el conjunto global de competencias transversales), en la Figura 1 podemos observar cómo la competencia cinco ocupa el octavo lugar en relación al resto. Sin embargo, cuando se trata de valorar el nivel de desarrollo que alumnado considera haber adquirido, esta competencia gana una posición (séptimo lugar).

De manera general, podemos indicar que, tanto en la importancia como en el nivel, desarrollar espacios de aprendizaje que tengan en cuenta la igualdad

de género se encuentra en una posición intermedia con relación al resto de competencias transversales.

FIGURA 1
COMPETENCIAS ORDENADAS DE MAYOR A MENOR MEDIA



Fuente: Elaboración propia.

RELACIÓN ENTRE LA IMPORTANCIA ATRIBUIDA Y EL NIVEL DE DESARROLLO ADQUIRIDO

La correlación de Pearson muestra una relación significativa y positiva entre ambas variables (nivel e importancia) (Pearson = 0,21; $p < 0,0001$).

INFLUENCIA DE FACTORES: GÉNERO, EDAD Y ÁREA DE CONOCIMIENTO

Los resultados obtenidos en el ANOVA para el caso de la importancia atribuida al diseño y desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género no mostraron diferencias significativas para ninguno de los factores incluidos. Sin embargo, sí muestran diferencias entre ambos géneros y entre ambas macro-áreas en el caso del nivel de desarrollo adquirido en el diseño y desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género (Tabla 3).

TABLA 3
RESULTADOS DEL ANOVA PARA LA VARIABLE NIVEL DE DESARROLLO

VARIABLES	Sc	gl	F	p
Modelo	13,67	4	2,98	0,01
Edad	1,68	2	0,73	0,48
Género	5,90	1	5,15	0,02
Macro-área	4,66	1	4,07	0,04
Error	398,45	348		
Total	431,12	352		

gl = grados de libertad del denominador; Sc = Suma de cuadrados

Fuente: Elaboración propia.

Los resultados del análisis a posteriori (LSD de Fisher) indican diferencias entre los dos géneros (Tabla 4), mostrando que las mujeres asignan un mayor valor al nivel de desarrollo adquirido que los hombres. Por otro lado, este análisis también muestra que los encuestados del macro-área de sociales y humanidades asignan un mayor valor al nivel de desarrollo adquirido a tal competencia que el alumnado de Ciencias y Tecnologías.

TABLA 4
RESULTADOS DEL LSD DE FISHER PARA LA VARIABLE NIVEL DE DESARROLLO

MACRO - ÁREA	MEDIAS	n	E.E.	LETRA
Ciencias y Tecnologías	3,07	178	0,08	A
Sociales y Humanidades	3,30	175	0,09	B

SEXO	MEDIAS	n	E.E.	LETRA
Hombres	3,05	163	0,09	A
Mujeres	3,31	190	0,08	B

Medias con una letra común no son significativamente diferentes ($p > 0,05$)

Error: 1,1450; gl: 348

Fuente: Elaboración propia.

DISCUSIÓN

Los resultados parecen indicar de forma clara, en el caso del nivel de desarrollo adquirido entre los estudiantes del Máster MAES, que las variables género y área de conocimiento juegan un papel importante en la determinación de la competencia centrada en el diseño y desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género.

En la línea de lo que planteaban Forbes y Davis (2010), podemos observar que algunas de las competencias que se atribuyen como menos importantes entre el colectivo, son las menos desarrolladas por los futuros y las futuras docentes (conocer los procesos de interacción del alumnado y la resolución de conflictos, diseñar actividades no formales y el fomento del espíritu crítico, reflexivo y emprendedor). Lo que conllevará una disminución en el tiempo que se dedicará frente a otras competencias que generan un mayor nivel de seguridad. Sin embargo, esto no siempre ocurre; como hemos podido ver, hay competencias que tienen un nivel de importancia atribuido bastante bajo (conocer la normativa del sistema educativo y analizar las características históricas de la profesión) y la percepción sobre el nivel de desarrollo es bastante elevada.

Por otro lado, a diferencia de los resultados de González (2016), el futuro profesorado de Educación Secundaria sí valora como importante la inclusión de espacios y actividades en el aula que fomenten la igualdad de género. Aunque como indican Ukpokodu (2016) y Walton y colaboradores (2018), es necesario seguir reforzando la formación en prácticas relacionadas con la igualdad de género que contribuyan a mejorar el nivel de desarrollo adquirido (GARCÍA *et al.*, 2013).

En otra línea, cuando tenemos en cuenta la formación previa recibida, observamos en los resultados como ésta ejerce una influencia significativa en relación al nivel de desarrollo adquirido. Es decir, como ya anticipaban Goldman y Warren (1973), Watkins y Hattie (1985) y Delgado y Prieto (1993) y más recientemente Harlen (2015), la formación recibida en las diferentes carreras universitarias va a plantear contextos de aprendizaje heterogéneos y como consecuencia, distintos tipos de conductas y enfoques de aprendizaje diferentes en los futuros y las futuras docentes. Resultados muy en consonancia con Cano (2000), cuando afirma que esas diferencias afloran sobre todo cuando entra en juego la formación previa y el género, como ocurre en nuestro estudio.

De acuerdo con los resultados de Díaz de Grenu y Anguita (2017), en nuestro estudio también se evidencia una tendencia femenina para incorporar el diseño de prácticas educativas sobre género en el aula. Por tanto, la sensibilización y formación son imprescindibles en los procesos de inclusión de la perspectiva de género en los contenidos y prácticas educativas (REBOLLO CATALÁN; VEGA CARO; GARCÍA-PEREZ, 2011).

CONCLUSIÓN

Como formadores y formadoras, conocer las actitudes del profesorado hacia el diseño y desarrollo de espacios que favorezcan el respeto y la igualdad de género

puede ayudarnos no solo a desarrollar programas formativos específicos para trabajar con nuestro alumnado (futuros y futuras docentes), sino también para conocer cómo perciben este tema y su importancia en la educación futura de sus discentes.

En general, la puesta en marcha del Máster FPES en nuestro país durante los últimos años, junto con la necesidad de transformar la formación inicial del profesorado de secundaria en un proceso que permita disponer de docentes mejor preparados y capacitados para la educación del siglo XXI, ha generado muchas expectativas sobre el nuevo modelo de formación. Con este tipo de trabajos, podemos contribuir a mejorar la FIPS desarrollando investigaciones educativas que ayuden a conocer el pensamiento inicial de los futuros y las futuras docentes, a identificar necesidades formativas, a indagar en las expectativas sobre el proceso de formación inicial, a valorar las competencias docentes que logran desarrollar durante dicho proceso, entre otras.

Como hemos podido concluir en los resultados, variables contextuales como la carrera universitaria estudiada inciden significativamente en las percepciones que los futuros y las futuras docentes tienen sobre la formación recibida y en interacción con el género. Esto implica que no se debe obviar esta variable en espacios de investigación, intervención y enseñanza. Como apuntaban Rebollo Catalán, Vega Caro y García-Perez (2011), es necesario que el profesorado asuma un papel activo, reflexionando y revisando sus actitudes y prácticas docentes. Como anticipábamos en la literatura y en consonancia con Esen (2013), si las políticas educativas promueven la igualdad de género en la educación, la resistencia, la sensibilización y las nuevas prácticas docentes desempeñarían nuevos criterios, roles y actitudes con respecto a la igualdad de género.

Finalmente, consideramos que sería necesario profundizar en los mecanismos que propician estas diferencias y en la evolución de los diferentes estilos por titulación y género. Determinar si las diferencias se deben a factores previos o son determinados por procesos específicos de las diferentes titulaciones. O bien, como se anticipaba en la literatura, si esto puede ser debido al propio sistema de evaluación que se utiliza (LEDER; FORGASZ, 2018). Esto permitiría una mayor comprensión de los estilos de aprendizaje del alumnado y, por ende, de sus procesos de aprendizaje.

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NOTA: Rocío Serrano Rodríguez planificó el diseño y la toma de datos, la introducción teórica y la discusión; Elisa Pérez Gracia revisó y completó el marco teórico, los análisis de resultados y las conclusiones; Monserrat Bustamante Chan realizó la revisión del análisis de los datos y la adaptación del texto al estilo y normas de la revista; Antonio Carpio Camargo se encargó del tratamiento metodológico de los datos.

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4.6. ESTUDIO 2.1. CONSTRUCCIÓN DE LA IDENTIDAD PROFESIONAL DOCENTE: UNA REVISIÓN DE LA LITERATURA

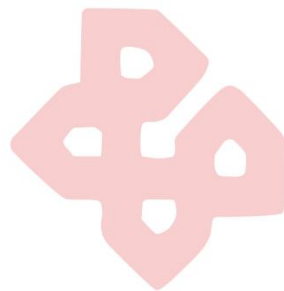
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Este estudio tiene como objetivo general explorar cómo evoluciona la IPD durante el proceso de formación inicial del profesorado de educación secundaria, analizando cómo se aborda este tema en los programas de formación docente y qué factores pueden influir en su desarrollo.



CONSTRUCCIÓN DE LA IDENTIDAD PROFESIONAL DOCENTE: UNA REVISIÓN DE LA LITERATURA

Teachers' Professional Identity Construction: A review of the literature



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Resumen:

La construcción de la identidad profesional docente (IPD) es un tema clave en la investigación actual por las implicaciones que puede tener en la práctica educativa del profesorado. Su construcción y evolución están influenciadas por una gran variedad de factores (personales, profesionales y contextuales). Esta revisión de la literatura tiene como objetivo principal conocer cómo evoluciona la IPD durante el proceso de formación inicial del profesorado de Educación Secundaria, tratando de saber cómo se aborda este tema en los programas de formación docente y qué factores pueden influir en su desarrollo. Por ello, se ha llevado a cabo un metaanálisis para examinar la literatura existente entre los años 1990 y 2019, en el que se han analizado 35 estudios de investigación y se ha observado un aumento progresivo de la cantidad de trabajos publicados a medida que se avanza en el tiempo. La mayoría de ellos coinciden en la definición del término, la necesidad de trabajar este tema dentro del proceso de formación inicial y abordar los factores que influyen en su desarrollo. Para concluir, este trabajo evidencia los diferentes enfoques y perspectivas que se han



considerado en la investigación sobre la IPD y, como consecuencia, las variadas posibilidades de estudio.

Palabras clave: *profesión docente, identidad, investigación sobre literatura científica, formación inicial, metaanálisis*

Abstract:

The construction of teachers' professional identity (TPI) is a key issue in current research, so a wide range of scholars has focused their interest on that topic. Its construction and evolution are influenced by a wide range factor (personal, professional and contextual) along the initial training period. This review aims to know how TPI within initial training among Secondary Education teachers evolves, how teacher training programs approach it, and which elements may influence its development. Therefore, a meta-analysis was used to examine the existing literature between 1990 and 2019. A total of 35 research studies were analysed showing an increase temporal tend. Most of them agree with the definition of the main term (TPI), the need to train it within initial training as well as the influence of determining factors in its construction. To conclude, this study evinces the different approaches and perspectives that have been considered in research on TPI, and, as a consequence, the varied study possibilities.

Key Words: *teaching profession; identity; literature review; preservice teacher education; meta-analysis*

1. Introduction

In the last decade, Teachers' Professional Identity (TPI) continues being a relevant research area in which a wide range of scholars and teacher educators have focused their attention (Cameron & Grant, 2017; Salazar Noguera & McCluskey, 2017; Izadinia, 2015). Moreover, this interest is even more relevant among preservice teachers for the reason that the focus on the shelf is a central aspect in teacher education referring to the influence of who you are on what you will learn and what you will be as a teacher in the near future (González-Calvo, et al., 2020; Timostsuk & Ugate, 2010) so there is an effect of initial teacher training on the construction of TPI (Salazar Noguera & McCluskey, 2017).

On the whole, despite the fact that literature counts with varied meanings and interpretations of the concept of TPI, they all have a feature in common which has to do with the fact that it is not a fixed quality but it is rather an attribute that evolves while - in the case of teachers - they experience teaching practices and training and the way they share these with others (Beijaard, Meijer & Verloop, 2004). Some authors state that TPI refers to the way in which teachers pursue their profession, their attitudes toward it and the importance they give to their professional work and live and other characteristics that meet to produce a professional (Pillen, Brok & Beijaard, 2013; Cameron & Grant, 2017). Then, Pillen, et al. (2013) state that it is also recognised that its construction should start since the training process, considering it as the central process of becoming a teacher, when teachers negotiate and debate their self-conceptions, prior knowledge about the teaching-learning procedures, and they reflect on their role as teachers (Lim, 2011).

There are several reasons why we develop this literature review. It is necessary to check whether researchers' conceptions about TPI have evolved as well as the focuses of the recent studies and to understand TPI in order to better known insights into the key aspects of their work experiences and lives as well as to see the influence of this concept in their motivation, satisfaction and commitment so it contributes to a greater understanding of the issue in question.

Thus, we aim to know how TPI within initial training among Secondary Education (SE) teachers evolves by answering the following questions: How do teacher-training programs approach TPI? How does TPI evolve during the different stages of initial training? Which elements influence its development?

2. Methodology

2.1. Selection of studies

We confined literature database searches for the terms “professional identity”, “teacher training” and “secondary education” and any combination of these terms by using the Boolean operators namely “or” “and” “not”. We reviewed research articles published between 1990 and 2019 because it was in the late nineties when TPI emerged as a “separate research area” (Beijaard, et al., 2004).

The review followed the recommendations and criteria established in the PRISMA statement. It was carried out with the help of two different databases namely Web of Science (WoS) and Scopus since they are the two most internationally recognized databases (Falenchuk, McMullen, Fletcher & Shah, 2017).

2.2. Inclusion and exclusion criteria

Research articles were evaluated using the PICOS (Population, Intervention, Comparators, Outcome and Study Design) model (table 1).

Table 1
PICOS criteria for inclusión and exclusión of studies

Category	Inclusion	Exclusion
Participants	Preservice and early career teachers	Inservice teachers with a solid and stable career
Intervention	Any	None
Comparator	Any	None
Outcomes	Studies regarding TPI definition, its need to be developed within teacher education (initial and lifelong learning) and influencing factors on this process	Studies too focused on the vocation but not associated with professional identity and those only interested in analysing policies
Study Design	Qualitative, quantitative, and mixed approaches	None

2.3. Approach to analysis

At first, a total of fifty-one studies were collected but after applying the PICO criteria, nine were dismissed (Figure 1).

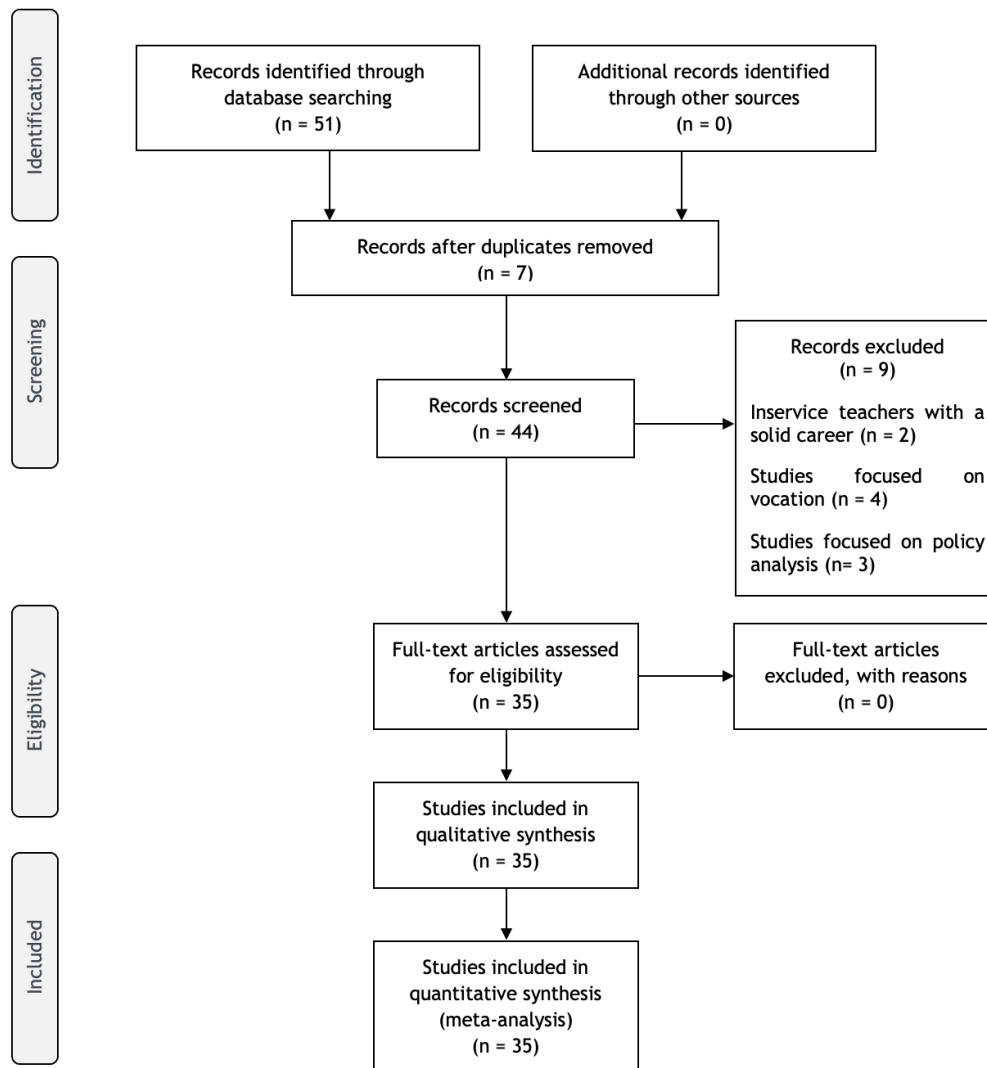


Figure 1. Flow diagram of the literature review process.

Then, the thirty-five selected studies were divided into two main blocks:

a) Reviews

- A.1 Analysis of teacher training programs (n=5). These studies are purely theoretical since they mainly analyse document and official reports.
- A.2 Evolution and development of TPI (n=4). This category is also theoretical, but information is provided by previous reviews.

b) Empirical studies. It is divided into three categories according to the moment in which the investigation has been developed (first training, while training and in-service).

- B.1 Studies carried out during the beginning of the training period (n=6). They count with participants, who have just started their training.
- B.2 Studies whose focus is on preservice teachers in their initial training period (n=13). Participants in these studies have already experienced a placement period.
- B.3 Studies whose participants are in-service teachers who are starting their professional activity as teachers (n=7).

Figure 2 shows the total and the quartiles of research articles classified in the database Scopus (SJR) and Journal Citation Report (JCR).

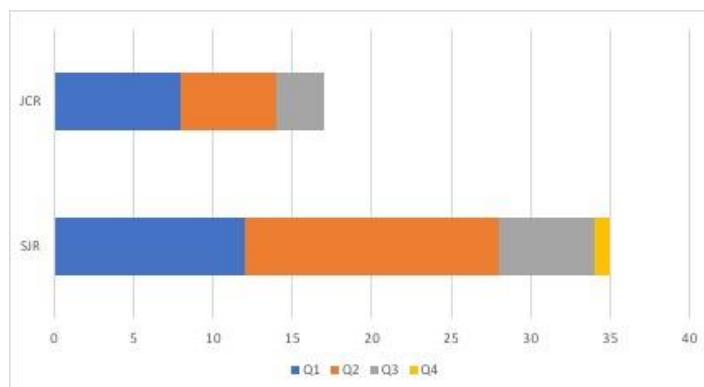


Figure 2. Research articles analysed and databases.

Then, figure 2 shows the amount of publications per years. It evinces that the number of research articles increases over time, so it means the growing interest in research on this subject.

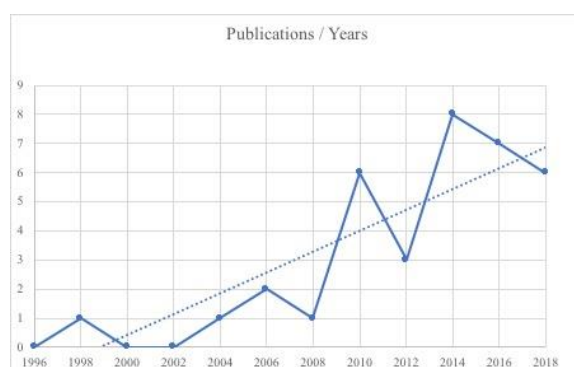


Figure 3. Research articles analysed per years.

3. Results

In this section, we are going to present the studies derived from our search separated in different blocks as defined in the methodology section.

In response to the first question, we distinguish two subcategories (A.1 and A.2).

a) Analysis of teacher training programs (A.1)

In table 2 we present the studies whose aim is to analyse teaching training programs and how they affect the TPI.

Table 2
Studies within A. 1.

Reference	Purpose(s)	Methodology	Major findings
Escudero Muñoz (2009) Revista de Educación	To analyse the concepts and capacities that secondary school teacher education programs should develop.	Qualitative research. Document analysis. Two Master's degree programs.	There is a lack of training in terms of professional identity.
Esteve (2009) Revista de Educación	To analyse how pre-service training programs must be planned to help future teacher to build their TPI.	Qualitative research. Document analysis. Investigations of the last 30 years	Orientations to design training programs: Profile each teacher's own professional identity. Understand the classroom as an interactive and communicative system.
González Sanmamed (2009) Revista de Educación	To rethink training programs for Secondary Education teachers and orient them towards the development of TPI.	Qualitative research. Document analysis. Programs (not specified).	There is an urgent need to redefine the professionalization of secondary school teachers. Training must provide opportunities to develop cultural emotions and feelings.
Marcelo García (2009) Revista de Educación	To argue the need to deal with pre-service teacher training from formal and informal spheres.	Qualitative research. Document analysis. Investigations (not specified).	It explains in detail the TPI as the object of the training process.
Lorenzo Vicente, Muñoz Galiano and Beas Miranda (2014) Revista Complutense de Educación Valores Afectivos	To analyse some key issues (e. g. professional identity) related to initial training models for Secondary Education from an international perspective.	Qualitative research. Review (reports). Document analysis. Eurydice (2002-2006, 2012; 2013); MEC (2012); TALIS (2014).	In terms of professional identity, initial training should include both theoretical and practical tasks.

Their main aim is to analyse how initial training programs for SE teachers should be designed to positively contribute to professional identity formation and distinguish which are the elements that must be considered.

They follow qualitative research method. Some of them use Eurydice reports (Lorenzo Vicente, Muñoz Galiano & Beas Miranda, 2014), diverse programs (Escudero Muñoz, 2009; González Sanmamed, 2009) and previous investigations (Esteve, 2009; Marcelo García, 2009).

First of all, it is required to wonder what kind of training is needed in order to deal with current social demands and which objectives this training should achieve (González Sanmamed, 2009). This reflection is the starting point to work towards the construction of TPI along the initial training process. Regarding the major findings, we should start by emphasising that the five studies agree it is within the initial training when pre-service teacher should define their professional identity as educators. It means to provide them with the adequate pedagogical and psychological knowledge and attitudes instead of stressing the content knowledge and academic skills, which lead to train Scientifics and experts in determine field of knowledge but not teachers (Lorenzo Vicente, et al., 2014). Esteve (2009) states that teacher training must be focused on what the teacher does so once they start working in their own classrooms, they do not have to apply a heuristic model that usually affect their self-esteem.

All in all, the best training should include both pedagogical and practical foundations considering the socialisation and complex interactions among educators to build an adequate TPI.

b) Evolution and development of TPI (A.2)

In spite of the fact that the four studies use qualitative research methodology (table 2), they differ from each other mainly due to the sample. On one hand, Beijaard, et al. (2004) carry out a literature review. Then, Bolívar (2007) and Bolívar and Domingo (2006) analyse documents such as previous literature and policy documents regarding teacher-training programs. Finally, the most recent study focuses on Science teachers so Avraamidou (2014) reviewed twenty-nine previous empirical studies that aimed to identify how they build their TPI.

Table 3
Studies within A.2.

Reference	Purpose(s)	Methodology	Major findings
Beijaard, Meijer and Verloop (2004) Teaching and Teacher Education	To carry out a literature review regarding TPI.	Qualitative research. Review. 22 research articles.	Most studies focus on personal variables rather than the contextual ones.

Bolívar and Domingo (2006) Theory and Research in Education	To analyse how Secondary Education TPI is rebuilt in times of educational reform.	Qualitative research. Document analysis. Previous research data (biographical-narrative approach to identity Beijaard et al 2004 and Bolívar et al. 2001). Qualitative research. Document analysis. Investigations of the last 30 years	Professionalisation of teaching is a dynamic process. Professional skills and knowledge as well as training strategies and formative models are needed to construct adequate identity.
Bolívar (2007) Estudios sobre Educación	To describe the process of building TPI in initial training.	Qualitative research. Review. Previous literature (not specified).	This article states how training courses contributes to TPI.
Avraamidou (2014) Studies in Science Education	To examine how the construct of science teacher identity has been conceptualised and studied within science education.	Qualitative research. Review. 29 empirical studies on teacher identity within the field of science education.	It identifies gaps and limitations in the existing literature: Oldest recommendations have not been taken into account so there is not much advance. There are not longitudinal studies.

To start with this block, there is a review of the field of teacher identity, which was published in 2004 by Beijaard, et al. This work is highly seminal since it provides scholars and practitioners with a solid basis of theory and research outcomes. In this paper, the authors reviewed twenty-two studies published between 1988 and 2000.

Moving to Bolívar (2007) and Bolívar and Domingo (2006), they both focus on the relationship between preservice Secondary Education teacher training and identity construction in Spain by taking into account the constant educational reforms. These changes directly affect TPI because it also introduces greater modifications in the “professionalization” of teaching. These authors understand initial teacher training as a process of personal and professional development in which professional identity is built. Identity includes rational factors, which are cognitive, and non-rational ones (emotional and affective) where the personal and professional values are the centre and it expressed through their motivation, attitude and commitment. That is why training directly affects identity construction.

Finally, there is a relevant work in which Avraamidou (2014) deeply analyses Science teacher’s identity; she reviewed 29 studies gathered into two main blocks. The first one includes studies related to how teacher identity is framed by their initial training, the subject matter knowledge, the wide range of reforms and dimensions namely competence, performance and recognition. The second one has to do with the elements that can influence teacher identity formation and development

such as courses, experiences, the use of technological devices and diverse curriculum resources and personal histories and biographies.

Regarding the first block of studies, Avraamidou (2014) agrees with other scholars such as Luehmann in Avraamidou (2014) that it is during the initial teacher training when identity is built. Nevertheless, it should be bore in mind that pre-service teachers already bring with them their own identity (maybe shaped by their previous professional experiences) and that this process of forming and reforming is not an easy task. As for science teacher identity, Gee (2000) defines it as the combination of three elements namely competence, performance and recognition.

As for the second block, Avraamidou (2014) gathers studies found in the literature that cover a wide range of approaches. The use of information and communication technologies (ICT) to share their thoughts, feelings, personal histories and considerations is determinant to support the evolution of teachers' identity. However, the management of assorted curricular materials during preservice training shape professional identity since they will strongly control their confidence (Forbes & Davis, 2008 in Avraamidou, 2014). Finally, some researchers have proved how after school experiences enable teacher to rethink about their attitudes, sensitivity, inquiry and collaboration when teaching (Katz et al., 2011 in Avraamidou, 2014).

Whereas tables 1 and 2 focuses on review and theoretical articles; tables 3, 4 and 5 show empirical studies on the field of TPI and these three aims to answer the second and third questions.

c) Studies carried out during the beginning of the training period (B.1)

Table 4
Studies within B.1.

Reference	Purpose(s)	Methodology	Major findings
Timostsuk and Ugaste (2010) Teaching and Teacher Education	To analyse TPI.	Qualitative research. Interviews. 45 student teachers.	It suggests the need to develop the social aspects of learning to teach by supporting teacher identity formation in initial training.
Lim (2011) Teaching and Teacher Education	To explore the underlying structure and dimensionality of student teachers' reflections on their professional identity.	Qualitative research. Autobiographical essays from 90 students. (Preservice EFL teachers).	It highlights key concepts that constitute professional identity: background for career pursuit, conceptualization of a good English teacher and confidence/aspirations.

Manso Ayuso and Martín Ortega (2014) Revista de Educación	To assess concrete elements within the implementation of the Master's degree in Secondary Education teacher training such as the acquisition of the professional identity.	Qualitative research. Document analysis and interviews. Master's Degree's programs. Students at UAM and UPC in 2009-2010 and 2010-2011. Mentors at both universities.	Identity construction is closely related to competences acquisition.
Izadinia (2015) Teaching and Teacher Education	To analyse how mentoring relationships play a role in creating changes in the professional identity among preservice teachers during the first week of training.	Qualitative research. Semi-structured interviews, observations and reflective journals. 7 preservice teachers.	No fundamental changes happened in the participants' teacher identity, only small changes were observed.
Torriente and Villardón-Gallego (2018) Profesorado Revista de Currículum y Formación de Profesorado	To analyse education undergraduate and master students' perceptions about teachers' social image.	Mixed research method. Open and close question questionnaire. 59 Master students at the beginning of the course. 52 Master students at the end.	Teachers' social prestige is a factor that affects teachers' identity and quality of education. Participants have great awareness of the undervalued social status of teachers.
Ibáñez and Oliva (2018) Profesorado Revista de Currículum y Formación de Profesorado	To analyse the impact of MAES in the initial training of future teachers of Spanish language and Literature as the basis of their professional identity.	Qualitative and quantitative research methods. 18 MAES students.	MAES has been a meaningful leap in the quality of initial training of future Secondary Education teachers.

There are six studies whose aim is to analyse TPI within their first stage of training as well as to examine which elements can introduce some changes in preservice TPI.

In terms of methodology, the first four studies follow qualitative research methods, whereas the last two carry out mixed research methods.

Timostsuk and Ugaste (2010) carried out a study in which they give importance to the role of both the self and social aspects in the formation of the TPI. On one hand, the researchers support it is decisive to know oneself before recognising you as a teacher, so they understand TPI as the person self-knowledge in changing context and the links between their previous experiences and their feelings. On the other hand, there is a range of social aspects, which should be developed by supporting teacher identity formation in the initial training. Among these social issues, they highlight the interpersonal relationships and cooperation with other people within the educational contexts, the socio-economic circumstances who directly affect the students, and consequently, the teaching practice.

Preservice teacher training gathers professionals from varied specialisations. Lim (2011) aims to investigate English preservice teachers' reflections on their professional identity. The researcher identifies the concepts that constitute professional identity by analysing the autobiographies of student teachers and the beliefs, perceptions and feelings that underline them. Participants are divided into two blocks: undergraduate student teachers (USTs) and graduate student teachers (GSTs). This study reveals differences between USTs and GSTs in their professional identities. Despite these two groups agree with the conceptualization of what a good English teacher is, they differ in the methodological strategies and skills needed.

Regarding preservice teachers' training, in the second study, Manso Ayuso and Martín Ortega (2014) assess the implementation of the Master's Degree in Secondary Education teachers training in two Spanish universities in order to identify their strengths and weaknesses. After analysing the programs, interviewing key informants from both universities and surveying students, teachers and mentors, the researchers were able to reach some conclusions such as the fact that longitudinal study enables the researchers to see how teachers' identity evolves through the training process when they acquire the necessary competences.

In addition, there are diverse factors and elements, which help teachers to build their professional identity and make them feel more confident. In this way, Izadinia (2015) focuses her attention in studying whether mentoring relationships reduce the attrition rate by supporting this hypothesis on authors such as He (2009, p. 1 in Izadinia, 2015) who states "the mentoring experience is a key factor in the success of beginning teachers." and Johnson (2003, p. 2 in Izadinia, 2015), who argues that "the relationship between a mentor teacher and a preservice teacher can transform the teachers involved." In order to pursue her main goal, she interviewed seven preservice teachers three times over the course of the one-year GDE-S program: before their first placement, after the first placement and at the end of the second placement. Results reveal positive and negative mentoring relationships. After all, she concluded that every preservice teacher has their own expectations of the training program, so they need different sort of help depending on their personalities and attitudes to properly build their confidence and construct their identity as teachers.

Another factor that influences the development of teachers' identity has to do with the social image of the profession and how future teachers perceive that (Torriente & Villardón-Gallego, 2018). In this sense, their initial training contributes to become aware of this profession's undervalued status and how it affects to their sense of belongingness to the profession and the construction of professional identity.

Finally, Ibáñez and Oliva (2018) analyses the confrontation between the professional identity acquired along the initial teacher training and the classrooms reality. They add that the Master's Degree in Secondary Teacher Education positively supply proper strategies to enhance TPI.

Thus, this block (Table 3) points out relevant facts to consider in future research among preservice teachers in their initial training such as the need to deepen in mentors' role and research on what constitutes mentor training; to approach TPI within the training period and to make teacher educators aware of preservice teachers' beliefs to facilitate their professional identity development.

d) Studies whose focus is on preservice teachers in their training period (B.2)

This category counts with the highest number of research articles (table 49). It shows a great gap between 1997 and 2006 and between 2006 and 2010 where studies related to TPI has not been found in our search.

Table 5
Studies within B.2.

Reference	Purpose(s)	Methodology	Major findings
Evans and Abbott (1997) Teacher Development	To examine how mentoring role may influence identity.	Qualitative research. Comparison of two models of PGCE secondary ITE.	Commitment along the training process is crucial so the role of mentoring also determines the way in which future teachers construct their identity.
Raffo and Hall (2006) British Journal of Sociology of Education	To examine how social and cultural aspects influence the trainee development and their identity construction.	Qualitative research Semi-structured interviews 9 full-time secondary PGCE trainee teachers (2002-2003).	Complex interdependences of personal biography, identity and socio-cultural dimensions of context have a great impact on the way they become teachers.
Hong (2010) Teaching and Teacher Education	To identify the relationship between preservice and beginning teachers' identity and their decision to leave the profession.	Mixed method research. Interviews and surveys. 84 surveys, 24 interviews.	The main reason to leave the profession has to do with emotional burnout due to their idealistic previous perceptions.
Smith and Darfler (2012) Journal of Science Teacher Education	To train Secondary Science teachers in developing identity among their students through an 8-week pedagogy course.	Qualitative research. Descriptive and grounded approach - data coding. 22 Secondary Science teachers.	Participants reported two broad categories of concerns with regard to identity constitution: teachers' prior knowledge, training and institutional support; inflexible curricula, standardized testing and teacher accountability.
Nicotra, Massimino, Petralia, Attinà, Maugeri and Costa (2012) Acta Medica Mediterranea	To examine among PE teachers in training their self-esteem, identity and self-assertion	Qualitative research. Projective techniques the human-figure drawing. 64 teachers in training.	Identity values increases as the training course develops.

Kim Anh (2013) Teaching and Teacher Education	To analyse the evolution of the professional identities of student teachers in a paired-placement in Vietnam.	Qualitative research. Individual semi-structured interviews. One pair (representative of the cohort in terms of gender, background, etc.)	Most of their conflicts were constructively solved and they experienced qualitative development in their teaching identities.
Torrecilla Sánchez, Martínez Abad, Olmos Migeláñez and Rodríguez Conde (2014) Profesorado Revista de Currículum y Formación de Profesorado	To test whether teaching programs about informational competences on conflict resolution are effective to improve the configuration of professional identity among Secondary Education teachers.	Quantitative research. Pre-experimental design with minimal control by pre-test and post-test. 60 students enrolled in the Master's Degree in Secondary Education teacher training.	Improving cross-curricular core competences is positive for the professional identity constitution in secondary school teachers.
Martínez de la Hidalga and Villardón Gallego (2015) Profesorado Revista de Currículum y Formación de Profesorado	To know how students enrolled in the Master's Degree in Secondary Education understand the image of a high school teacher in initial training with regard to TPI.	Qualitative research. Open-question questionnaire. 35 students enrolled within this Master's Degree.	It is necessary to identify teachers' competences within the process of identity construction. These competences have to do with planning and evaluation, students' guidance, communication, encourage students and their autonomy, curriculum design, teaching strategies and education in values.
Green (2015) Asia-Pacific Journal of Teacher Education	To examine the formation of their identity as new teachers, their adaption to the new roles and their own thoughts in relation to their new careers.	Qualitative research. Interviews, site visits, emails and phone calls. 12 career-change teachers from industry background.	The identity formation was clearly influenced by their prior industry experiences and their vocational attitudes rather than by their teacher education program and their experiences in schools.
Papavassiliou-Alexiou and Zourna (2016) Professional Development in Education	To analyse how the training in and use of Drama in Education (DiE) affects the development of teachers' skills (identity).	Qualitative research. Semi-structured interviews. 35 Secondary Education teachers who had been trained in DiE.	DiE strengthens their professional identity.

Izadina (2016) International Journal of Mentoring and Coaching in Education	To examine the changes in preservice TPI after a four-week block practicum. To investigate the role of mentor teachers in creating changes in their professional identity.	Qualitative research. Open interviews. 8 secondary preservice teachers and 9 mentor teachers.	Some participants' experiences changes in: Confidence: due to their mentor's support, positive feedback and advice. Teacher voice understood as a sense of authority: they take ownerships and more decisions. Vision: through the course they change their conception of teaching and teachers' identity. These variables affect the construction of identity.
Trevallion (2018) International Journal of Innovation, Creativity and Change	To examine the transitions a pre-service Technology Education teacher during their pre-service program.	Qualitative research. Multiple case study approach (portfolios, concept maps, reflective journals and semi-structured interviews).	This study discusses significant changes in the students' professional identity and this has significant implication for the training of secondary teachers.
Bennett and Chong (2018) International Journal of Music Education	To explore pre-service music teachers' professional identities during pre-service training.	Mixed research methods. 60 undergraduate and graduate students in the field of music.	Participants' teacher identities did not align with their level of performance proficiency but with participants' intentions to remain in teaching.

The main aim of these studies is to analyse the evolution of TPI along their training. Some of them focus their attention on the changes it suffers and the link between preservice teachers and mentor teachers during the training period (Izadina, 2016; Kim, 2013; Evans & Abbott, 1997; Raffo & Hall, 2006). The other authors (table 4) are more interested in analysing TPI influencing factors.

In order to reach these objectives, some researchers have used qualitative research methods, other quantitative ones and another group mixed research methods depending on the sample, the context and the goals.

Not only Izadina (2016; 2015) but also other researchers such as Kim (2013) and Evans and Abbott (1997) devote their attention to the importance of the placement periods and the mentor teachers' role. They base their concern on the premise that teacher identity formation is a process of negotiation between diverse conceptions of teaching that can be seen during the placement period by interacting with in-service teachers. Mentors affirm that there are changes in aspects such as the teaching strategies, authority, confidence and relationships with pupils (Izadina, 2016). The mentoring relationship is decisive because it affects teachers' identity and confidence in their work. Sometimes, mentees are grateful for the support and assistance they receive and they recognize how it positively affect to their

professional development (Izadinia, 2016) but occasionally there could be some misunderstandings and contradictions regarding the planning, coordination and teaching tasks that modify the way preservice teachers perceive their experiences cognitively and affectively (Kim, 2013) and it makes them to underestimate the role of mentor teachers (Raffo & Hall, 2006; Evans & Abbott, 1997). However, they all agree that placement makes changes in preservice teachers' identity along its evolution.

Besides, being identity a dynamic concept, its progression has caught the attention of many scholars. Within this category, there are five studies, which have proved the effectiveness of Drama in Education (DiE) (Papavassiliou-Alexiou & Zourna, 2016), the enhancement of teachers' competences (Smith & Darfler, 2012), the understanding of students' identity (Torrecilla Sánchez, et al., 2014), the proficient management and solid understanding of Education (Trevallion, 2018) and the influence of teaching bonds (Bennett & Chong, 2018) as strategies that contribute to the development of TPI. Firstly, DiE strengthens professional identity because once teachers have been trained to apply it into their daily practices, they feel more confident, and they discover how motivating this strategy is for both teachers and students.

Secondly, Smith and Darfler (2012) ensure that in order to become an effective secondary Science teacher, it is not only necessary to develop teachers' identity but also to know students' identity and how it evolves. Results support the premise that there are strong connections between identity and student motivation.

Thirdly, Torrecilla Sánchez, et al. (2014) study the connections between teachers' competences and identity progression. They affirm "improving on transversal core competences is positive for the professional identity constitution in secondary school teachers." (Torrecilla Sánchez, et al., 2014, p. 190). Results reveal that the more developed these competences are, the better teachers' identity is constructed but they point out that these competences are not trained enough during initial teacher training in the study's context, which is Spain.

Altogether, TPI evolution is continuous, and it is affected by diverse factors that are directly connected to the teaching practice. Martínez de la Hidalga and Villardón Gallego (2015) study how important the image of a secondary education teacher in initial training is in regards with the identity construction and they also take into account its relationship with the development of teachers' competences. In this sense, they go further since they consider that preservice teachers should be able to identify their competences as well as to train them.

Then, there are also some important aspects of the personality of the teacher that should be considered to get success in the construction of teachers' identity. Nicotra, et al. (2012) point out two of them namely self-esteem and self-assertion.

Furthermore, vocation and identity are strongly related. Green (2015) considers that prior careers experiences influence the creation of identity among

mature new teachers. She concludes that previous experiences influence the formation of the TPI.

To end up with this category, Hong (2010) analyses factors such as values, efficacy, commitment, knowledge and belief, emotion and micropolitics as parts of the teachers' identity. It means that those teachers, whose identity is not solid and well-constructed, usually show emotional burnout that make them leave the profession.

e) Studies whose participants are in-service teachers who are starting their professional career as teachers (B.3)

This category includes the most recent research articles (published between 2013 and 2017). They all share a feature; the participants of the studies are novice in-service teachers so they have been working for a maximum of five years. As for their goals, they concentrate on how their TPI evolve once they are emerged in their daily praxis as teachers as well as on identifying diverse ways teachers have to personally reflect about the skills they put into practice and their own progression such as e-Portfolio (Boulton, 2014).

Table 6
Studies within B.3.

Reference	Purpose(s)	Methodology	Major findings
Pillen, Den Brok and Beijaard (2013) Teaching and Teacher Education	To study profiles and tensions regarding professional identity.	Quantitative research. Close-question questionnaire. 373 teachers.	It provides a classification of six profiles: teachers struggling with significant others, with care-related tensions, with responsibility-related tensions, moderately tense teachers, tension-free and troubled teachers.
Lenuta Rus, Raluca Tomsa, Luiza Rebege and Apostol (2013) Procedia - Social and Behavioral Sciences	To examine the elements of science teachers' professional identity.	Qualitative research. Content analysis. 21-Statement Test (created for this study based on Kuhn and McPartland's 20 statements). 80 teachers.	Teachers' professional identity was defined using statements related to worker characteristics, occupational and worker requirements, whereas statements regarding experience were less relevant.

Boulton (2014) European Journal of Teacher Education	To demonstrate the efficacy of using ePortfolios to enhance career skills for new teachers focusing on digital stories of developing professional identity.	Qualitative research. Action research. Two semi-structured interviews. An electronic questionnaire. Observations. 25 newly qualified teachers.	The participants view the ePortfolio as an assessment tool rather than as a repository for authentic evidence for evidencing professional identity.
Sanz Ponce and Hirsch Adler (2016) Perfiles Educativos	To diagnose the skills that teachers use in their daily work focusing the attention on conflicts and ethical dilemmas, deontology, professional identity and ethical skills.	Quantitative research. Scale of attitudes regarding professional ethic (Ajzen and Fishbein 1980). 551 Secondary School teachers (private and semi-private centres).	High level of self-awareness among teachers with regard to their professional ethics.
Sancho-Gil and Correa-Gorospé (2016) Movimento	To study how identity is built through diverse experiences, contexts and elements during the first years as teachers.	Qualitative research. 23 micro-ethnographies and 13 focus groups. 88 teachers.	Teachers' identity is linked to personal experiences and social interactions. Initial teacher training directly influences teachers' identity.
Salazar Noguera and McCluskey (2017) Teacher Development	To identify to what extent beginning teachers feel prepared for teaching. To analyse what they have learned as practicing teachers.	Qualitative research. Open interviews. 12 secondary education teachers from Spain and 9 secondary education teachers from Australia.	There are differences in their early career experiences regarding professional learning and their development of identity.
Cameron and Grant (2017) International Journal of Mentoring and Coaching in Education	To explore how external subject-specific mentoring can influence the professional identity construction of early career physics teachers	Qualitative research. Semi-structured interviews. 18 physics teachers (UK)	The mentoring process has a strong impact on their professional identity. There is a relationship between teachers' needs and their identity.

On one hand, Pillen, et al. (2013) identify the tensions that appear once teachers start their jobs as teachers because of the differences in how they see themselves as a person and as a teacher.

Although, these studies are focused on early career teachers, the interest in knowing the elements that set up TPI is still in force. Lenuta Rus, et al. (2013) identify six of them: worker characteristics, occupational and worker requirements, experience, occupation-specific information and workforce characteristics.

Cameron and Grant (2017) interviewed 18 teachers to know the impact of external subject-specific mentoring on their professional identity. Results show that early career teachers start identifying their training needs and they are directly

connected to their identity. Moreover, the mentoring process plays a key role in either rise or suppression of their TPI.

In light of the above, the identification of teachers' needs is crucial during the first years of teaching. Salazar and McCluskey (2017) and, Sancho Gil and Correa Gorospe (2016) focus on analysing whether teachers believe they are ready for their careers or not and how they interact within their professional contexts. Both studies consider the placement experiences as an important period that could influence them in diverse ways. Salazar and MacCluskey (2017) carried out the study in Spain and Australia so result slightly differ from each other. In Spain, participants refer to the lack of motivation within the theoretical lessons and the positive experience of the placement. In Australia, participants see the training period as beneficial although they clearly say that it was until they work as teachers when they truly understand teacher's role. Sanz Ponce and Hirsch Adler (2016) are also interested in diagnosing the skills novice teachers use so as to provide them with specific training which contributes to their identity construction. Among the main findings, participants point out professional identity as one of the dimensions within the professional ethics.

It is also interesting how the evolution of TPI can be analysed through e-Portfolio although it is necessary to be competence in using ICT (Boulton, 2014). All in all, the researcher sees this tool as a space for developing professional self-identity through sharing community needs with pre-service teachers. Thus, it could accomplish two goals: to deepen on identity evolution and to support preservice teachers.

Despite all the studies used in this review aim diverse goals, they share the interest in TPI and its evolution at various stages.

4. Conclusions

In the introduction of this review, we identified TPI as a separate research field due to the great interest scholars have devoted to it and its repercussion in educational success. The number of studies is constantly growing up and there is also a significant evolution in terms of methodology. At the beginning, most of studies were quite theoretical so they based on the analysis of documents, training program and international reports. Teacher training programs as well as international reports agree with the importance and need to devote specific attention to the construction of TPI. Then, there was a slight change in the method, so the researchers started to interview both teacher educators and preservice teachers in order to be provided with more real information and closer to the educational praxis. Finally, those studies, which are more recent, introduce quantitative analysis such as pre-test and post-test and cluster analyses and mixed research methods which enable the researcher to get better understanding and corroboration of the research problem due to the integration of diverse strategies. It means there has been an evolution in

the approaches used in the field, which reflects the expanding concern on TPI nowadays.

The concept of TPI has also matured during this time. On one hand, most of the researchers define it similarly so they understand the term as a dynamic nature concept, which is important to understand their professional lives and career decision-making. Moreover, it refers to the perceptions preservice teachers have of themselves regarding self-awareness, knowledge, values, confidence and the interaction with colleagues, students and families. On the other hand, the researchers analyse a wide range of factors and elements, which influence the development of the TPI. Although some of them were already directly or indirectly considered in previous studies such as motivation, confidence and working experiences, there are some new elements such as the contextual features, the mentoring relationships, self-esteem and tensions. It means advancement with respect to the conclusions of Beijaard, et al. (2004) since they stress the need to pay more attention to the context in professional identity formation as well as to the interactions between mentors and mentees, which provide preservice teachers with a more realistic viewpoint that reinforce their self-esteem and reduce possible tensions in future practices.

Furthermore, it is clear that TPI evolves along the different stages of training, since the initial steps, during their first experiences with the real practice in their placement periods and afterwards. Then, it confirms that identity is something that develops during one's whole life and it is affected by a wide range of factors and elements both personal and contextual ones.

Research in this field point to improve initial Secondary Education teachers training as future lines taking into account that this process is crucial and that by creating a consistent identity among preservice teachers, retention rate of beginning teachers will be lower and educational outcomes at this stage will ameliorate. Furthermore, the role of mentoring should be emphasized for the reason that it has been proved its strong influence in teachers' identity (Izadina, 2016). In this sense, the mentor should be motivated enough because otherwise their role could become ineffective, and it affects preservice teachers' conceptions regarding their future role functions and creates tensions between them. In addition, longitudinal studies in this field are needed so as to study in detail whether evolution is significant within a concrete period of time.

This work makes a useful and updated contribution to the field. Not only it gathers the most relevant studies with regards to TPI and its construction, but it also brings insights regarding where investigation should go further in order to meet educational needs and societal demands. TPI has been shown to influence the teaching-learning process so those educators who feel a strong teacher identity, will succeed in their practice and their students will be able to take the most of each lesson due to their motivation.

To conclude, our future research aims to design a Likert scale questionnaire, which enables us to clearly identify which elements affect the development of TPI during the initial training of Secondary Education teachers. So, then this data can be corroborated with semi-structured interviews. Moreover, this review supply with a solid, complete, and updated literature, which will serve as the basis for forthcoming research articles.

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4.7. ESTUDIO 2.2. IDENTIDAD PROFESIONAL DOCENTE: VALIDACIÓN DE UN INSTRUMENTO DE EVALUACIÓN PARA PROFESORADO EN FORMACIÓN INICIAL

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Este estudio tiene como objetivo general desarrollar y validar un instrumento adecuado para analizar las creencias del alumnado del máster de profesorado de educación secundaria sobre el desarrollo de la IPD en el proceso de formación.



Research article

Teachers' professional identity: validation of an assessment instrument for preservice teachers



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ABSTRACT

This study aims to develop and validate an instrument to analyse future Secondary Education teachers' perceptions regarding the development of Teachers' Professional Identity (TPI). The data were collected from a sample of 733 participants who were students enrolled in the Master's Degree for Secondary Education teachers. The psychometric properties of the instrument were obtained by analysing content, and comprehension validity, construct validity and reliability. A first subsample was used for an Exploratory Factor Analysis, and a second one to verify the identified factor structure via Confirmatory Factor Analysis. The instrument is made up of 31 items in four scales namely the understanding of TPI, the development of TPI at various educational levels, the development of TPI in comparison with that of other professionals and the influencing factors. The results show that it has high levels of validity and reliability. Therefore, it provides TPI research field with an instrument to assess it during the initial teacher training period in consecutive training models where it seems to occur more identity crisis.

1. Introduction

Scholars increasingly acknowledge the construction and development of Teachers' Professional Identity (TPI) as a central focus on initial teacher training periods and the teaching profession (Beijaard et al., 2004; Cameron and Grant, 2017; Izadinia, 2015; Zhang et al., 2016).

In this sense, TPI is not a static attribute that remains the same throughout teachers' training processes (preservice teachers) and the development of their careers (inservice teachers), but rather a dynamic, changing, active and on-going process of the interpretation of experiences (Pérez Gracia et al., 2022; Beijaard et al., 2004; Donnini Rodríguez et al., 2018), that generates changes in knowledge and skills related to each person's conception of teaching and actions as a teacher (Garner and Kaplan, 2019). Learning to teach is a complex process in which an interaction between personal values and professional demands of teaching takes place (Leeferink et al., 2019). It could bring about diverse discernments that may end up as identity crisis. Thus, further understanding of how this interplay develops along preservice teachers training and the factors that may influence it is needed in order to strengthening the teaching profession.

Teacher learning not only refers to learning subject matter content, pedagogical strategies or teaching and learning theories, but it is also an identity making process (Schaefer and Clandinin, 2019). Thus, it is strongly essential to work with future teachers' perceptions of teachers' work and practices. TPI should begin at the same time as the training process, since it is considered to be the central process of becoming a teacher. Throughout this process, teachers negotiate and debate their self-conceptions and prior knowledge about the teaching-learning procedures, and reflect on their role as teachers (Clarke et al., 2017; Lim, 2011).

Therefore, teacher learning can and should be conceptualised as teacher identity learning (Capps et al., 2012). Knowing future teachers' beliefs in detail is consequently decisive for both their professional development and the students' academic performance (Pillen et al., 2013) and understanding their continuing development of their identity of becoming and being education professionals.

Moreover, results from prior research indicate the wide range of personal and contextual elements that should be analysed (e. g. Kim, 2013; Papavassiliou-Alexiou and Zourna, 2016; Yuan et al., 2019).

For that purpose, it is interesting to design and validate an instrument that enables researcher to get information about these issues and attain

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greater knowledge of how TPI is understood. In this way, it could be also useful to have such instrument so as to be able to carry out a diagnostic assessment in different moments of the initial teacher training process and consider these aspects in teacher education curricula with the final goal of strengthening future teachers' identity and prevent early career teachers' burnout. Therefore, in order to select and formulate the items of the instrument, the variables studied in previous research studies, whose influence and determination have been proved, were considered.

1.1. Understanding of TPI

Firstly, it is necessary to know how preservice teachers understand the TPI concept before going further with other aspects such as its differences depending on the educational stage and its influencing factors.

In this sense, preservice teachers tend to understand TPI as a process (either continuous or discontinuous) with highs and lows and full of transformative phases (Leeferink et al., 2019) and associated to diverse variables that may help them to develop their commitment and identity towards the teaching practise and work (Izadinia, 2015).

On the one hand, some student teachers may find easier to integrate the new experiences and learning with the existing knowledge into their personal life, so they are immersed within a steady process characterised by the continuous combination of concepts and practices from different contexts, they do not have an internal debate about themselves as teachers (Olsen, 2008; Leeferink et al., 2019). They are keen on learning teaching strategies to teach their discipline, to communicate with their colleagues and are self-critical in their practise (Salazar and McCluskey, 2017). On the other hand, there are also preservice teachers who go through diverse crises and tensions (Meijer et al., 2011). In those cases, these frictions are linked to lack of motivation and commitment (Rodrigues and Mogarro, 2019), they do not have intrinsic motivation towards the education world so their self-esteem along the process is low (Leeferink et al., 2019). However, these periods may be followed by an inspiring moment when they are able to feel the motivation back and it coincides with moments in which they have the chance of sharing their thoughts with their colleagues (Meijer et al., 2011).

1.2. TPI in teachers of diverse educational levels and in other professions

After gathering information about the definition of TPI and the variables associated with it, literature review (e.g. Schwartz and Dori, 2020) points out that the construction of TPI may differ according to the educational stage in which they are going to be develop their professional careers and, in comparison between the education world and other sectors due to its particularities and social mission (Zhong, 2020; Keary et al., 2020). Thus, these aspects were also considered in the instrument construction.

Firstly, there are two key points to be considered in this sense: (a) it should be considered that both the curriculum requirement and teaching functions and competences are different depending on the educational level (Green, 2015); (ii) the teacher training models (consecutive vs. simultaneous) (Gómez et al., 2017).

Early Childhood Education and Primary Education preservice teachers are usually enrolled in these degrees as their first option, so they made their decision following their intrinsic motivation (Hong, 2010; Keary et al., 2020; Zhong, 2020). They follow a simultaneous training model, so science and pedagogy are trained at the same level and given de same treatment. On the other hand, secondary and higher education student teachers usually come from a professional background (e. g. music, nursing, chemistry, economic), they feel "strongly identified with their (former) professions" (Van Lankveld et al., 2017, p. 328). For instance, Spain and other European countries (Eurydice, 2018) has opted for a consecutive training model in which scientific training predominates and practical training, along with training in secondary-level pedagogy, take second place (Bolívar, 2007; Gómez et al., 2017). Therefore, see themselves as professionals rather than teachers (expert becomes novice) and

they undervalue the need to learn teaching strategies, resources and issues regarding coexistence, values, etc.

The TPI construction process finds crises in both scenarios but the reasons differ. In early stages, these dilemmas are consequence of the personal and academic development, their mindset as we all their "view of an education degree as something meaningless" (Schaefer and Clandinin, 2019, p. 55). In higher education levels, the principal causes than take student teachers to face critical moments have to do with economic issues, trends, instability and "the perception of teaching as a job that is fitting for those who cannot get into other faculties of professions (Schaefer and Clandinin, 2019, p. 55). The identity learning process is so complex at that stages that the rate of early career attrition is significant (Clandinin et al., 2015).

1.3. TPI influencing factors

Finally, in light of the above mentioned, literature shows that building TPI involves a process that is influenced by a wide range of personal and contextual elements (Rodrigues and Mogarro, 2019). Therefore, a scale on this regard is needed in order to know in dept to which variables preservice teachers devote more importance (Aykac et al., 2017).

Thus, motivation, self-concept and self-image and the desire to design a professional project are key issues (Huu and Ngoc, 2017; Izadinia, 2015). Futhermore, there are three factors that seem to have stronger influence namely psychopedagogical training (Darling-Hammond, 2017), the placement period during initial teacher training (Yuan et al., 2019) and the interaction with colleagues (Avraamidou, 2014). The first one refers to the pedagogical tools that students are provided with in order to develop their skills and awareness on the importance of not only control the knowledge content, but also diverse psychological and education strategies to approach the students (Izadinia, 2015). Then, students attain great importance to the workplace learning process (teaching practicum), and social interactions with their mentors and other in-service teachers in different school settings (Henry, 2016; Leeferink et al., 2019).

All in all, after reviewing the existing literature on this field, there is a need to design this instrument for varied reasons:

- There is not an instrument including these elements (understanding of TPI, TPI in teachers of diverse educational levels and in other professions and TPI influencing factors) to assess TPI during the initial teacher training period but the existing ones refer to inservice teachers, so they cover other aspects (Hanna et al., 2020).
- Most of the research regarding TPI has been focused on inservice teachers despite the fact that there is a claim highlighting the urgent need of working on TPI since initial teacher training processes (Capps et al., 2012; Zhu and Gang, 2018).
- There is a mainstream that mainly focuses the research on the development of TPI considering simultaneous training models, so it would be convenient to analyse TPI construction in consecutive training models where it seems to occur more identity crisis (Anspal et al., 2019; Avraamidou, 2019).

Thus, the current study aims to describe the process employed to design and validate an instrument, which aims to analyse the perceptions of future secondary education teachers regarding the development of teachers' professional identity (TPI). The specific objectives are, therefore:

- To analyse the validity of the content as regards the 'Instrument for the development of Teachers Professional Identity'.
- To analyse the validity of the comprehension as regards the 'Instrument for the development of Teachers Professional Identity'.
- To study the construct validity of the 'Instrument for the development of Teachers Professional Identity'.

2. Methods

2.1. Participants

A sample of 733 Secondary Teacher Training Masters' Degree students at the University of Cordoba, corresponding to the academic years between 2014 and 2018, took part in this study (62.68% women and 37.2% men). The reason why we chose Mastre's Degree students is justified by diverse reasons: i) Considering previous literature (Schaefer and Clandinin, 2019), it was identified that TPI should be built since the initial teacher training process in order to guarantee quality education as well as prevent early career teachers' burnout; ii) The context where the research has been conducted applied a consecutive teacher education model, so it focuses pedagogy training that follows disciplinary content degree studies (Zuzovsky and Donitsa-Schmidt, 2017). Therefore, it is in the Master's degree when they first receive pedagogy training to become teachers.

Considering the home university, 50% of the students enrol in this master's degree carried out their degree studies at the University of Cordoba (UCO), 30% of them at other universities within the same region (Andalusia), and 20% at other universities of the country (Spain). Besides, 54% of the participants were aged between 20 and 25 years of age, whereas 19.1% were between 26 and 30 years of age. The remaining participants were over 30 years of age. Regarding their teaching experience, the participants have between 0 (no experience) and 3 years of experience (range; mean ± SD = 0–3; 1,7 ± 1) (see Table 1).

According to Morales (2012), the minimum number of participants recommended to establish the factorial validity of an instrument should be 10 subjects per item of the questionnaire or a minimum overall sample of 300 respondents (Burton and Mazerolle, 2011). Table 2 shows the distribution of the participants.

The sampling technique applied was the convenience sampling (Emerson, 2015) for the reason that participants were selected based on availability and willingness to take part. Participants were previously informed about the purpose of the present study and research ethical principles were applied so as to protect their anonymity, dignity, rights and welfare throughout the whole research project. Furthermore, before that, the research team asked for permission to both the University of Córdoba Committee on Publication Ethics and then, to the professors of the Master's Degree where the instrument was going to be administrated.

2.2. Instrument

In order to achieve the proposed objectives, an *ad hoc* instrument entitled 'Instrument for the development of Teachers' Professional Identity' was designed as part of more wide-ranging research.

The results of a previous qualitative research work on the development of TPI among preservice Secondary Education teachers (Serrano Rodríguez, 2013) were taken into account for this purpose. The original open questions were validated by experts and through a pilot study and consisted of five open questions: i) What do you think the term TPI means or what would be the main characteristics of this identity?; ii) Is the professional identity of primary education teachers, secondary education teachers and university teachers the same? Why?; iii) Do you think that future secondary education teachers develop during their degree studies a TPI equivalent to that developed by doctors, architects, lawyers, engineers, journalists or any other profession that requires university training? Why?; iv) At what training stage or career moment do you think

Table 2. Participants according to the field of knowledge.

Field of knowledge	Frequency	Percentage
Social Sciences (SS)	181	24.7%
Humanities (HUM)	213	29.1%
Art (ART)	60	8.2%
Experimental Sciences (ES)	155	21.2%
Technology and Computing-Mathematics (TCM)	124	16.8%
Total	733	

preservice secondary education teachers begins to develop their TPI? Why?; v) Indicate which aspects you think that can contribute the most to developing TPI during the initial training process for secondary education teachers.

Once the textual and conceptual analyses of the content (processed with Atlas.ti) had been performed, we were able to identify the categories, subcategories and codes that helped to define the 'I-TPI' quantitative scale (Serrano Rodriguez and Pontes Pedrajas, 2016).

The I-TPI contains two differentiated blocks, the first of which is related to socio-demographic data includes variables whose influence has been tested in previous research studies: sex (Pé rez Gracia et al., 2019), age, year when they finish their tertiary studies (Pé rez Gracia et al., 2019), degree (Keary et al., 2020); current employment situation (Van Lankveld et al., 2017) and teaching experience (Green, 2015; Yuan et al., 2019). The second part, meanwhile, consists of 33 items, whose aim is to analyse the preservice teachers' beliefs regarding the construction and development of TPI. It is measured using a 5-point Likert-type response scale ranging from 1 (totally disagree) to 5 (totally agree). The 33 items are contained in four scales and they cover the main aspects gathered in literature: the understanding of TPI (Schaefer and Clandinin, 2019), the development of TPI at diverse educational levels (Zhong, 2020), the development of a professional identity in comparison with that of other professions (Schwartz and Dori, 2020) and factors that contribute to its development (Leeferink et al., 2019).

2.3. Research design and procedure

The development of the instrument follows four well differentiated steps that provide it with preciseness and reliability (Figure 1).

- 1. Selection and formulation of the items.** Firstly, a review of the literature was carried out in order to identify the different variables that may influence the process of TPI construction and the aspects that can be distinguished in developing professional identity. Thus, they were organised in different blocks that coincides with the structure of the introduction of this paper and the scales within the instrument.
- 2. Content validation** by the panel of scientific experts. Secondly, a panel of experts judged the instrument's clarity, appropriateness and relevance using a Likert-scale. Then, this validation of the items and scales in terms of content lead to some adaptations that were done.
- 3. Comprehension validation.** Thirdly, after modifying the instrument considering the experts' suggestions, it was given to 16 participants to analyse its comprehension.
- 4. Construct validation.** Finally, this large-scale study focuses on establishing the quality of the instrument with regard to the measuring of the four aspects: TPI understanding, TPI in teachers of

Table 1. Participants' data.

Sample	Sex		Age		Home university (degree studies)			Teaching experience		
	M	W	<25	>25	UCO	Region	Spain	0	<3	>3
733	62.68%	37.2%	54%	46%	50%	30%	20%	66%	28%	6%

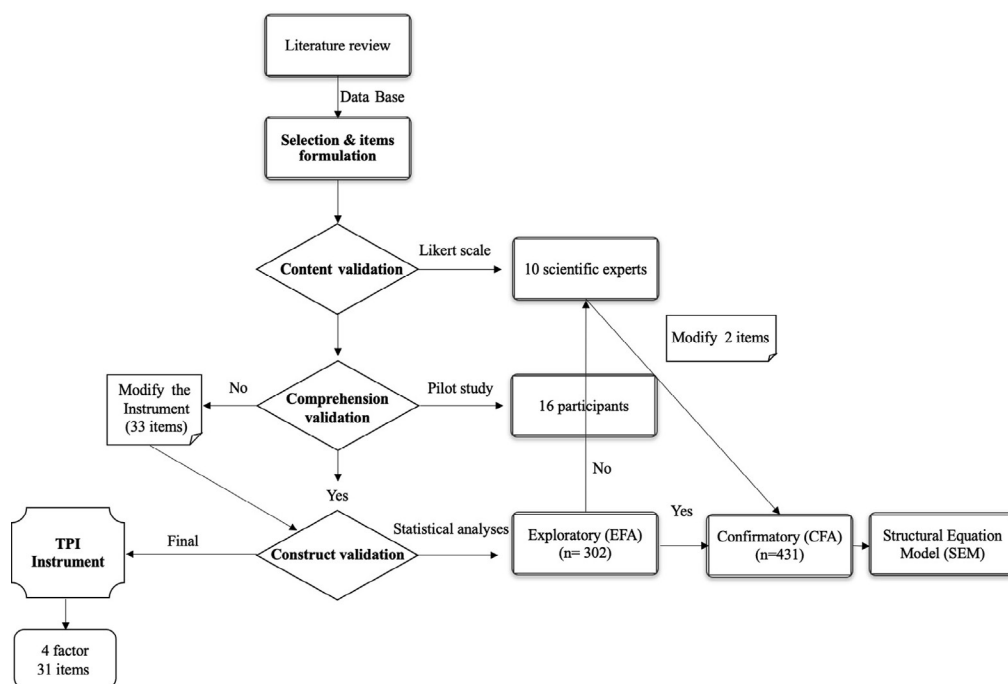


Figure 1. Flow diagram for instrument development.

diverse educational levels and in other professions, and TPI influencing factors. This construct validity is used to determine how well the instrument measures what it is supposed to measure, in other words, whether it successfully test our objectives.

- As the **final step**, the instrument is made up by 31 items gathered in four different scales.

As for the procedure, the instrument was administrated differently in stage 3 and stage 4 (see Figure 1). On the one hand, in stage 3, the participants' questions, doubts and suggestions were recorded in a face-to-face session. These data were collected at the beginning of the master's degree, in October. On the other hand, as for the fourth stage, I-TPI was administrated in face-to-face sessions at the beginning of the generic module, in the subject of Contexts and Educational Processes (face-to-face sessions), within the block on teaching professionalism, in which contents related to the professional profile and access to the teaching function are taught.

Moreover, participants were volunteers, after been informed by the research group about the implications and benefits of the study, they showed great interest in taking part on this stage of the process justifying their motivation towards improving initial teacher training on this regard. They showed their interest in contributing by sharing their beliefs with the research team because they were aware of the importance of TPI for their future career. It is also important to highlight the motivation of the professors who were in charge of administrating the instrument, their encouragement was high because they used this instrument as the starting point of a reflection activity.

2.4. Data analyses

Then, these steps as well as the analyses applied are explained in detail:

2.4.1. Content validity

In order to validate the content of the instrument, an expert panel reviewed it in terms of its clarity, appropriateness and relevance (Burton and Mazerolle, 2011). To do so, the criteria and suggestions made by

Almanasreh and Moles (2018) were followed. Therefore, the panel was made up of ten experts considering their expertise in relation to TPI, professional experience (at least ten years in the field of education), their knowledge of and experience as regards the Delphi Method and their ability to intercommunicate (Oluwatayo, 2012). Not only did the experts consider that the items were appropriate to achieve the objectives of this research, but they were also of the opinion that none of the items were redundant (Lloret et al., 2014).

In order to carry out this validation, a scale rating 1 to 4 (1 anything, 2 little, 3 quite, 4 a lot) was used to gather experts' opinions. Then, depending on the results, an expertise index is generated. Those items of the instrument with a low score (<58% of the total) are modified (in terms of clarity) or eliminated (in case of accuracy and relevance). To calculate the CVR (content validity ratio) and CVI (content validity index), the Lawshe's method was used. On the one hand, the CVR was performed by linear transformation according to the number of experts that evaluated the instrument as *essential* using the formula: $CVR = (ne - N/2)/(N/2)$ where *ne* is the number of experts who gave this *essential* rating and *N* is the total number of experts. On the other hand, the CVI calculation is the proportion of experts who gave a *relevant* rating of 3 and 4 out of the total number of experts (Almanasreh and Moles, 2018).

2.4.2. Comprehension validity

Comprehension validity was then analysed by means of a pilot study, in which 16 students (Alaminos and Castejón, 2006) enrolled on the master's degree for Secondary Education teachers took part. This was useful to test the degree of comprehension from a qualitative point of view.

2.4.3. Construct validity

The construct was validated by applying two-step statistical analyses. To check the quality of the developed instrument, an Exploratory (EFA) and Confirmatory Factor Analyses (CFA) were conducted with two sub-samples (Tondeur et al., 2017). The data were randomly split into approximately 40% and 60% (40% for EFA and 60% for CFA). A sample-to-variable ratio of 10:1 (Costello and Osborne, 2005; Singh et al., 2016) or alternately more than 300 cases are generally considered

adequate for factor analysis (Tabachnick and Fidell 2013). In this case, the larger subsample can be used for the more crucial process of item evaluation and scale construction and the smaller for cross-validation (DeVellis, 2017). Therefore, we used 40% in EFA and 60% in CFA (Kyriazos, 2018). Furthermore, the ratio between both subsample sizes (n1 = 302 and n2 = 431) and the number of items (31) met the minimum requirement of 10 participants per item (Floyd and Widaman, 1995; Burton and Mazerolle, 2011). The survey was constructed to measure a multidimensional construct with four dimensions. First, EFA (in SPSS 21) was used to explore the possible underlying factor structure of a set of observed variables without imposing a preconceived structure on the outcome. By performing EFA, the underlying factor structure was identified. It was permuted on subsampled 1 and with all the items (n1 = 302) in order to identify the number of latent factors underlying Teachers Professional Identity. In this first analysis, maximum likelihood was used as an extraction method, and the factors extracted were rotated using direct oblimin rotation. After carrying out the direct oblimin rotation, the decision was made to report all those items with a factor loading of ≥0.3, and we further identified as ‘uniquely significant’ those items for which the factor loading was ≥0.2 higher than the next highest loading (Jennrich and Bentler, 2011). Second, after performing the EFA, we extracted a more suitable factor structure from the new dataset. In the second stage, a Maximum Likelihood CFA (AMOS 21) was applied to subsample 2 (n = 431) to investigate whether the identified exploratory factor structure fit the data. CFA allowed to test the hypothesis that a relationship between observed variables and their underlying latent constructs existed. The researchers used knowledge of the theory and empirical research to postulate the relationship pattern a priori and then it is tested the hypothesis statistically. In this sense, maximum likelihood and principal axis factoring are generally recommended extraction methods. The factors extracted were rotated by means of direct oblimin rotation. Due to the fact that the CFA showed high correlations between the four factors, it raised the hypothesis of the existence of a latent second-order factor that could explain the common variance among them. For this reason, a Structural Equation Modelling (SEM) was carried out considering the second-order factor that is inferred from the model. Therefore, this global factor was not scaled from other indicators, but as a latent factor to the four factors of the CFA. Thus, the SEM was carried out using the regression coefficients of the four dimensions (of the previous CFA) as variables. In this model, a principal component analysis was used as an extraction method, and the factors extracted were rotated by means of promax rotation. For this purpose, several models fit indices and their

criteria were used to examine the goodness-of-fit of the model as regards the given dataset (Bollen, 1989; Fábregas et al., 2018): goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), the Parsimony Goodness of Fit Index (PGFI), Chi-square (x²), Chi-square/degrees of freedom (x²/df < 3.0), root mean square error of approximation (RMSEA <0.08) and root mean square residual (RMS <0.08).

Finally, the reliability of the items in each factor was examined using Cronbach's α. This validation provides confidence that the scale measures what it is intended to.

3. Results

3.1. Content validity

Considering the scale completed by the ten experts, Table 3 shows the results of the CVR and CVI. These results show that all the items of the instrument were acceptable. Only five of the items underwent modifications because their CVR values in clarity were under 0.5823. These suggestions of correction were mainly focused on clarifying some concepts that could lead to misunderstanding (for example: teaching techniques or strategies) as well as on writing all the items from a positive viewpoint, so that all of them follow the same direction. The definitive scale was made up of 8 sociodemographic items and 33 items related to TPI.

3.2. Comprehension validity

Once the expert panel for the validation of the content of the questionnaire had made its decisions, the pilot study was carried out with the intention of improving the validity of comprehension. No difficulties were detected in the piloting and all the data were consequently included as part of the final sample.

3.3. Construct validity

It was confirmed that the sample size was appropriate to study the technical quality of the instrument (Morales et al., 2003) and thereby analyse the construct validity.

3.3.1. Exploratory Factor Analysis (n = 302)

The Kaiser-Meyer-Olkin measure (KMO) showed a high level of sampling adequacy (0.891) and the Bartlett test was significant (Chi-

Table 3. Content validity index of the instrument.

BLOCK	N° of ITEMS	N° of EXPERTS	Features assessed	Sum CVR	M	ACCEPT	PARTIAL CVI	TOTAL CVI
Level of adequacy sociodemographic data items	8	10	Essential	6.4	8	YES	0.800	0.800
TPI Understanding	15	10	Clarity	8.6	12	YES	0.716	0.714
			Appropriateness	9.6	15	YES	0.640	
			Relevance	11.8	15	YES	0.786	
TPI Ed. Levels	7	10	Clarity	4.4	5	YES	0.88	0.826
			Appropriateness	5.8	7	YES	0.828	
			Relevance	5.4	7	YES	0.771	
PI Professionals	5	10	Clarity	4.4	5	YES	0.88	0.906
			Appropriateness	4.8	5	YES	0.96	
			Relevance	4.4	5	YES	0.88	
TPI Factors	6	10	Clarity	5.8	6	YES	0.966	0.977
			Appropriateness	5.8	6	YES	0.966	
			Relevance	6	6	YES	1	

M = Number of items with CVR values >0.5823.

Acceptable = 95% of the items have CVR values >0.5823.

Partial CVI = ΣCVR/M obtained for the set of items on each aspect assessed (clarity, appropriateness and relevance).

Total CVI = Average of the all partial CVI' M = Number of items with CVR values > 0,5823.

Source: own elaboration.

Square = 4947.731; $p < 0.001$), signifying that a factor analysis would be suitable. Four factors were extracted according to the Eigenvalues obtained and screen test (Figure 2), explaining 40% of the variance. In addition, a parallel analysis (PA) was performed to confirm the existence of these four factors. The PA was performed with SPSS (O'Connor 2000), reaffirming the existence of 4 factors that present eigenvalues greater than those that would be obtained by chance (Horn, 1965).

In total the 4 factors explain 41.6% of variance. The first factor explains the greatest amount of the variance (23.6%), second factor explains 7.08%, third factor explains 5.79% and the last explains 5.2%. Finally, the rotated component matrix determines the factorial loads for the selection of items for each factor (Table 4).

In these results, 4 factors were extracted from the 33 variables. Their commonality values are generally high for all variables, indicating that the 4 factors adequately represent the variables. For example, 32 variables had values > 0.4 (except item 17).

The four factors are, hereafter, denominated as:

Factor 1, which contains 15 items regarding how participants understand TPI (TPI Understanding).

Factor 2, which contains 7 items related to the development of TPI at diverse educational levels (TPI Ed. Levels).

Factor 3, which contains 5 items related to the development of TPI and other professionals' identity (PI professionals).

Factor 4, which contains 6 items that gather information concerning the factors that may contribute to the development of TPI (TPI Factors).

Items 21 and 22 were removed ('There is a common purpose, which is the Education and training of people' and 'The psychological and cognitive characteristics of students change according to their age') because their absolute values were under 0.3 (Peterson, 2000). However, this decision was also checked with the panel of experts responsible for the content validation of the instrument so that the removal of both items was agreed.

Finally, we performed the correlation matrix of the factors (Table 5), to establish the relationship that exists between the 4 factors (see Tables 6 and 7).

3.3.2. Confirmatory Factor Analysis (n = 431)

In order to study the internal structure, we carried out a Confirmatory Factor Analysis because it provides the appropriate statistical framework in which to evaluate both the validity and reliability of each item, rather than analysing them globally (Batista et al., 2004). The 31 items (which have been consecutively renumbered from item 21 onwards so as to avoid missing numbers) obtained from the EFA were, therefore, grouped into four dimensions, which correspond with the factors. Table 8 shows the main descriptive data from each item on the scale. This signifies that the a priori model fits the sample data. In sum, a total of 78 parameters were estimated: 31 factors loadings, 31 error variances, 4 error variances, 6 factors and 6 factors correlations.

The indexes show that the adjustment of the proposed model is highly appropriate. Calculate the goodness of fit (GFI) by measuring how much of the sample variance and covariance is explained by the model. 0.80 is usually considered as the minimum threshold for a good GFI fit (Hooper et al., 2008). In the model, the GFI value was 0.889, which suggests a good fit. Adjusted goodness-of-fit statistic (AGFI), it is the same indicator as GFI, but adjusted according to the degrees of freedom (Westland, 2015). A value close to 1 would indicate a perfect fit, while the minimum limit that is usually admitted is 0.8 (Bentler and Bonnett, 1980). The AGFI value for the model was 0.872, therefore within of this threshold. The parsimony indices PGFI, PNFI and PCFI took values of 0.773, 0.728 and 0.799 respectively. The threshold set for them is lower, generally standing at 0.5 (Mulaik et al., 1989), instead of the 0.9 cuts that are usually set in the other groups of indices. In this case, the three indices analysed exceeded the minimum limit. In order to be considered acceptable, Chi square would have to take a value below 0.05, in this study was < 0.01 . However, it is a very sensitive measure to sample size (Bentler and Bonnett, 1980). Therefore, for studies with large samples such as the one in this research, it is more appropriate to use it weighted

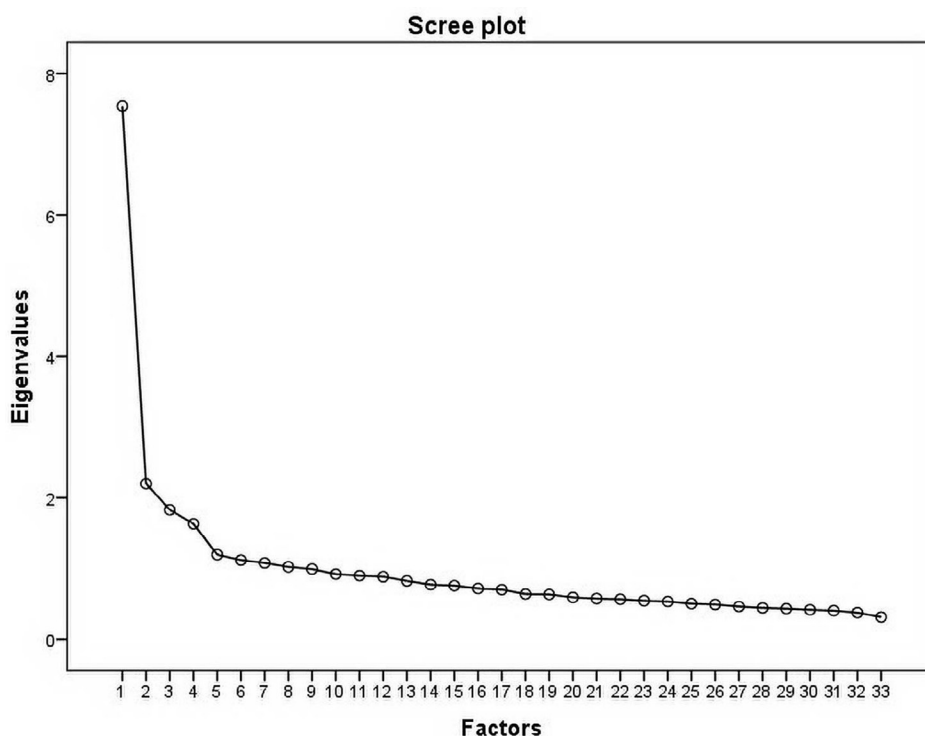


Figure 2. Scree plot of EFA analysis.

Table 4. Rotated component matrix.

Items	TPI Underst.	TPI Ed. Levels	PI Profess.	TPI Factors	Common.
6. Using and mastering teaching communication techniques	.654				.538
11. Ability to manage class work and solve possible conflicts	.645				.581
9. Properly combining theory and practise about teaching	.614				.504
3. Having solid training regarding Education and teaching	.605				.604
7. Showing an interest in knowing and understanding students	.580				.618
5. Knowing how to adapt yourself to educational changes according to the circumstances	.573				.462
13. Being an expert in one's discipline	.542				.434
8. Integrating ICT into teaching	.512				.578
14. Motivation to awaken the students' interest in learning	.488				.607
2. Feeling a high level of commitment to the teaching profession	.486				.579
15. Adopting a reflective and self-critical attitude with regard to teaching practise	.477				.488
1. Having an adequate capacity to teach	.456				.557
12. Having high self-esteem as a teacher	.440				.600
10. Worrying about human relationships in the educational context	.424				.655
4. Building a positive self-image as an aspiring teacher	.418				.489
16. The previous academic training to become a teacher is different at each stage		.590			.722
17. There is a different Curriculum for each educational level		.548			.354
19. The problems of coexistence are more frequent in Secondary Education		.479			.519
20. There are different teaching functions in each stage		.458			.533
18. The methodological strategies and resources vary according to the circumstances		.406			.536
21. There is a common purpose, which is the Education and the training of people		.226*			.456
22. The psychological and cognitive characteristics of students change according to their age		.220*			.445
25. Teaching implies a relationship with students that contributes to their personal and academic development			.684		.606
24. Teaching includes an educational practise that makes it different from other professions			.577		.573
27. Teaching fulfils a very specific social mission which differs from that of other professions			.548		.546
23. Psycho-pedagogical training is required for the teaching profession			.513		.531
26. Teaching places a different importance on the interpersonal relationships in the workplace			.341		.445
32. Learning through experiences with other teaching professionals				.570	.557
30. The recognition and social evaluation of the teaching profession				.548	.551
31. The acquisition of new methodologies and the use of educational resources				.542	.514
33. The promotion of teacher motivation and the development of a professional project				.532	.529
29. A broader psycho-pedagogical training during the Master's Degree				.478	.474
28. Longer placement period				.360	.430

* Values under 0.3 – Items removed.

Table 5. Factor correlations matrix.

Factor	1	2	3	4
1	1.000	.313	-.394	-.383
2		1.000	-.235	-.325
3			1.000	.258
4				1.000

by degrees of freedom (Wheaton et al., 1977). Given the scope of the research, the degrees of freedom amounted to 768. Thus, the study has taken the value of χ^2/df , which to be considered acceptable must take a value between 2.0 and 5.0 (Hooper et al., 2008). The value of $\chi^2/d.f.$ (1034,722/431) in the model it is 2.401, which fits perfectly within the acceptable parameters. Finally, the RMSEA (Root Mean Square Error of Approximation) shows that the model has a good fit, with an index of 0.05 (Lo = 0.046 - Hi = 0.054), and the RMR is 0.044. RMSEA indicates the degree to which the model fits the sample covariance matrix. There is no consensus about the threshold to consider the acceptable fit: some authors consider that it should be below 0.08 (McDonald and Ho, 2002), while others place it at 0.07 (Steiger, 2007). The RMSEA value in the model was 0.05, which is within what is acceptable in any of the cases. It is, therefore, possible to conclude that the proposed model provides a

Table 6. Values of inter-item covariances and inter-item correlation.

	Mean	Minimum	Maximum	Range	Variance
Inter-element covariances	.160	.021	.484	.462	.005
Inter-element correlations	.202	.021	.540	.519	.010

sensible approximation to the data and can contribute towards supporting the multidimensionality hypothesis of the construct.

Finally, subscale 1 (TPI understanding) has 15 items; subscale 2 (TPI Ed. Levels) includes 5 items; subscale 3 (TPI and other professions) counts with 5 items and subscale 4 (TPI factors) has 6 items. It should be considered that the Likert-scale ranges between 1 (totally disagree) and 5 (totally agree) points and that all items were written in positive according to the experts' suggestion. Therefore, when the mean value of the first scale is higher than 3, it means that participants know and understand what TPI, whereas mean values lower than 3 shows that participants have a diffuse concept of TPI. As for the second scale, mean values higher than 3 show agreement among the participants regarding the fact that TPI is built differently depending on the educational stage. Mean values lower than 3 in the third scale reports participants coincide with the reasons why TPI is different than professional identities of other professionals. Finally, in the fourth scale, higher values (>3) point out that participants know the factors that could influence the construction of TPI.

Table 7. Intraclass correlation coefficients.

Scales	α	95% confidence interval	
		Lower limit	Upper limit
Global	0.879	0.864	0.893
Subscale 1	0.867	0.850	0.883
Subscale 2	0.776	0.732	0.817
Subscale 3	0.730	0.682	0.755
Subscale 4	0.694	0.653	0.731

Table 8. I-TPI basic descriptive statistical analyses.

Scales	Items	M	SD	Assym	Kurt
TPI Underst.	1	4.13	0.884	-0.589	0.472
	2	4.32	0.771	-0.914	0.843
	3	3.97	0.840	-0.438	-0.128
	4	3.88	1.033	-0.479	0.035
	5	4.34	0.794	-0.893	0.587
	6	4.35	0.756	-1.042	1.773
	7	4.58	0.684	-1.623	3.127
	8	3.94	0.983	-0.631	0.232
	9	4.27	0.802	-0.945	1.300
	10	4.33	0.803	-0.911	0.624
	11	4.46	0.735	-1.311	2.360
	12	4.07	0.857	-0.467	-0.192
	13	4.20	0.806	-0.557	-0.111
	14	4.69	0.600	-1.924	4.462
	15	4.43	0.726	-0.957	0.762
Scale	1–15	4.264	0.805	-0.912	1.076
TPI Ed. Levels	16	3.71	1.160	-0.324	-0.164
	17	3.88	1.076	-0.365	0.247
	18	4.08	0.931	-0.671	0.537
	19	3.79	1.170	-0.521	0.270
	20	3.76	1.203	-0.310	-0.115
Scale	16–20	3.844	1.108	-0.438	0.155
PI Profess.	21	4.08	0.964	-0.958	0.772
	22	4.06	0.978	-0.840	0.708
	23	4.42	0.779	-1.253	1.762
	24	4.00	1.022	-0.277	-0.072
	25	4.21	0.931	-1.009	0.942
Scale	21–25	4.154	0.935	-0.867	0.822
TPI Factors	26	4.07	1.062	-0.815	0.345
	27	3.80	1.121	-0.587	-0.209
	28	3.87	1.131	-0.563	-0.063
	29	4.02	1.019	-0.627	0.437
	30	4.39	0.842	-1.091	1.385
	31	4.23	0.905	-0.909	1.085
Scale	26–31	4.063	1.013	-0.765	0.497

Figure 3 represents the results of the CFA (left side) and SEM (right side). It shows that the four factors are well differentiated and related to each other in a coherent manner. This can, therefore, be considered as a proof of the internal consistency of the research instrument.

Finally, the Pearson correlation coefficient was analysed in order to test the concurrent validity among the different factors on the scale. Table 9 shows that they have a significant correlation with each other.

Table 9 presents the coefficient values as regards the correlation among the factors on the scale. They are statistically significant ($p < 0.001$). This raises the hypothesis that all of them have a common latent factor (Oliva and Blanco-López, 2021), which may be a global factor (GF) related to the ‘global vision of future teachers regarding the construction of TPI’. To evaluate this hypothesis, a SEM was, therefore,

carried out using the regression coefficients of the 4 dimensions (from the previous model) as variables. In this model, a principal component analysis was used as an extraction method, and the factors extracted were rotated using promax rotation. This second reduction of dimensions allowed us to see the effect in the value of each dimension on the global factor (Figure 2). In addition, Composite Reliability (CR) and average variance extraction of each sub-constructs in the CFA were calculated (Table 10). Although AVE were below .50, it could be considered, since CR is above .70 (Fornell and Larcker, 1981), which might give support to retain the factors. Although, in the case of the TPI Ed. Levels the reliability value is close (although below 0.7). However alpha, did not suggest that deleting any items improve subscale reliability.

The Cronbach's Alpha test proved to have a highly reliable coefficient at a global level (0.879). The four dimensions or factors also have high values as regards reliability since they are close to or higher than 0.800. All in all, it can be considered that the scale is adequate (Hair et al., 2010).

4. Discussion and conclusions

This work describes the procedure carried out to design and validate an instrument for the evaluation of future Secondary Education teachers' perceptions of the construction and development of TPI.

First, and with regard to the first objective of this paper, the content and understanding validity have been analysed by a panel of experts and by running a pilot study. Both analyses were highly useful as regards improving the readability, internal consistency and appropriateness of the scale. These results evince that the selection of the items was appropriate in term of content, and they show consistency with previous research studies on TPI (Hanna et al., 2020; Zhong, 2020). Moreover, they meet length and comprehensive parameters as indicated by De Von et al. (2007).

In the case of the second objective, the results presented here demonstrate that the scale has a satisfactory metric quality, since they have been evaluated by means of confirmatory procedures and show that the proposed model is adequately adjusted. The results specifically allow us to conclude that the structure of four factors is replicated: TPI understanding, TPI Ed. Levels, PI Professionals and TPI Factors. They also show adequate reliability in terms of internal consistency, both for factors and the whole scale, which facilitates the applicability of the scale in diverse contexts. Each factor is supported by previous studies which highlighted the need to consider those aspects within the TPI construction process. As for the first one, since there has been a maturation process as regards the concept of TPI, it is necessary to start by analysing how it is understood by future teachers, since this could influence the other factors (Beijaard et al., 2004; Garner and Kaplan, 2019). For the second and third scales, it is also relevant attain a detailed knowledge of whether they find differences according to the educational level and different professionals because there are issues such as vocation or motivation that directly influence the construction of TPI (Green, 2015; Kim, 2013; Schaefer and Clandinin, 2019). Finally, the last factor is decisive since it could explain on which elements (personal and contextual) they place more importance during their training process and, consequently, which ones they associate with the construction and development of TPI (Lorenzo et al., 2015; Leeferink et al., 2019; Yuan et al., 2019).

Moreover, the existence of a GF allows us to conclude that the instrument is solid, since it explains all the factors. These psychometric results of factor structure and reliability complement the aspects of content validity. With regard to the third objective, all of the above enables us to conclude that the scale is, according to the empirical evidences analysed to date, of a reliable psychometric quality. Moreover, the design of this scale has made it possible to identify a set of priority aspects for the initial teacher training of future Secondary Education teachers. These four factors additionally coincide with the main aspects found in literature (Leeferink et al., 2019; Rodrigues and Mogarro, 2019; Van

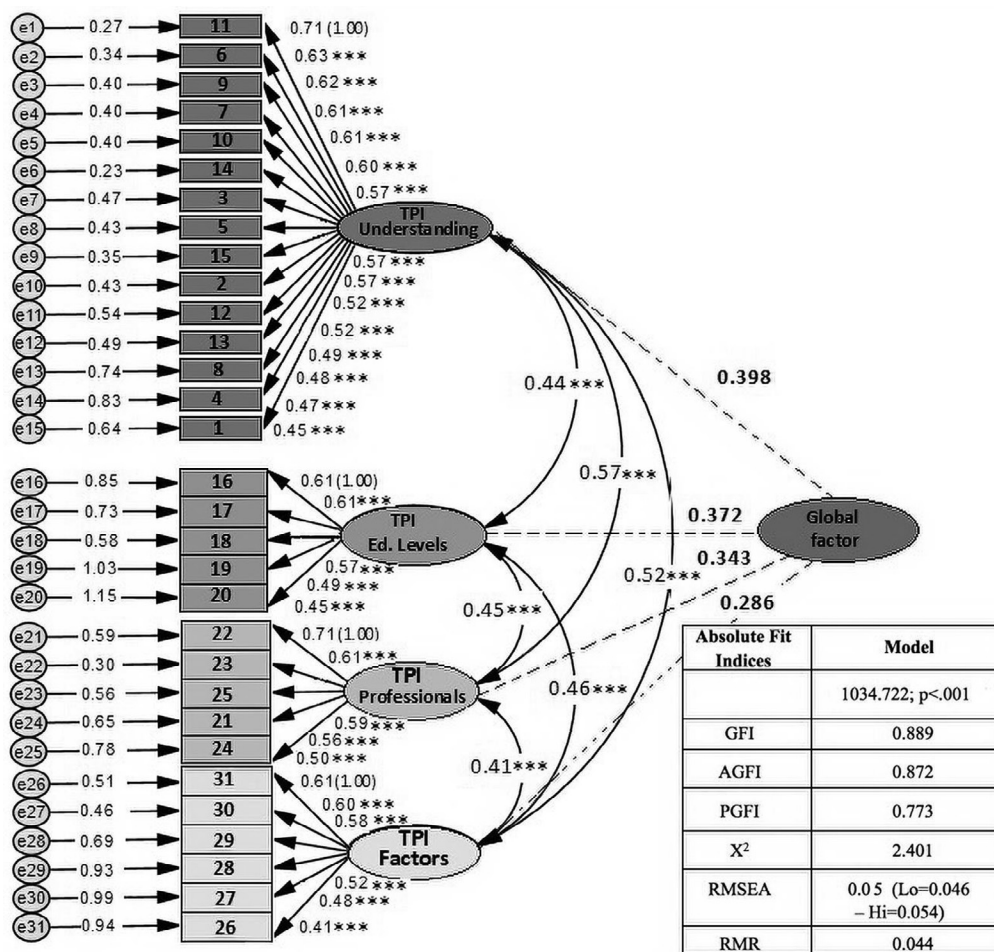


Figure 3. Factorial saturations corresponding to the items and goodness-of-fit indexes of the model.

Table 9. Correlations among the factors.

	F2	F3	F4
F1	.338*	.442*	.395*
F2		.329*	.330*
F3			.319*

Table 10. Composite reliability (CR) and average variance extraction of each sub-constructs in the CFA.

Sub-constructs	Average variance extracted	Composite reliability (CR)
TPI Understandings	0.321	0.875
TPI Ed. Levels	0.302	0.681
TPI Professionals	0.358	0.733
TPI Factors	0.290	0.706

Lankveld et al., 2017; Yuan et al., 2019) as regards the fact that they are considered relevant in order to improve teacher education programmes and education quality.

To conclude, we should emphasise that the instrument is solid in terms of its content and construct validity and reliability, since it is able to discover and analyse the perceptions of future Secondary Education teachers as regards the development of the TPI. This instrument, therefore, allows us to analyse possible imbalances or deficiencies in the initial

teacher training process that directly influence the teaching-learning process (preservice training) with regard to students.

These results suggest proposals, whose objective is to continue analysing teacher training programmes so as to make relevant improvements and remove those contents that become redundant. Moreover, this information is essential in order to guarantee the quality of the educational system in general and that of Secondary Education teacher training in particular. The participants' opinions and beliefs may contribute to the continuous betterment and progression of the teaching profession and even to the reformulation of new objectives in future curricular designs. In addition, this scale not only enables the possibility of continuing research into TPI and progressing in education quality and initial teacher training (Zhang et al., 2016), but also allows advances to be made in the research methods used for the investigation of the TPI to date, since there is a lack regarding quantitative research in this field (Aykaç et al., 2017).

All in all, the main implications of this study and the validation of the instrument can be classified in three groups: i) implications for initial teacher education; ii) implications for future teachers; iii) implications for reconsidering research on TPI.

Firstly, this instrument could be used as a resource in the class to promote debate about their teaching beliefs. Thus, it brings the chance of reinforcing both the constructivist and the reflective approaches to teacher education for the reason that it makes student teachers more aware and, consequently, engaged in their progression of meaning and knowledge construction and gives relevance to one's teaching experiences perspectives. Furthermore, it drives teacher educators to reflect about where to focus. Not only they should be aware of the importance of

subject matter knowledge and teaching skills, but also be concerned with identities of preservice teachers by mentoring them throughout the initial training period. Teacher education should go further than improving pedagogical training. Thus, improving the quality of initial teacher training programs is among this study's implications. A proof of that is that the participants establish an important relationship between TPI development and diverse training aspects that had been analysed in previous studies (Serrano Rodríguez and Pontes Pedrajas, 2015) and which are closely related to items included in I-TPI (e.g. Using and mastering teaching communication techniques (It.6), integrating ICT into teaching (It.8) and adopting a reflective and self-critical attitude with regard to teaching practise (It.15). In the aforementioned work, an experience on the use of the CmapTools software in the development of teaching communication techniques and in favouring reflection on initial training itself is described through the elaboration of concept maps (individual and collaborative) on texts related to the problem of teaching activity in secondary education (Serrano Rodríguez and Pontes Pedrajas, 2015). Subsequently, other ICT resources have been incorporated, such as interactive simulations (Phet) and immediate response systems (Turning Point), along with the use of virtual teaching platforms (Moodle and Blackboard Collaborate), whose influence on the initial development of the IPD will be analysed in future research projects.

Secondly, considering the previous ideas, enhancing teacher education by paying attention to train future teachers to be resilient, resourceful and committed may lead to prevent early career teachers flee the profession.

Finally, the use of TPI could induce to consider other aspects that have not been deeply studied yet such as TPI in teachers of diverse educational levels (contrasting parallel and consecutive teacher education models) and in other professions. Consequently, teacher educators, preservice teachers and education policy makers could benefit from the present study.

Possible limitations of the study could be related to the fact that it is a self-report scale and problems such as the social desirability and sincerity of the sample when answering it could, therefore, have affected the analysis. It would consequently be suitable to contrast the information collected by carrying out interviews with students (preservice teachers). Besides, the context of the study could be a limitation too since most of the participants have carried out their degree studies in the same university, so it could be useful to apply the instrument to other contexts where teacher education model is not consecutive but parallel.

Declarations

Author contribution statement

Elisa Pérez Gracia, Rocío Serrano Rodríguez, Alfonso Pontes Pedrajas: Conceived and designed the experiments; Performed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Antonio J. Carpio: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

Data included in article/supplementary material/referenced in article.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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4.8. ESTUDIO 2.3. ANÁLISIS DE LAS CREENCIAS DEL PROFESORADO EN FORMACIÓN DE CIENCIAS Y TECNOLOGÍA SOBRE LA CONSTRUCCIÓN DE LA IDENTIDAD PROFESIONAL DURANTE EL PROCESO DE FORMACIÓN INICIAL

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Este estudio tiene como objetivo general explorar y analizar las creencias sobre la construcción de la IPD en el alumnado del máster de profesorado de educación secundaria de las áreas de conocimiento de Ciencias Experimentales y de Tecnología.

Analysis of Science and Technology Pre-service Teachers' Beliefs on the Construction of the Teachers' Professional Identity during the Initial Training Process

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ABSTRACT

This study focuses on exploring the beliefs regarding the construction and development of Teacher's Professional Identity (TPI) of Secondary Education Master's Degree (SEMD) students from the areas of Science and Technology. An 'S-TPI' questionnaire, measured using a Likert scale, was used to obtain the opinions of 279 future teachers in the 2014-2018 academic years. After analysing the data, no significant differences were found between the two groups (Science and Technology). However, there were significant differences in the responses obtained for the four dimensions on the scale with regard to the students' gender. We noticed an important relationship between the global view of professional identity and the development of educational skills linked to socio-educative and methodological aspects. These results may contribute to improving knowledge concerning future teachers' beliefs and have served as a basis on which to design activities that will enable us to integrate TPI into the initial training process.

Keywords: secondary education, science and technology, students' beliefs, teacher's professional identity

INTRODUCTION

Several studies have stated that aspiring Secondary Education teachers begin their initial teacher training studies with different views and conceptions of the teaching professionalism and they show different attitudes regarding the process to be followed in order to achieve adequate pedagogical training to face the challenges and address the demands for improvement in this educational stage (Buldur, 2017; Esteve, 2009; Hong, 2010; Smith & Darfler, 2012). For this reason, we have been working on a research project for a long time related to the following problem: What Science and Technology Secondary Education pre-service teachers think about the teaching profession and to what extent the initial training process contribute to improve these thoughts while promoting the development of teachers' professional identity (TPI)? Moreover, this project consists of three different stages (Figure 1).

Within the general framework of the aforementioned project, this study belongs to the second stage, in which it is intended to analyse the beliefs of future Science and Technology teachers on the TPI and its evolution during the Master's Degree in Secondary Education Teacher Training. For this purpose, a scale of beliefs on various aspects related to the development of the TPI (Serrano Rodríguez, Pérez Gracia & Pontes Pedrajas, 2018) has been designed based on the ideas gathered in the reflection and debate activities in the classroom during the previous phase.

After proceeding with the validation of the new scale (Serrano Rodríguez, Pérez Gracia & Pontes Pedrajas, 2018), several complementary studies have been designed to understand the main characteristics of pre-service teachers' beliefs about TPI and the aspects that may influence its evolution. In the context of the second phase of the research project, it should be noted that the specific problem addressed is directly related to the following question: What are the main characteristics presented by the beliefs of future Science and Technology teachers

Contribution of this paper to the literature

- This study demonstrates that there are no significant differences between Science and Technology pre-service Secondary Education teachers as regards the construction and development of the TPI.
- It highlights the need to rethink initial Secondary Education teacher training in order to incorporate the development of the TPI into the curriculum so as to improve teaching quality.
- It goes one step further by evincing gender differences in the construction of TPI during pre-service teacher training.

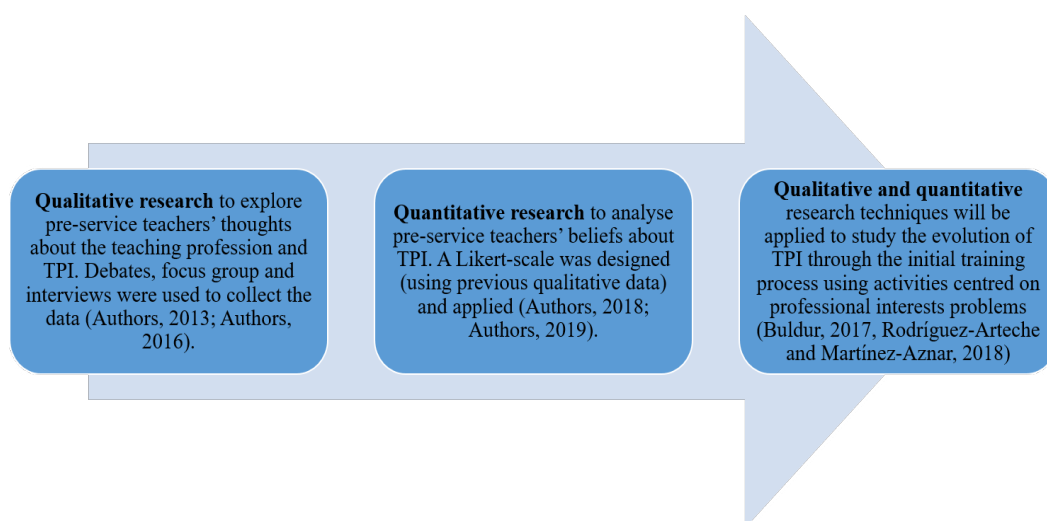


Figure 1. Project's stages

regarding the construction and development of the TPI at the beginning of the training process and what training implications are derived from the knowledge of such characteristics?

To address this problem, the following aspects will be analysed in a differentiated way: (1) The convergence or dissimilarity between Science and Technology future teachers' beliefs on TPI; (2) The degree of extension these beliefs common to the entire sample; (3) The global dimensions in which such beliefs can be grouped and the differences existing in such dimensions or in the items of the scale that can explain such differences.

The theoretical framework of this study and the educational foundation of the global research project is based on ideas from the constructivist and reflexive approach. On the one hand, the constructivist educational approach considers that teachers' beliefs and conceptions about the educational process and the teaching profession mean an important aspect to be taken into account in the initial formation, since there is empirical evidence that future teachers tend to reproduce the action schemes of traditional teaching that they have known as students (Appleton & Asoko, 1996; Demirci, 2015; Luft, Roehrig, & Patterson, 2003). Therefore, training strategies should be developed so as to favour the change in the previous conceptions or the evolution of the implicit theories of the teaching staff towards a teaching model oriented to encourage the construction of significant knowledge of their students (Buldur, 2017; Pool, Reitsma & Mentz, 2013). On the other hand, the reflective approach to teacher education (Abell, Bryan & Anderson, 1998), which has had a great influence on the proposals for improving teacher training in Science and Technology, devotes great importance to the design and development of activities that allow reflection on different aspects related to the teaching practice and the promotion of metacognition in teacher training (Jiménez-Tenorio & Oliva, 2016; Pilitsis & Duncan, 2012; Sutton, 2011). Both approaches contain ideas that serve as a basis for the elaboration of the theoretical framework of this research project. Likewise, these approaches converge with other lines of work focused on advancing towards Desirable Professional Practical Knowledge (Solís, Martín, Rivero, & Porlán, 2013) or on the Development of effective teaching competences (García-Carmona, 2013), because they also grant importance to reflection and debate on practical problems of interest to teachers, which allow to express their beliefs about the teaching profession and favour the evolution of their personal conceptions of educational processes (Rodríguez-Arteche & Martínez-Aznar, 2018).

The requirements proposed as regards the role played by Secondary Education teachers has led to an interesting debate about the skills that trainee teachers should acquire and develop, highlighting the need to tackle the construction of the Teacher's Professional Identity (TPI) during this formative period in order to help train more

competent teachers who will identify more with and be more committed to their profession (Manso Ayuso & Martín Ortega, 2014; Shatunova, Merzon, Shaimardanova, & Shabalin, 2018; Zhang, Liu, Yang, Tripp, & Shao, 2018). The research concerning Science and Technology teachers' beliefs, which has been developed to a fairly considerable extent in the last two decades (Luft, Roehrig, & Patterson, 2003; Gullberg, Kellner, & Attorps, 2008; Subramaniam, 2013), has highlighted the important role played by trainee teachers' initial conceptions and beliefs regarding various aspects of the activity of teaching professionally (Buldur, 2017; Pontes Pedrajas, Serrano Rodríguez & Poyato, 2013; Pool, Reitsma, & Mentz, 2013; Sutton, 2011) and its relationship with the development of the TPI (Cameron & Grant, 2017; Smith & Darfler, 2012), a relatively new term in the field of scientific-technical education that has opened up interesting work perspectives (Izadinia, 2016). In this sense, current research in this topic highlights diverse variables and constructs that directly affect the construction and development of TPI such as the way future teachers understand the profession, the ability to teach and to integrate ICT in the classrooms, their attitude (sensible and self-critic) as well as their interest in engaging students in the teaching-learning process (Izadinia, 2015; Taylor & Booth, 2015). Moreover, other studies point out that there may be differences in the construction of TPI depending on the stage teachers work (Jarauta Borrasca, 2017; Pontes, Serrano, & Poyato, 2013). Finally, variables that affect this process can be both individual and contextual (Beijaard, Meijer, & Verloop, 2004). Therefore, they all have been considered for this study since it would be interesting to test to what extent these constructs affect TPI.

The current situation has led us to ponder the need to provide professionals who are prepared in accordance with present-day teaching needs. It is, therefore, vital to emphasize the importance of profiling the professional identity of teachers themselves, i.e. "to specify what professional roles I am going to assume as a teacher, what could be realistic objectives in my daily work, ... and I should also profile my own style in a manner that is appropriate for my personality and my own ideas about teaching." (Esteve, 2009, p. 20). Otherwise, teachers may fail professionally at an early stage in their career, which will have a direct effect on the quality and excellence of their teaching, and consequently, on their pupil's results at that educative level.

LITERATURE REVIEW

Science and Technology Pre-service Teachers' Understanding of the Construction and Development of TPI

Numerous studies regarding educational beliefs have shown that teachers from the area of Science and Technology have ideas, attitudes and motivations concerning teaching, learning and other aspects of education that have an important influence on the construction of the professional knowledge required in order to teach (Alabdulkareem, 2016; Kind, 2016; Shatunova, et al., 2018; Solís, Martín, Rivero, & Porlán, 2013; Taylor & Booth, 2015).

In this respect, Asensio and Ruiz (2017) point out that on those degrees that qualify students to work in the teaching profession, the beliefs that these students have regarding what teaching is, how we teach and how we learn, or what the teacher's role is in the context of present-day education, play an important role in their training. The same authors are of the opinion that these beliefs may have an influence on the students' later identification with the teaching profession and the decisions that they will make concerning the methods and resources that they will use during their teaching practice (Buldur, 2017; Rodríguez-Arteche & Martínez-Aznar, 2018; Subramaniam, 2013). Another study on the teaching beliefs of future teachers when undergoing their initial training that was carried out by Monroy and Hernández Pina (2014) indicates that epistemological beliefs about professional teaching knowledge, teaching and learning processes, educative methods and the teacher's work in general, have an influence on how those students who wish to become teachers in the future learn.

There are also studies that stress the need to take into account Science and Technology teachers' beliefs when they are undergoing their initial permanent training, particularly as regards attempting to improve their teaching practice and bringing the educational context closer to the daily reality of the classroom (Bakar, 2006; El-Deghaidy, Mansour, Aldahmash, & Alshamrani, 2015). The teaching resources and strategies in the domain of Science and Technology are highly diverse and undergo progressive changes, such that researchers in the field of education attempt to analyse the influence of teachers' beliefs on the use of these resources and strategies in the teaching process carried out in the classroom (Demirci, 2015).

Factors that Influence the Construction and Development of TPI

The construction of the TPI in relation to future secondary education teachers' initial training has been the focus of interest of various pieces of research carried out in the last decade (Buldur, 2017; Huu & Ngoc, 2017; Izadinia, 2015; Martínez de la Hidalga & Villardón-Gallego, 2015). In this respect, some studies stress the role played by the students' process of identifying with the teaching profession and the development of attitudes or values that may

be important if they are to progress in their professional development (Beijaard, et al., 2004; Esteve, 2009; Timostuk & Ugaste, 2010), such as their intrinsic vocation for teaching, a commitment to improving education, the capacity to reflect and be self-critical, the flexibility to adapt to changes and the need to improve their own theoretical and practical training (Hong, 2010; Kim, 2013; Salazar Noguera & McCluskey, 2017).

The majority of the aforementioned studies concern the sphere in general, and very few tackle the development of the Teacher's Professional Identity (TPI) in the context of the training of Science and Technology teachers, although several works dealing with this subject have been published recently (Avraamidou, 2014; Cameron & Grant, 2017; Green, 2015; Izadinia, 2016; Smith & Darfler, 2012; Trevallion, 2018) and it is, therefore, appropriate to analyse them in some detail.

Contextual factors

The work carried out by Avraamidou (2014) provides an interesting review of the theme of Science teachers' identity through the analysis of 29 previous studies on this subject. In the conclusion, the author emphasizes that future Science teachers already have their own professional identity, which they have been able to forge by means of previous experiences and that evolves as they progress in their teacher training. This author also points out that Science teachers' TPI can be considered to have come about as the result of the combination of their competence and the content domain of the subject, their performance in relation to the scientific experiences that they had before beginning their teacher training and their and others' recognition of them as professionals in the field of science.

Cameron and Grant (2017), meanwhile, interviewed 18 teachers in order to discover the impact of external tutoring on the development of Science teachers' TPI. These authors consider that, in spite of the fact that the TPI of those interviewed began to develop during their initial training process, this professional identity may be affected by the environment in which they work. The results of this study show that there is a direct relationship between training needs and the construction of the TPI. In this respect, they highlight that the external mentoring process may have played a key role in the evolution of the participants' TPI.

Vocational attitudes towards the teaching profession may also play a decisive role in the TPI. In this respect, Green (2015) noted that survey participants' attitudes before starting teacher training were in turn influenced by prior experiences that the majority of them had had in environments other than the sphere of teaching. This author states that "They were more clearly influenced by their prior industry experiences and their vocational attitudes rather than by their teacher education program and their experiences in schools." (Green 2015, p. 55).

Furthermore, one of the factors contributing to the development of the TPI that is most frequently studied is Teaching Practice. Izadinia (2016) concentrated on the importance of this period and the role that professional teachers play as the mentors of new and trainee teachers. This study shows that the construction of the TPI can be considered as a process of negotiating the various concepts of teaching and that the trainees' TPI is enriched upon interacting with working teachers. The mentors interviewed in this study stated that they noticed changes in the trainees as regards aspects such as their teaching strategies, their authority, their confidence and their relationships with the pupils. Trevallion (2018) similarly shows the influence of initial training on the development of the TPI, along with coming into contact with the professional reality (the classroom) and the interpersonal relationships that occur in a work environment.

Independent and individual factors

Finally, there are also studies which state that there may be other issues than these factors themselves that affect the TPI. On the one hand, Smith and Darfler (2012) state that, in order to become an efficient Secondary Education Science teacher, in addition to forging one's own TPI, it is necessary to know the identity and evolution of one's pupils, along with having an interest in the teaching-learning process. On the other hand, there are independent factors, such as sex or age, that may influence the way in which teachers construct their TPI (Chang & Lo, 2016).

Gender differences have been determinant in aspects related to professional identity (Allard, 2004; Camacho, 2014; Chetcuti, 2009; Kapitanoff & Pandey, 2017). Some studies note that the differences between genders in the sphere of teaching influence teachers' vocational attitudes, although Monroy and Hernández (2014) point out that there is still no clear evidence regarding the effect that gender has on the construction of the TPI. However, a study by Blinova (2010) shows that men and women are different in very many respects (personality, conduct, communication, attitude towards conflicts...) and it may, therefore, be interesting to analyse the possible dissimilarities between future male and female teachers as regards the construction of their identity as teachers during the period of their initial training.

Bearing in mind all the advances made in literature in this respect, and given the importance of this subject, we are developing a research project that is oriented towards exploring future Secondary Education Science and Technology teachers' views of the TPI and the factors that influence the process of identifying with the teaching

profession. In the first phase of this project, we carried out a qualitative study in which we analysed the opinions of a group of SEMD students from the areas of Science and Technology, which were obtained using a set of open questions that formed part of the classroom activity programme in a subject of a specific module on the aforementioned Master's degree (Serrano Rodríguez & Pontes Pedrajas, 2016). In the second phase we have developed a new study, whose results are shown in this work, in which we have attempted to explore this line of research in greater depth using new investigation instruments and techniques with a view to discovering how future teachers develop the TPI construction process, and what the implications of this process are, in order to improve the quality of Secondary Education Science and Technology teacher's initial training. Within the general framework, our intention with the development of this study is to focus on exploring future Science and Technology teachers' beliefs regarding the global notion of the TPI by first analysing the similarities and differences between students specialising in Science (Physics-Chemistry and Biology-Geology) and those from the sphere of technology-computing (Technology) with regard to this subject. This is done in order to subsequently study the extent of the principal beliefs comprising the notion of the TPI and the factors that may influence possible differences among the various dimensions on the scale employed.

METHODOLOGY

Objectives

To address the different aspects that make up the research problem from an analytical perspective, the following objectives are stated:

- To identify the similarities and differences between SEMD students specialising in Experimental Science and those from the area of Technology as regards: their global idea of TPI, their development in teaching at different educational stages, the relationship between the TPI and the professional identity of other professionals and the aspects that contribute towards the construction of the TPI during their initial teacher training.
- To analyse the extent of the participants' beliefs concerning the construction and development of the TPI.
- To discover whether there are any significant differences among the four dimensions on the scale: (i) the definition of the TPI, (ii) the development of the TPI by teachers in different stages of education, (iii) the TPI and the professional identity of other professionals, and (iv) the aspects that contribute towards the construction of the TPI, by analysing which factors and items are responsible for them.

Instrument

We have developed this research by designing a questionnaire on the basis of the results obtained in the qualitative study mentioned previously (Serrano Rodríguez, Pérez Gracia & Pontes Pedrajas, 2018). This quantitative scale was designed because it was tested that there was not any validated tool to analyse TPI. The 'S-TPI' is formed of 40 variables and split into two sections, the first of which obtains information regarding 9 independent variables related to various socio-demographic data. The second section corresponds to a five-point Likert scale with response options varying from 1 (totally disagree) to 5 (totally agree). It comprises 31 items organised in four dimensions related to the following respective aspects: elements that globally characterise or define the TPI (15); the development of the TPI in different stages of education (5); differences in the way in which teachers and other professionals construct their professional identity (5), and the aspects that contribute towards the development of the TPI (6).

The global questionnaire was validated externally (for its content validity) by a group of five experts in educational research, who evaluated the relevance, pertinence, intensity, clarity and exhaustiveness of the questions on the scale (Oluwatayo, 2012). It was also validated internally (for its construct validity) by applying exploratory and confirmatory factorial analysis techniques. The results of these analysis showed both the high level of sampling adequacy and the significance of the four factors (dimensions) that explain 40% of the variance. In order to study the reliability of the questionnaire, we calculated the Cronbach's alpha coefficient and obtained a value of 0.879, which is considered to be sufficiently high, thus demonstrating that the scale is reliable.

Participants

For this study, the participants were a total of 279 students from four consecutive academic years (2014-2018), of which 51.6 % were women and the remaining 48.4% were men. It represents 97% of the population (all students enrolled in the SEMD during the four academic years). Therefore, the sample is made up of those Science and Technology pre-service teachers that attended the lesson in which the scale was administered, and they voluntarily answered the scale (S-TPI). Since we aimed at getting as many participants as possible so as to ensure a maximum

of representativeness, the sampling technique applied was the convenience sampling (Emerson, 2015) since participants are selected based on availability and willingness to take part.

The average age of the sample was 26.8. The majority of the participants were from the University of XXX (78%), while 13% were from other universities in XXX, 7% were from other universities in Spain and 2% were from universities in other countries. The sample was composed of a first group of students from the area of Science (henceforth G1), comprising 54 from the specialities of Physics and Chemistry, and 101 students from the specialities of Biology and Geology, and a second group of students from the technology-computing sphere (henceforth G2), comprising 58 students from the speciality of Technology and 66 students from the speciality of Computing. A comparative analysis of the Technology and Computing students' beliefs regarding the TPI was carried out in a prior research phase, and no significant differences were found as regards any of the items on the questionnaire, and we, therefore, considered that the students from this technology-computing area formed a homogeneous subset (G2). We also carried out a similar study of the students from the specialities of Physics-Chemistry and Biology-Geology, and since there were no significant differences in the various items on the questionnaire, we also included all the students from the area of experimental science in the same group - G1 (Serrano Rodríguez, Pérez Gracia & Pontes Pedrajas, 2018).

Research Procedure

First of all, the researchers of this study asked the University and the professors of the SEMD for permission to carry out this investigation. The data employed in this study were collected at the beginning of the specific module of the SEMD at the University of Córdoba (Spain) in the subject of *Complements to Disciplinary Training*, which includes a theme regarding teachers' professional profiles, so it addresses contents focused on the teacher professional profile as well as the access to the teaching profession. This subject is taught during the month of October, so it was when data were collected. Moreover, for this module, the SEMD students are separated in groups depending on their field of knowledge.

Students answered voluntarily to the scale and they were informed of the purpose of the study as well as the anonymity of their answers. Answering the scale (S-TPI) took approximately fifteen minutes to each participant.

Data Analysis

After collecting the data, we applied various statistical treatments to them in order to provide responses concerning the objectives of the present study.

First, in order to analyse the common aspects and the differences between the experimental science group (G1) and that of technology (G2), we applied the parametric student's t-test to each of the variables of the instrument used (objective 1).

We then applied several descriptive analysis procedures (mean values and frequencies) in order to study the extent of the participants' beliefs regarding the aforementioned aspects (objective 2).

To be able to analyse whether there were significant differences between those from the Science and Technology groups as regards the various dimensions on the scale, we applied the Kruskal Wallis test and a pairwise analysis (objective 3). We then used a Permutational Multivariate Analysis of Variance (PERMANOVA,) (objective 3). This analysis made it possible to evaluate the differences among the values of the responses according to the following variables: sex (2 levels) and age (4 levels). We employed the type III square sum, since it is appropriate in the case of an unbalanced design. All the tests were carried out with 9999 permutations with the objective of increasing the power and precision of the analysis of residues with a reduced model (Anderson and Ter Braak, 2003). The advantage of the permutation method is that the resulting test is 'distribution free' and is not limited by many of the suppositions typical of parametric statistics (Walters and Coen, 2006).

Finally, we also carried out an analysis in order to calculate the percentages of similarity/dissimilarity (SIMPER, *Similarity Percentages*, Clarke, 1993) between the two levels of the sex factor. This analysis enabled us to determine which items were responsible for the greatest proportion of differences among the variables on the questionnaire that the PERMANOVA determined as being significant (sex). In this study, the SIMPER was used to identify and order the items that were responsible for the dissimilarity between the two levels of the sex variable.

The analyses were carried out using the PRIMER V6 computer programme, including the complementary PERMANOVA + package (Anderson, 2008) and the SPSS V22 statistics package.

RESULTS

This section presents the results according to the four objectives of the study.

Table 1. Comparison of means of the two groups in the 31 items

Dim.	Item	G1	G2	t	p
1	1. Having an adequate capacity to teach	4.07	4.24	-1.611	0.108
1	2. Feeling a high level of commitment to the teaching profession	4.33	4.35	-0.208	0.835
1	3. Having solid training regarding Education and teaching	3.99	3.86	1.290	0.198
1	4. Building a positive self-image as an aspiring teacher	3.93	3.69	1.876	0.062
1	5. Knowing how to adapt yourself to educational changes according to the circumstances	4.34	4.31	0.370	0.711
1	6. Using and mastering teaching communication techniques	4.41	4.26	1.787	0.075
1	7. Showing an interest in knowing and understanding students	4.62	4.50	1.534	0.126
1	8. Integrating ICT into teaching	3.97	3.98	-0.135	0.893
1	9. Properly combining theory and practise about teaching	4.34	4.30	0.395	0.693
1	10. Worrying about human relationships in the educational context	4.30	4.22	0.885	0.377
1	11. Ability to manage class work and solve possible conflicts	4.45	4.36	1.011	0.313
1	12. Having high self-esteem as a teacher	4.11	4.04	0.664	0.507
1	13. Being an expert in one's discipline	4.16	4.29	-1.327	0.186
1	14. Motivation to awaken the students' interest in learning	4.65	4.69	-0.478	0.633
1	15. Adopting a reflective and self-critical attitude with regard to teaching practise	4.43	4.45	-0.319	0.750
2	16. The previous academic training to become a teacher is different at each stage	3.72	3.52	1.409	0.160
2	17. There is a different Curriculum for each educational level	3.94	3.78	1.238	0.217
2	18. The methodological strategies and resources vary according to the circumstances	4.06	3.98	0.703	0.483
2	19. The problems of coexistence are more frequent in Secondary Education	3.95	3.89	0.462	0.645
2	20. There are different teaching functions in each stage	3.96	3.61	2.403	0.067
3	21. Psycho-pedagogical training is required for the teaching profession	4.05	4.02	0.302	0.763
3	22. Teaching includes an educational practice that makes it different from other professions	4.04	4.04	-0.014	0.989
3	23. Teaching implies a relationship with students that contributes to their personal and academic development	4.43	4.35	0.774	0.439
3	24. Teaching places a different importance on the interpersonal relationships in the workplace	3.97	3.98	-0.068	0.946
3	25. Teaching fulfils a very specific social mission which differs from that of other professions	4.14	4.21	-0.595	0.552
4	26. Longer placement period	4.04	3.91	0.984	0.326
4	27. A broader psycho-pedagogical training during the Master's Degree	3.91	3.64	2.009	0.056
4	28. The recognition and social evaluation of the teaching profession	3.90	3.85	0.406	0.685
4	29. The acquisition of new methodologies and the use of educational resources	3.89	4.11	-1.795	0.074
4	30. Learning through experiences with other teaching professionals	4.31	4.36	-0.523	0.602
4	31. The promotion of teacher motivation and the development of a professional project	4.23	4.23	0.000	1.000

Similarities and Differences between G1 and G2 as Regard the Construction and Development of the TPI

After applying the T test in order to study the possible differences between G1 (Science pre-service Secondary Education teachers) and G2 (Technology pre-service Secondary Education teachers) as regards the 31 items on the scale, we observed that there were no significant differences in their responses (Table 1). It means that Science and Technology pre-service Secondary Education teachers understand TPI construction and development in the same terms.

The items in which the difference between G1 and G2 is greater are those related to the ability to solve problems in the classroom (item 11), the idea that the previous academic training to become a teacher is different at each stage (item 16), the importance of the relationship between the teacher and the students (item 23), the need to broaden the psycho-pedagogical training (item 27) and the importance of knowing new methodologies and teaching resources (item 29). On the other hand, the items with no difference or slight difference between both groups have to do with the inclusion of ICT in lesson planning (item 8), the fact that teaching includes an educational practice that makes it different from other professions (item 22), the relevance of interpersonal relationships in this profession (item 24) and the role of motivation and the development of a professional project (item 31). Therefore, since there are not statistically significant differences between G1 and G2 in regard to the items of the scale S-TPI, the sample is considered as a unique group for the following analyses.

Extent of Principal Beliefs

An analysis of the frequency and means was carried out in order to analyse the extent of the beliefs of the groups surveyed (Figure 2).

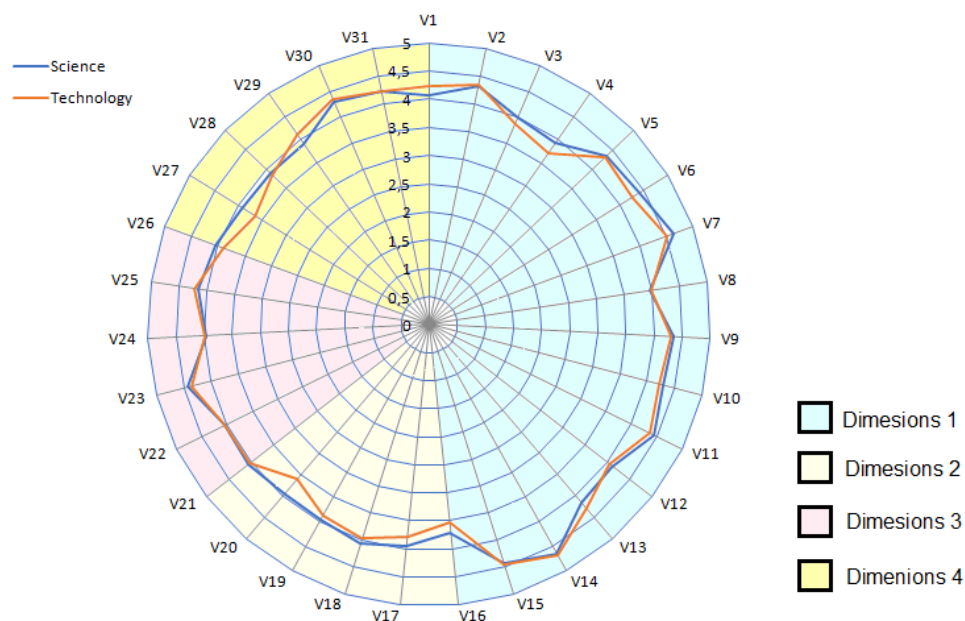


Figure 2. Extent of beliefs regarding TPI

The items with the highest frequency in dimension 1 (definition of the TPI) and which, therefore have the highest rate of agreement, are related to motivating the pupil during the teaching-learning process (item 14, \bar{x} =4.67), showing an interest in understanding the pupils and their needs (item 7, \bar{x} = 4.55) and having classroom management skills and the ability to resolve possible conflicts that occur on a daily basis (item 11, \bar{x} = 4.41). The items with the lowest frequency were, however, those related to constructing a positive image of oneself as a teacher (item 4, \bar{x} = 3.81) and integrating information and communication technologies into the classroom (item 8, \bar{x} = 3.97).

The frequencies of the responses were lower in dimension 2 (developing the TPI in the different stages of education) because there was a lesser degree of agreement among them. The sample shows that the development of the TPI differs in the different stages of education because the curriculum is different (item 17, \bar{x} = 3.86) and because different methodological strategies and resources are required depending on the stage (item 18, \bar{x} = 4.02). However, the participants did not consider that receiving different prior academic training has an influence on the development as their identity as teachers (item 16, \bar{x} = 3.62).

The frequencies in dimension 3 (differences in the way in which teachers and other professionals construct their professional identity) were once again high. These differences are associated with the fact that teaching implies a relationship with the pupils that contributes to both their academic and personal development (item 23, \bar{x} = 4.39). They are also related to the interpersonal relationships with workmates (item 24, \bar{x} = 3.98), although with much less frequency.

The most relevant aspects in dimension 4 (aspects that contribute to the development of the TPI) are learning through experience (item 30, \bar{x} = 4.33), the teachers' motivation and vocation (item 31, \bar{x} = 4.23) and the periods of teaching practice in initial training, during which trainee teachers have the opportunity to be immersed in the real context of a classroom (item 26, \bar{x} = 3.97). The acquisition of new methodologies and the use of educational resources (item 29, \bar{x} = 4) have a lower frequency in this dimension.

Study of Differences among Dimensions and Factors Responsible for Such Differences

To develop the third objective of the study, it is necessary to go from the "micro" level, based on the analysis of the specific beliefs reflected in each item of the scale, to the "macro" level that requires an analysis of the overall results obtained in the four dimensions of the scale that refer to the following aspects: understanding of TPI, development of the TPI in the teaching staff of different educational levels, relationship between the professional identity of teachers and that of other professionals and aspects that contribute to the construction of TPI during initial training.

Table 2. Results of PERMANOVA according to sex and age

Variables	gl	Sc	F	p
Sex	1	513.02	4.72	0.001*
Age	2	177.13	0.81	0.72
Sex*Age	2	253.73	1.16	0.25
Residues	273	29698		
Total	278	30606		

Table 3. Contribution of each of the items to the dissimilarity between men and women

Average dissimilarity = 11.83%						
		G1	G2			
Dim.	Item	Mean	Mean	Average dis.	% Contr.	% Accum.
2	20	3.78	3.83	0.52	4.41	4.41
2	16	3.60	3.65	0.51	4.29	8.69
4	28	3.76	4.01	0.50	4.19	12.89
4	27	3.99	3.58	0.49	4.17	17.06
2	19	3.97	3.87	0.47	3.95	21.01
2	17	3.96	3.78	0.45	3.83	24.84
4	26	4.09	3.87	0.45	3.83	28.67
1	4	3.88	3.77	0.45	3.78	32.46
4	29	4.10	3.87	0.44	3.74	36.20
1	8	4.10	3.84	0.43	3.59	39.79
3	24	4.03	3.91	0.42	3.52	43.32
2	18	4.19	3.84	0.41	3.50	46.81
3	21	4.24	3.81	0.41	3.47	50.28
3	22	3.99	4.09	0.40	3.38	53.66
3	25	4.14	4.21	0.39	3.31	56.97
1	1	4.23	4.06	0.37	3.14	60.11
4	31	4.28	4.16	0.37	3.13	63.24
1	12	4.12	4.04	0.36	3.08	66.32
1	3	4.07	3.79	0.36	3.06	69.38
4	30	4.36	4.30	0.34	2.87	72.25
1	10	4.38	4.14	0.34	2.85	75.10
1	13	4.24	4.19	0.34	2.84	77.94
1	5	4.47	4.17	0.33	2.83	80.76
1	9	4.42	4.21	0.32	2.68	83.44
3	23	4.51	4.27	0.31	2.61	86.05
1	6	4.47	4.21	0.30	2.53	88.58
1	11	4.53	4.28	0.30	2.51	91.09

Therefore, we first carried out the Kruskal Wallis test, which indicated that there were significant differences among the four dimensions on the scale ($H = 74.52$; $p < 0.0001$). Furthermore, the pairwise test confirmed that there were differences among the four dimensions ($p < 0.05$).

Finally, after verifying that there were significant differences among the four dimensions on the scale, we studied which factor and which items were most responsible for these differences. We included both independent variables of the scale (sex and age) so as to check which one was responsible for the existing difference (Table 2).

PERMANOVA results show that the independent variable sex significantly affects the way participants respond to the items of the scale in the four dimensions (men and women respond differently) ($F = 4.72$, $P = 0.001$). However, there are no significant differences as regards either the age factor ($F = 0.81$, $P = 0.72$) or the interaction between sex and age ($F = 1.16$, $P = 0.25$).

The results of the SIMPER analysis (Table 3) indicate an average amount of dissimilarity, as regards the evaluation of the responses, of 11.83% between men and women. This difference is principally owing to the following items: 20 (4.41%) "There are different teaching functions in each stage", 16 (4.29%) "The previous academic training to become a teacher is different at each stage", 28 (4.19%) "The recognition and social evaluation of the teaching profession", 27 (4.17%) "A broader psycho-pedagogical training during the Master's Degree" and 19 (3.95%) "The problems of coexistence are more frequent in Secondary Education". We should stress that all of these items belong to dimension 2, with the exception of item 28, which is from dimension 4.

DISCUSSION AND CONCLUSIONS

This paper analyses SEMD Science and Technology students' beliefs regarding the construction of the TPI during their initial teacher training process. We have first studied the similarities and differences as regards this subject between students from the area of Science and those from the area of Technology and have then gone on to analyse the extent of the principal beliefs of which the idea of the TPI is composed, along with the factors that may influence the origin of any possible differences. This was done using a Likert scale test created using the opinions on this subject obtained in a prior stage by means of open questions (Serrano Rodríguez & Pontes Pedrajas, 2016). We verified *a priori* that the new questionnaire had appropriate reliability and validity features for a research instrument (Serrano Rodríguez, Pérez Gracia & Pontes Pedrajas, 2018).

With regard to the first objective, a broad degree of similarity has been observed in the Science and Technology future teachers' beliefs regarding the global understanding of TPI. It also happens with respect to the development of the TPI in the teaching staff of different educational stages and around the relationship between the TPI and the professional identity of other professionals. There is also convergence of results around the aspects that contribute to the construction of TPI during the initial teacher training. This similarity has also been observed in other previous works related to the beliefs of such groups around various aspects of teaching activity (Solís et al., 2013) and around the teaching processes (Pontes, Poyato, & Oliva, 2018). These results can be better understood considering that the previous experience as students and the academic training received by such groups is similar during Secondary Education. Regarding the university education of both groups, it is also quite similar at the methodological level, although there are differences in the contents of the teaching of the different scientific and technological degrees.

In the case of the second objective, upon considering that both groups form part of the same sample, we observed that the S&T SEMD students extensively relate the general idea of the TPI with the possession of a series of qualities that are of particular interest for those who wish to work in the teaching profession (an interest in learning from the pupils, commitment to education, professional self-esteem, the capacity to adapt to changes, the importance of teacher training, concern about the human relationships that occur in educational contexts, the capacity for reflexion and self-criticism, etc.). In this respect, the results also reflect the importance of acquiring certain professional skills that are basic for those who wish to teach in secondary education centres (transforming scientific training into didactic knowledge of the content, motivating the pupils to learn Science and Technology, using and dominating educational communication techniques, effectively integrating ICTs into teaching, learning to resolve conflicts and appropriately managing educative processes in the classroom, etc.). Previous works have also shown that these aspects are important elements as regards teaching in an appropriate manner and improving the quality of education (Avraamidou, 2014; Beijaard et al., 2004; Izadinia, 2016; Smith & Darfler, 2012), and have stressed the importance of the professional being able to maintain the pupils motivated and interested during the teaching-learning process and of developing the specific abilities that are required to be able to teach efficiently.

Other subjects regarding which we have found highly extended beliefs concern the different way in which the TPI is developed by teachers at different levels of teaching. The participants specifically placed quite a lot of emphasis on the fact that both the curriculum and the didactic strategies and resources used by teachers are different according to the stage of education. This is related to the results obtained in the study carried out by Bakar (2016), which indicated that S&T teachers require specific training, since the didactic content and the teaching strategies have to be adapted to the pupils' level of education.

With regard to the differences in the way in which teachers and other professionals with a university education construct their professional identity, the results obtained in this work show a high level of agreement as regards the opinion that interpersonal relationships in the work context have quite a significant influence in the sphere of education. This is related to the results obtained in other studies that showed the importance of the development of the TPI when trainee teachers come into contact with professionals from the same sphere during their teaching practice and get to know the real context in which they will develop as teachers (Cameron & Grant, 2017; Green, 2015; Trevallion, 2018). Furthermore, the participants in this study indicated that the aspects that have most influence on the construction of the TPI during initial training are the period of teaching practice (Avraamidou, 2014; Izadinia, 2016) and professional interest of a vocational nature (Kim, 2013; Salazar Noguera & McCluskey, 2017) in order to prevent the burnout of newly-graduated teachers (Hong, 2010).

When summing up the purposes of this study, it is worth recalling that the first two objectives are related to the participants' responses to each of the items on the S-TPI scale. However, in order to develop the third objective, it was necessary to carry out an in-depth global analysis of the results obtained for the four dimensions of which the aforementioned scale is composed.

As for the independent variables, the results obtained in this respect do not reflect differences according to the SEMD students' knowledge area or age in any of these dimensions but do reflect significant differences with regard to their gender in all cases.

Furthermore, gender is responsible for the differences among the answers given in the four dimensions. The answers in which men and women differ more are mainly related to the factors that affect the development of TPI. Men and women do not agree with the need to increase the placement period, the importance of the psychopedagogic training and the recognition and social approval of the teaching profession so as to enhance their identities as future teachers (Cameron & Grant, 2017; Huu & Ngoc, 2017; Izadnia, 2016). Moreover, they also dissent in the fact that different educational stages require dissimilar training since not only the curriculum but also the students present diverse peculiarities (Martínez de la Hidalga, et al., 2015). Finally, their different opinions rely on the fact in order to build TPI it is necessary to have a positive self-image of you as future teachers (Kapitanoff & Pandey, 2017). This contrasts with the results obtained in previous studies regarding the influence of age (Chang & Lo, 2016) or gender (Monroy & Hernández, 2014) on students' initial thoughts about various aspects of the teaching profession. However, the data in this study refer very specifically to their beliefs concerning the construction of the teacher's professional identity and, judging by the results obtained, we have to conclude that the gender variable would appear to play a relevant role in SEMD Science and Technology students' initial ideas about the TPI. We are of the opinion that this may be related to the fact that men and women are globally trained in different ways as regards society and family (Blinova, 2010), or the existence of social stereotypes that indicate a progressive process of feminisation of the teaching profession (Kapitanoff & Pandey, 2017).

In order to draw conclusions derived from the above results, it is worth remembering that this study is part of a larger project, aimed at fostering reflection on teaching activity and the construction of adequate professional knowledge (Abell et al., 1998; Appleton & Asoko, 1996; Sutton 2011), which is being developed in three phases and this paper is part of the second stage, focused on analysing the main characteristics of TPI that have been detected through classroom activities in the previous stage (Serrano Rodríguez & Pontes Pedrajas, 2016). From our point of view, the most relevant fact is that future Science and Technology teachers show a certain interest in the development of the teacher's professional identity from the beginning of their teacher training Master's degrees, and that their view of the TPI is fairly closely related to the need to acquire certain professional skills that are appropriate in order to improve teaching and learning processes in the subjects related to Science and Technology (Avramidou, 2014; Cameron & Grant, 2017).

In this sense, we must highlight, as a relevant fact, the important relationship that future Science and Technology teachers establish between the construction of the TPI during initial training and the development of teaching skills linked to key elements of the constructivist approach, such as the following: to better understand the needs of students and learn to motivate students during the teaching-learning process, become familiar with new teaching methods based on the use of innovative strategies and interactive resources, take better advantage of the period of teaching practices for acquire skills related to interactive communication and the organization of work in the classroom, trying to learn to solve possible conflicts that arise in the classrooms and secondary schools (García-Carmona, 2013; Pontes Pedrajas, Serrano Rodríguez & Poyato, 2013). Another interesting aspect of this study refers to the gender differences detected around some beliefs related to the way future Science and Technology teachers build TPI during the initial teacher training. This is an issue that has been little investigated so far, although there are studies that present a good perspective to further explore this aspect (Allard, 2004; Chetcuti, 2009; Camacho, 2014).

All in all, we should highlight the need to bear in mind SEMD students' beliefs regarding teaching and the professional identity when designing the future S&T teachers' training process with regard to both the academics responsible for this and the professors who give classes on teaching on this Master's degree. In this respect, we consider that it would be appropriate to include the subject of the TPI in the curricular design of the Master's degree, linked to didactic knowledge of the content and the development of the educational curriculum of each speciality (Serrano Rodríguez, Pérez Gracia & Pontes Pedrajas, 2018).

These facts have led us to design new training proposals for the third phase of the project, based on activities that allow progress in the relationship between the development of teaching professionalism and reflection on educational practice, on the use of innovative strategies for teaching of Science and Technology (inquiry-based and problem solving learning, the use of models in Science, project-based learning, analysis of technological objects, science-technology-society relations, teaching in context, etc.) or on the use of educational resources that encourage student motivation and interaction (analogies, simulations, practical work in the classroom or in the laboratory, interactive response systems using remote controls, etc.). From this perspective, it is necessary that Science and Technology teachers in the initial training period understand the importance of reflecting and debating on practical problems of the teaching profession, during the development of activities that allow to explain their beliefs and favour the evolution of their previous conceptions (Buldur, 2017; Demirci, 2015; Jiménez-Tenorio & Oliva, 2016; Rodríguez-Arteche & Martínez-Aznar, 2018). Likewise, taking into account the lower vocation that is appreciated by Secondary Education students when it comes to choosing some Science and Engineering degrees (Lych & Nowosenetz, 2009), we also think it is necessary to develop classroom activities that help future teachers reflect on

the incorporation of a gender perspective when planning the teaching of Science and Technology in Secondary Education (Camacho, 2014; Chetcuti, 2009).

Finally, in the following stage of this project, we also intend to extend the reach of this research by carrying out a long-term study in which we shall analyse the changes that take place as regards trainee teachers' views of educative processes and the development of teaching professionalism (Buldur, 2017), from the beginning of their initial training until their teaching practice in secondary education centres. This is owing to the existence of studies that have detected various identity crises as a result of the expectations raised by academic training clashing with the complexity of the educational reality (Esteve, 2009; Smith & Darfler, 2012).

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4.9. ESTUDIO 2.4. CONSTRUCCIÓN DE LA IDENTIDAD PROFESIONAL DOCENTE DE FUTUROS DOCENTES INGLÉS COMO LENGUA EXTRANJERA: ¿IMPORTA EL GÉNERO?

Referencia: Pérez Gracia, E., Serrano Rodríguez, R., & Pontes Pedrajas, A. (en prensa). Building EFL Preservice Teachers' Professional Identity: Does Gender Matter? Profile: Issues in Teachers' Professional Development.

Este estudio tiene como objetivo general explorar y analizar las creencias de los futuros docentes de educación secundaria de ILE sobre la construcción de la IPD.



Bogotá D.C., mayo 16 de 2022

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Por medio de la presente me permito informar que los profesores **Elisa Pérez Gracia**, **Rocío Serrano Rodríguez**, y **Alfonso Pontes Pedrajas** presentaron el artículo "Building EFL Preservice Teachers' Professional Identity: Does Gender Matter?" (Construcción de la identidad profesional docente de futuros docentes de inglés como lengua extranjera: ¿Importa el género?) para efectos de evaluación y publicación en la revista *Profile: Issues in Teachers' Professional Development*.

Dicho artículo superó satisfactoriamente los procesos de evaluación y ha sido aceptado para publicación en el volumen 24, número 2 de la revista, correspondiente al semestre julio-diciembre de 2022. Pronto se dará inicio al proceso de edición de este número de la revista y según cronograma se publicará en el mes de julio de 2022.

La revista *Profile* es una publicación científica en inglés cuyo objetivo principal es socializar los resultados de proyectos de investigación en el aula, reflexiones e innovaciones llevadas a cabo por docentes-investigadores de inglés como segunda lengua o lengua extranjera. La revista está registrada en Scopus, Ulrich's Periodicals Directory, Latindex, EBSCO, Informe Académico, Academic OneFile, Red Iberoamericana de Innovación y Conocimiento Científico - REDIB, the Directory of Open Access Journals - DOAJ y Dialnet. La revista también está indizada en MLA International Bibliography, Educational Research Abstracts online - ERA, The Education Resources Information Center (ERIC), The Emerging Sources Citation Index (Clarivate Analytics), The European Reference Index for the Humanities and the Social Sciences (ERIH PLUS), Iresie, LatAm Plus, Linguistics and Language Behavior Abstracts database - LLBA, Redalyc, SciELO Citation Index (Web of Science), SciELO Colombia, CLASE - Citas Latinoamericanas en Ciencias Sociales y Humanidades, y Publindex - Minciencias, clasificada en categoría A1. La revista se ubica en el cuartil 1 del

área de lingüística y lenguaje y en el cuartil 2 del área de educación del Scimago Journal Rank 2021.

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Building EFL Preservice Teachers' Professional Identity: Does Gender Matter?

Construcción de la identidad profesional docente de futuros docentes de inglés como lengua extranjera: ¿Importa el género?

This study explores the beliefs of English as a foreign language preservice secondary education teachers regarding the construction of teachers' professional identity. A questionnaire was used to obtain the opinions of 131 future teachers in the 2014–2020 academic years. Results show that the participants understand teachers' professional identity connected to the ability to motivate students, manage the classroom, and worry about interpersonal relations. Women and men think differently regarding the effect of the acquisition of new methodologies, the psycho-pedagogical training, and a longer placement period in the construction of teachers' professional identity. To conclude, this study brings the chance of reflecting on the importance of strengthening English as a foreign language teachers' professional identity considering the gender perspective to introduce changes in the curriculum.

Keywords: English teacher education, identity, preservice teacher education, teaching profession

Este estudio explora las creencias de los futuros docentes de educación secundaria de inglés como lengua extranjera sobre la construcción de la identidad profesional docente. Se aplicó un cuestionario a 131 futuros docentes en los cursos 2014–2020. Los resultados muestran que los participantes relacionan la identidad profesional docente con la capacidad de motivar al alumnado, gestionar el aula y preocuparse por las relaciones interpersonales. Mujeres y hombres piensan diferente acerca de la influencia de la adquisición de nuevas metodologías, la formación psicopedagógica y un mayor período de prácticas en la construcción de la identidad profesional docente. Para concluir, este estudio permite reflexionar sobre la importancia de fortalecer la identidad profesional de los docentes de inglés como lengua extranjera considerando la perspectiva de género para introducir cambios curriculares.

Palabras clave: formación docente de inglés, formación inicial docente, identidad, profesión docente

Introduction

Numerous studies on teacher cognition have shown that preservice teachers have diverse ideas, attitudes, and motivations regarding teaching, learning, and other aspects related to the teaching profession that influence, in a significant way, the construction and development of their teachers' professional identity (TPI; Beijaard et al., 2004; Garner & Kaplan, 2019). Therefore, the importance for preservice teachers of building their TPI is being recognized at an international level (Schaefer & Clandinin, 2019; Suelves et al., 2021). Throughout this learning-to-teach process, it is important to make them reflect and wonder about who they are and how they see themselves as teachers in an immediate future (Keary et al., 2020).

Thus, the scientific and educational grounding of this study is mainly based on the constructivist approach to teacher education because it defends the idea that learning occurs only when preservice teachers are thoroughly engaged in the process of meaning and knowledge construction (Harfitt & Chan, 2017). Moreover, there is evidence to prove that mastery experience substantially contributes to preservice teachers' constructivist teaching beliefs (Cansiz & Cansiz, 2019). Then, it is also positive that they develop an understanding of this approach so that they can apply it to their future practice in real educational contexts as an alternative to more traditional-oriented teaching approaches. In other words, to avoid that future teacher reproduce the action schemes of traditional teaching strategies they have experienced as students in their early education (Flores, 2020).

Moreover, the reflective approach to teacher education has also been a reference for this study since it focuses on preservice teachers' beliefs. Therefore, this approach provides the study with a solid justification because it highlights the importance of thinking about one's teaching experiences in order to identify strengths and weaknesses and introduce variations when needed to improve the learning outcomes (Blackley et al., 2017). Thus, it is necessary to introduce in preservice teacher training curriculum activities that enable reflection of diverse aspects connected to the teaching practice and the promotion of metacognition (Pérez-Garcias et al., 2020).

In line with the abovementioned, over the past decade, most research on teacher education has mainly focused on subject matter, teachers' competences, and traditional and non-traditional approaches (Cañadas, 2021; Özcan & Gerçek, 2019; Werler & Tahirsylaj, 2020). However, "scholars have begun to highlight additional, important factors that shape teachers' conceptions of and actions in teaching that should be incorporated into teacher professional learning frameworks" (Garner & Kaplan, 2019, p. 8). These other factors refer to teachers' conceptions about themselves as teachers, their TPI, since it has been proved to have an influence on their careers' success.

Considering that, this research examines how English as a foreign language (EFL) preservice teachers understand TPI as well as their beliefs on which aspects determine its construction and development. Additionally, it aims to analyse whether there are significant differences on these aspects depending on the gender of the participants, mainly for two reasons. On the one hand, this variable was included because in a preliminary qualitative study, participants suggested that gender may affect their comprehension of the teaching profession. On the other hand, because there is certain disagreement in previous studies on whether male and female teachers concur in their perceptions about the teaching profession and their vocational attitudes, and there is still scarce evidence regarding the effect of gender on the construction of TPI and the progression of teachers' careers (Egmir & Celik, 2019; Kapitanoff & Pandey, 2017). In addition, the present study focuses on preservice teachers whose first language is English and on those whose first language is other than English (mainly Spanish) because it seems they face a dualism of personalities (Treve, 2021; Vega et al., 2021). Therefore, these feelings will directly affect their beliefs regarding the teaching profession, and, consequently, their TPI construction.

EFL Teachers' Professional Identity

The initial teacher training process is of great importance in the development of TPI (Rodrigues & Mogarro, 2019). Every future teacher should start developing their commitment and identity with the teaching profession during their initial training; however, there are some groups that could be more vulnerable than others. The construction of the professional identity of language teachers is a topic that has generated great interest both in research literature and in the implementation of educational policies in recent decades (Hashemi et al., 2021; Mora et al., 2014; Trejo-Guzmán & Mora-Vázquez, 2018). In this study, we focus on preservice teachers whose first language is different than English because the "native vs. non-native English speakers" dualism could affect the development of their TPI and, consequently, their professional development (Zhu et al., 2020). In addition, there is also a significant variable that may accentuate this issue and it has to do with the teacher training model (consecutive vs. simultaneous; Gómez et al., 2017). Particularly, consecutive training models do not bring about the opportunity of combining subject and pedagogical content simultaneously, so they do not follow a teaching route from the beginning, which hinders the integration of both learnings. Therefore, preservice teachers see themselves as professionals rather than teachers (Schaefer & Clandinin, 2019).

The globalization and internationalization of our world brought about the phenomenon of Englishization (Lanvers & Hultgren, 2018) in all fields, and particularly in education. The spread of English has been significant, and it has even become the language of instruction in diverse educational levels (Feddermann et al., 2021; Macaro et al., 2018). It is undeniable that this situation has provoked great changes in language teaching and testing around the world. Thus, it has caused a global need for English language teachers, mainly in EFL countries (Llurda, 2004). Consequently, there is still a debate regarding what is better: either to count with professionals whose first language is English as the model in language teaching considering their culture and language proficiency, or to bet for EFL teachers with their linguistic and pedagogical skills (Dervić & Bećirović, 2019). In this regard, scholars tend to favor the second option on the grounds that EFL lessons are more linguistically varied, allowing teachers to switch codes when necessary. Nevertheless, the discussion is still open due to the diversity of learning contexts, but, undoubtedly, this is something that has an impact on preservice EFL teachers' TPI (Zhu et al., 2020). Thus, beliefs about the teaching of EFL affect the development of the professional identity of EFL teachers and, given that identity is a construct of multiple, dynamic, and changing character, teachers should be exposed to didactic experiences that contribute to building a professional identity with a sense of context awareness and with a multicultural vision (Chacón, 2010; Ortaçtepe, 2015).

The dichotomy between teachers whose first language is English and those with another first language and theories behind it have a great discriminatory impact in their careers, therefore, labels such as native vs. non-native should be reviewed against the negative effects of degrading categories (Shin, 2008). The second group is aware of this debate and the issue of employment discrimination that may affect them, mainly in the private sector (Clark & Paran, 2007), hence, it may impinge on the way they develop their TPI. In this sense, it is important to reinforce professional identity construction throughout their initial teacher education so as to prevent possible burnout rates (Lu et al., 2019), strengthen their competences (Roulston et al., 2018), and reduce their anxiety and feelings of helplessness and loneliness during preservice training and early career development (Deng et al., 2018).

Teachers' Professional Identity Influencing Factors

TPI is not a static attribute, teachers continuously develop and change their sense of self through looking and analyzing their daily professional practice and their lives as teachers (Vokatis & Zhang, 2016). This TPI construction process starts since the moment they made the decision to become teachers (Donnini-Rodrigues et al., 2018). Not only do they undergo variations in the development of their skills, but they also modify their conceptions of the teaching profession and its social image (Torriente & Villardón-Gallego, 2018).

Scientific literature on this issue state that TPI may be influenced by a wide range of aspects, both personal and contextual; internal and external (Rodrigues & Mogarro, 2019). On the one hand, regarding the personal aspects, there are studies that point out the need for teachers to have a deep interest in their own teaching-learning process and the ability to awake this concern among their students (Leeferink et al., 2019), count with intrinsic vocation towards education to avoid possible frictions linked to motivation or commitment (Meijer et al., 2011), be empathic and build a positive and solid self-esteem as future teachers (Day, 2018), among others. In addition, at the individual level, other independent factors—such as gender—should be considered (Chang & Lo, 2016; Nürnberger et al., 2016). Moreover, Egmir and Celik (2019) suggested that educational beliefs and teachers' identities during initial teacher training periods significantly differ in terms of variables such as gender, field of knowledge, and degree. Focusing on gender as one of the most

debatable issue, some studies highlight that differences between women and men in the field of teaching exist and affect their attitudes along their careers (Kapitanoff & Pandey, 2017). At first, Monroy and Hernández-Pina (2014) did not find clear evidence of the effect that gender makes on the development of TPI; however, with the increasing interest in this issue, later research projects have noted the significant differences in how men and women from different field of knowledge construct their TPI during their initial teacher training process (e.g., Pérez-Gracia et al., 2019). In this line, Healey and Hays (2012) had already conducted a study where the differences between male and female participants with respect to aspects of professional identity were evaluated. The results of the discriminant analysis indicated gender differences in the development of professional identity. An additional regression analysis revealed a significant predictive relationship between professional engagement and professional identity development and orientation. However, we did not find recent long-term and large-scale studies on EFL teachers' TPI.

On the other hand, contextual factors should be considered within the training background. The placement period included in the secondary education teacher training master's program is one of the aspects that has been more widely analyzed since preservice teachers' entry into the teaching practicum places them with both changes and challenges related to different tasks such as planning or coordination among colleagues (Leeferink et al., 2019). Therefore, Yuan et al. (2019) state that "confronting a new learning environment, student teachers are likely to create new forms of identities through their cognitive learning, social interactions and emotional experiences" (p. 975). Consequently, they may start to create a new identity different to the one they already have, and it will possibly influence their practice and development. These dissonances sometimes help them grow and reflect on their own professional learning. Moreover, learning by doing with mentors and peers as well as designing a professional project are decisive in TPI building (Schaefer & Clandinin, 2019). Finally, receiving specific training on pedagogy, psychology, and teaching methodologies also contributes to the way they feel dedicated to teaching (Tashma-Baum, 2014).

All in all, we believe this study is important to deeply analyze how the participants understand TPI and which aspects they believe that contribute to its development. Thus, its results would bring about the opportunity to critically reflect on the ways their training could be reinforced so as to reduce the anxiety and lack of confidence caused by the native vs. non-native dichotomy (Hashemi et al., 2021). In addition, this study results in newness in diverse issues: dualities on TPI construction (English as a first language and non-English as a first language EFL preservice teachers), lack of studies of non-English as a first language EFL preservice teachers and TPI, and the importance of gender in TPI construction in this collective.

The objectives of this study are:

To identify the beliefs of a group of non-English as a first language EFL preservice teachers about TPI and its influencing factors.

To identify whether there are significant differences between men and women in this regard. If differences are found, to identify the factors responsible for them.

Method

This is an empirical and descriptive study based on the quantitative analysis of data collected over several academic years within a master's degree in secondary education teacher training.

Participants

The sample was made up by 131 preservice EFL teachers from six consecutive academic years (2014–2020), 84% were women and 16% men. The sampling technique applied was the convenience sampling (Emerson, 2015) since participants are selected based on availability and willingness to take part, they participated voluntarily in the study. The average age of the sample was 21.2. All participants were enrolled in the master's degree in secondary education teacher training at Universidad de Córdoba (Spain). However, their home university (where they carried out their degree studies) were as follow: most of the participants were from the Universidad de Córdoba (82%), while 9% were from other universities in Andalusia, 7% were from other universities in Spain, and 2% were from universities in other countries.

In Spain—and in other European countries (Eurydice, 2018)—initial teacher education follows a consecutive training model which focuses on pedagogy training. In the case of secondary education teachers, people first need to hold a degree in a specific area such as EFL and then, if they are interested in becoming secondary education teachers, it is compulsory for them to enroll in the master's degree in secondary education teacher training, which also includes a placement period where preservice teachers are immersed in real education contexts.

Instrument for Data Collection

This study was carried out using a questionnaire designed on the basis of a previous qualitative study (Pérez-Gracia et al., 2021). The instrument is made up of 40 variables divided into two sections:

- Section 1 gathers information about the participants regarding nine independent variables related to various socio-demographic data, namely sex, age, field of knowledge, degree studies, time since they finished their degree studies, current employment situation, teaching experience, time of teaching experience, academic year in which they are enrolled in the master's degree.
- Section 2 corresponds to a five-point Likert scale with response options varying from 1 (totally disagree) to 5 (totally agree). It comprises 31 items organised in four dimensions (D1, D2, D3, and D4) related to the following respective aspects: D1 = 15 items on elements that globally characterize or define the TPI; D2 = five items on the development of the TPI in different stages of education; D3 = five items on differences in the way in which teachers and other professionals construct their professional identity, and D4 = six items on the aspects that contribute towards the development of the TPI.

However, for this study, two dimensions have been chosen: Elements that globally characterize the TPI (D1) and aspects that contribute towards the development of TPI (D4). We took the decision of using these two dimensions considering the scope of the journal as well as because D1 and D4 respond to a more personal and reflective perspective whereas the other dimensions have to do with more professional and contextual issues (Pérez-Gracia et al., 2019).

The instrument was validated in terms of content, comprehension, and construct. Firstly, the content and comprehension validity were carried out by a panel of experts through a pilot study, so it was improved regarding readability, internal consistency, and appropriateness of the scale. Then, after applying confirmatory procedures, the panel demonstrated the instrument has

a satisfactory metric quality too. The indexes show that the adjustment of the proposed model is highly appropriate, as the goodness of fit index (GFI) has a value of 0.889, 0.872 for the adjusted goodness of fit index (AGFI) and 0.773 for the parsimony goodness of fit index (PGFI). The χ^2 has a value of 2.401. Finally, the root mean square error of approximation (RMSEA) shows that the model has a good fit, with an index of 0.05 (Lo = 0.046 - Hi = 0.054), and the RMR is 0.044. All in all, the instrument is solid and counts with reliable psychometric quality (0.879 Cronbach's alpha).

Research Procedure

The data employed in this study were collected at the beginning of the specific module of Complements to Disciplinary Training of the master's degree in secondary education teacher training at the Universidad de Córdoba (Spain). We chose this module because it deals with issues regarding teachers' professional profiles and development, which is in alignment with TPI formation. This module is taught in the first semester of the master, and data were collected during face-to-face lessons.

Prior to data collection, students were informed of the objective of the study and its importance. Then, they were also told about the ethical issues such as the anonymity, confidentiality, and privacy of their answers. Only those students who were willing to participate answered the questionnaire, which took them between fifteen and twenty minutes.

Data Analysis

Diverse statistical treatments were applied in order to achieve the objectives of the study. Firstly, according to the first objective, descriptive analyses (mean values and standard deviation) were applied in order to know non-English as a first language EFL preservice teachers' beliefs regarding TPI understanding as well as its influencing aspects. These analyses were developed using SPSS V25.

Secondly, to be able to identify whether there were significant differences among the participants regarding their gender in both dimensions of the instrument (Objective 2), we carried out the Permutational Multivariate Analysis of Variance (PERMANOVA).

Finally, in order to discover the variables responsible for these significant differences, SIMPER (Similarity Percentages) was applied so as to calculate the percentages of similarity/dissimilarity between the two levels of the gender factor. Thus, it allowed us to determine which items were responsible for the greatest proportion of gender differences among the variables on the questionnaire that the PERMANOVA determined as being significant. The PERMANOVA analysis was carried out using PRIMER V6.

Results

This section presents the results according to the objectives of the study.

Trends in EFL Preservice Teachers' Beliefs on TPI

Considering the first objective, Table 1 presents the participants' beliefs about TPI and its influencing factors.

Table 1.

EFL preservice teachers' beliefs on TPI

Dimension	Variable	Mean	Standard deviation
D1: Elements that globally characterize teachers' professional identity	1A. Having an adequate capacity to teach	4.21	0.883
	1B. Feeling a high level of commitment to the teaching profession	4.41	0.763
	1C. Having solid training regarding education and teaching	4.17	0.776
	1D. Building a positive self-image as an aspiring teacher	4.1	0.876
	1E. Knowing how to adapt yourself to educational changes according to the circumstances	4.4	0.677
	1F. Using and mastering teaching communication techniques	4.44	0.703
	1G. Showing an interest in knowing and understanding students	4.62	0.638
	1H. Integrating information and communication technologies into teaching	3.87	1.026
	1I. Properly combining theory and practise about teaching	4.44	0.703
	1J. Worrying about human relationships in the educational context	4.46	0.715
	1K. Ability to manage class work and solve possible conflicts	4.63	0.599
	1L. Having high self-esteem as a teacher	4.07	0.896
	1M. Being an expert in one's discipline	4.32	0.757
	1N. Motivation to awaken the students' interest in learning	4.76	0.528
1O. Adopting a reflective and self-critical attitude with regard to teaching practise	4.42	0.733	
D4: Aspects that contribute towards the development of teachers' professional identity	4A. Longer placement period	4.21	0.977
	4B. A broader psycho-pedagogical training during the master's degree	3.92	1.053
	4C. The recognition and social evaluation of the teaching profession	3.97	0.928
	4D. The acquisition of new methodologies and the use of educational resources	4.07	0.994
	4E. Learning through experiences with other teaching professionals	4.42	0.723
	4F. The promotion of teacher motivation and the development of a professional project	4.28	0.93

Note. Own elaboration.

As for the first dimension, which refers to the participants' understanding of TPI, it shows that there is a high level of agreement among participants since the frequency rates are higher than 3.5.

The items with the highest frequency values are related to motivating pupils during the teaching-learning process (1N, $x \bar{x} = 4.76$), the ability to manage class work and solve possible conflicts (1K, $x \bar{x} = 4.63$), showing interest in knowing and understanding students (1G, $x \bar{x} = 4.62$), and worrying about human relationship in the educational context (1J, $x \bar{x} = 4.46$). On the other hand, the items with the lowest frequency, and therefore, with the lowest rate of agreement, have to do with integrating information and communication technologies (ICT) into teaching (1H, $x \bar{x} = 3.87$), having high self-esteem as a teacher (1L, $x \bar{x} = 4.07$), building a positive self-image as an aspiring teacher (1D, $x \bar{x} = 4.1$), and having a solid training regarding education and teaching (1C, $x \bar{x} = 4.17$).

The frequencies of the responses in Dimension 4 (aspects that contribute to the development of TPI) are slightly lower than in Dimension 1. The items with the highest frequency refer to learning through experiences with other teaching professionals (4E, $x \bar{x} = 4.42$), the promotion of teacher motivation and the development of a professional project (4F, $x \bar{x} = 4.28$), and a longer placement period (4A, $x \bar{x} = 4.21$). However, the sample shows that a broader psycho-pedagogical training during the master's degree (4B, $x \bar{x} = 3.92$) and the recognition and

social evaluation of the teaching profession (4C, $x^2 = 3.92$) are not that important in the development of the participants' TPI and there is a lower rate of agreement in this regard among preservice teachers.

Differences in Terms of Gender

Table 2 shows the results of the PERMANOVA analysis aimed to identify the possible significant differences between the participating men and women regarding TPI understanding and influencing factors.

Table 2.

Results of PERMANOVA According to Gender

Variable	Gl	Sc	F	p
Sex	1	188.91	3.438	0.004
Residues	129	7088.5	-	-
Total	130	7277.4		

Note. Own elaboration.

PERMANOVA results (Table 2) show that the independent variable sex significantly affects the way participants respond to the items of the scale in both dimensions (men and women respond differently; $F = 0.438$; $p = 0.004$). Finally, Table 3 shows the items responsible for these gender differences.

Table 3.

Contribution of Each Item to the Dissimilarity Between Men and Women

Average dissimilarity = 11.03						
Dimension	Item	Women Mean	Men Mean	Av. Diss.	Contr. %	Cum. %
4	4D	4.18	3.48	0.72	6.56	6.56
4	4B	3.99	3.52	0.72	6.49	13.04
4	4A	4.28	3.86	0.70	6.36	19.40
4	4F	4.38	3.76	0.67	6.06	25.46
1	1H	3.91	3.67	0.66	5.99	31.45
1	1B	4.53	3.81	0.61	5.54	36.99
4	4C	4.03	3.67	0.59	5.33	42.32
1	1D	4.17	3.71	0.58	5.22	47.55
1	1A	4.20	4.24	0.57	5.19	52.74
1	1L	4.13	3.76	0.55	5.00	57.74
1	1C	4.23	3.86	0.50	4.54	62.28
1	1J	4.52	4.14	0.48	4.37	66.65
1	1F	4.49	4.14	0.47	4.27	70.92
1	1I	4.51	4.10	0.46	4.20	75.12
1	1M	4.32	4.33	0.46	4.19	79.32
1	1O	4.45	4.24	0.46	4.13	83.44
4	4E	4.43	4.38	0.41	3.70	87.15
1	1E	4.43	4.29	0.39	3.57	90.72

Note. Own elaboration.

The results of the SIMPER analysis (Table 3) show an average amount of dissimilarity of 11.03 between men and women. This difference is mainly owing to the following items:

- 4D: The acquisition of new methodologies and the use of educational resources (6.56%)
- 4B: A broader psycho-pedagogical training during the master's degree (6.49%)
- 4A: A longer placement period (6.36%)
- 4F: The promotion of teacher motivation and the development of a professional project (6.06%)
- 1H: Integrating ICT into teaching (5.99%)
- 1B: Feeling a high level of commitment to the teaching profession (5.54%)
- 4C: The recognition and social evaluation of the teaching profession (5.33%)
- 1D: Building a positive self-image as an aspiring teacher (5.22%)
- 1A: Having an adequate capacity to teach (5.19%)

In all of these items, women show higher frequency levels than men but with the exception of 1A in which it turned around. Moreover, most of the items responsible for the differences in terms of sex belong to the dimension about the aspects that contribute to the construction of TPI.

Discussion and Conclusions

Considering the relevance of how language teachers shape their TPI (Trejo-Guzmán & Mora-Vázquez, 2018), this research aims to make a contribution to educational research on initial teacher training from a gender perspective that contemplates various aspects of the way in which non-English as a first language EFL preservice teachers build their TPI. Specifically, this work examines how non-English as a first language EFL preservice teachers understand the concept of TPI and which aspects they think that may modify it. Additionally, it shows that there are differences in the participants' beliefs in terms of gender. Hence, this study is a new contribution to TPI field of research since there are no previous studies in which an independent variable such as gender has been analyzed as a responsible for differences in non-English as a first language EFL future teachers' beliefs. Most of the studies focused on TPI have been approached considering external variables such as participants' previous experience and training or their field of knowledge, devoting less attention to internal and personal variables such as gender or age.

This group of future teachers who have followed a consecutive training model is sensitive for diverse reasons, but mainly, due to the controversy that still exists in non-EFL countries regarding the aptitude of EFL teachers (native vs. non-native). Therefore, not only it is decisive to know in depth how they perceive the meaning and influence of TPI during their initial training so as to strength their social image, self-esteem, and commitment to the profession in their near future (Yuan et al., 2019; Zhu et al., 2020), but it is also necessary to study in more detail how the dichotomy native vs. non-native affect their TPI development, paying specific attention to those future teachers whose first language is not English. Thus, future research will explore and analyze through interviews this issue considering its impact in their professional development.

To start with, as regard the first research objective, this study shows that preservice teachers already have their own conceptions and beliefs regarding TPI, although they have scarce previous experience in education. There is a broad degree of agreement among participants since they extensively relate the understanding of TPI to have the motivation needed to awake students' interest towards learning, the ability to manage their classroom and solve interpersonal conflict, and the worry about interpersonal relationships in the educational contexts. These results coincide with previous studies (Leeferink et al., 2019; Meijer et al., 2011) that point out the connection between

TPI and the attitude with which preservice and inservice teachers face their training and professional development. However, the participants do not agree to a great extent that the use of ICT or receiving a great training in education and teaching has to do with their identity as teachers. Neither they concur that building a positive image as an aspiring teacher and developing a high self-esteem has to do with TPI. These last results are not in line with Day (2018) and Torriente and Villardón-Gallego (2018), who clearly identify that emotional wellbeing and resilience do frame TPI, and that teachers' social prestige is a determining factor in identity and quality of education. This leads us to think that research on TPI should be focused and approached by areas of specialization, since its construction changes depending on the group.

As for Dimension 1, participants do not show values of agreement as high as in Dimension 4, however, they are consistent in the idea that learning through experiences with other teaching professionals (their future colleagues), developing a professional project, and the placement period are the most decisive factors in TPI construction. These outcomes agree with other studies such as the ones carried out by Yuan et al. (2019), Schaefer and Clandinin (2019), and Deng et al. (2018), who emphasize the importance of the practicum in order to solve the numerous dilemmas and internal conflicts that preservice teachers have regarding classroom authority vs. the ethic of caring, feeling part of an institution vs. feeling a stranger, seeing themselves as teachers or other professionals, and dichotomies regarding teaching approaches. In this sense, the literature confirms that the first experience student teachers have in real educational contexts is conclusive so as to start feeling committed and engaged with their professional career. On the other side, the participants of this study do not clearly associate a broader psycho-pedagogical training and the social status of the teaching professions as TPI influencing factors. These ideas dissent with other studies—such as the one by Day (2018)—since the scholars noted that preventing training needs and teaching social status directly contribute to the development of their identity as soon-to-be-teachers.

The second and third objectives could be discussed together. This study shows that there are significant differences between how non-English as a first language EFL preservice teachers respond to the questionnaire in term of their gender, that is men and women answered differently as it had already been highlighted in previous studies but in different fields of knowledge, not in EFL. This coincides with a previous study developed among future science and technology teachers in which gender was also determinant (Pérez-Gracia et al., 2019) and with Egmir and Celik (2019), who proved that preservice teachers' educational beliefs and identities significantly diverge in terms of gender. Moreover, this study also agrees with the perspectives and insights of Kapitanoff and Pandey (2017), who put emphasis on the existence of social stereotypes that indicate a progressive process of feminization of the teaching profession. However, these previous studies do not provide detailed information of the aspects of TPI construction about which men and women think differently. Therefore, the present study goes further in this regard, and it also contributes to the lack of evidence indicated by Monroy and Hernández-Pina (2014).

The level of agreement is higher in women than in men in most of the variables. The items in which men and women differ more are mainly related to the aspects that contribute to TPI construction and development whereas there is higher consistency regarding Dimension 1.

Differences are more pronounced in issues related to the use of educational resources, the psycho-pedagogical training, the need to have a longer placement period, and the promotion of teacher motivation and the development of a professional project. It seems that the participants are not quite sure that these aspects have a relation with TPI since they have low frequency values in the descriptive analyses too.

All in all, one of the most relevant facts is that future non-English as a first language EFL teachers show interest in the development of the professional teaching identity since the very beginning of their training and that their belief of TPI is closely linked to the interest in acquiring professional skills appropriate to improve the teaching and learning processes throughout the placement period (Yuan et al., 2019). Therefore, from these results we can infer the need to rethink the curriculum of this master's degree and strengthen the work towards an adequate construction of TPI to improve future teachers' confidence and commitment. Moreover, identity and language build each other through a complex process, where identity is founded as a changing, multifaceted, and dynamic construct that results from the interaction of the individual with their environment. This fact also has pedagogical implications for initial teacher training programs in our current context (Chacón, 2010). In this sense, the results of various investigations on TPI in early career EFL teachers show that the way of academic transitions, the link with the English language, teacher training programs as well as the professional culture in the work environment have a great impact in the formation of their professional identity (Trejo-Guzmán & Mora-Vázquez, 2018). However, the main uniqueness of this study includes one more aspect to consider when designing EFL future teachers' curriculum and training programmes, namely, gender. It cannot be part of the hidden curriculum but the results of the present research point out the need to reinforce different formative aspects in men and women during their periods as student teachers since it seems they may interpret TPI and the importance of its development in different ways. Finally, incorporating reflection activities in various subjects of the specific module of the master's degree with the aim of reinforcing their confidence and self-esteem could be determinant too.

It is important to point out that the data is the result of the participants' self-perceptions, which may be a limitation due to subjectiveness. Therefore, there could be varied beliefs about the same fact depending on the context where the instrument is applied. However, it could also be seen as a positive point since it enables to know first-hand how the participants understand TPI and its construction process (Gutiérrez-Castillo & Cabrero-Almenara, 2016).

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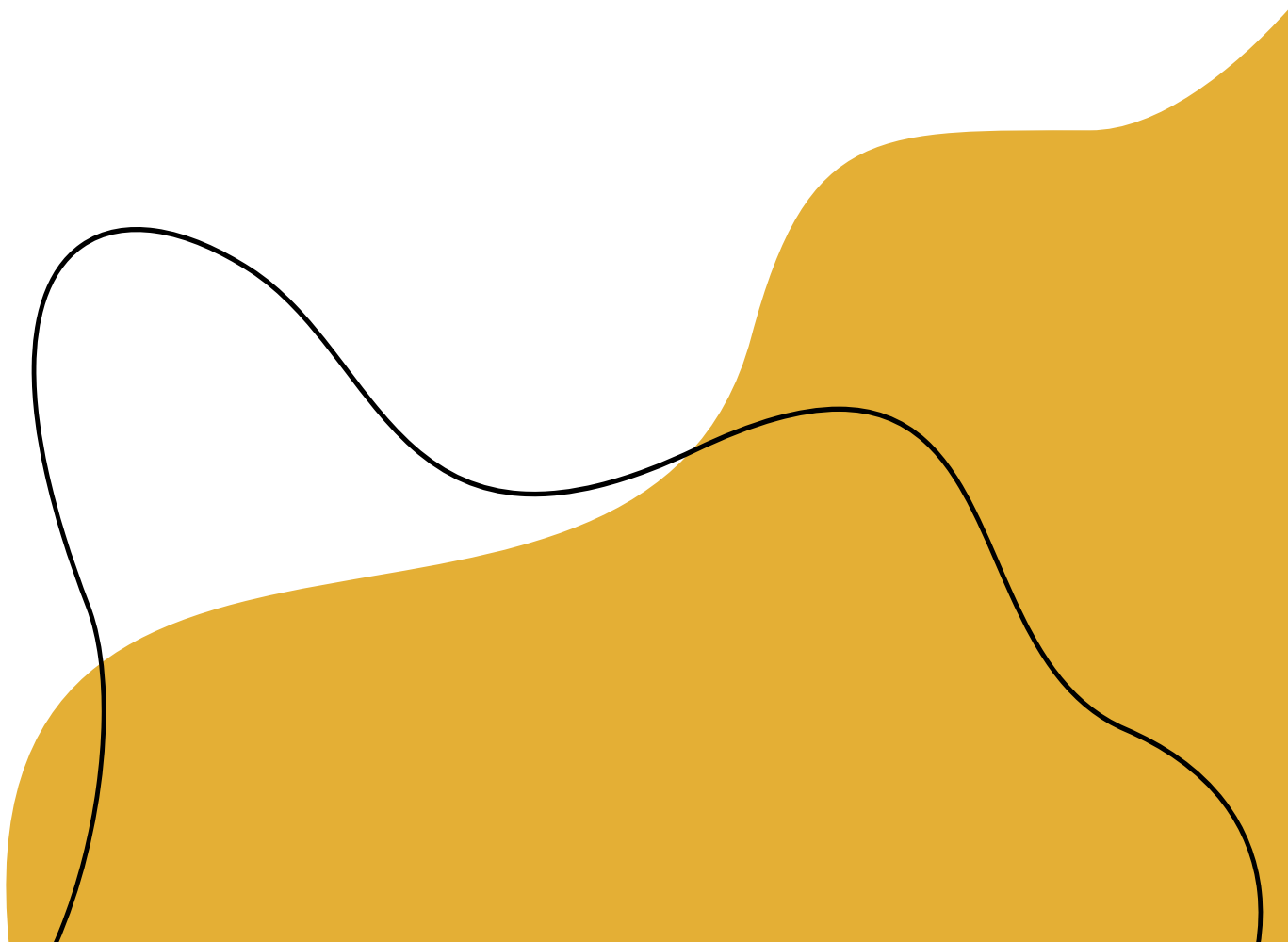
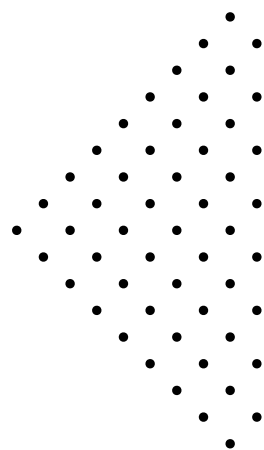
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CAPÍTULO V





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5.1. INTRODUCCIÓN

Este último capítulo recoge la discusión de los resultados obtenidos en los diferentes estudios desarrollados en esta investigación. Para seguir un orden lógico, se discutirán los resultados a partir de los dos objetivos generales de investigación y sus respectivos estudios. Asimismo, se presentan las principales conclusiones del proyecto de investigación, las futuras líneas de estudio y las diferentes limitaciones que se han encontrado en el proceso.

5.2. DISCUSIÓN

En el Capítulo III de esta memoria, se han señalado los interrogantes y objetivos que han guiado el diseño metodológico y la puesta en marcha de este proyecto de investigación. El punto de partida del proyecto ha sido el interés por mejorar la formación inicial del profesorado de educación secundaria que se desarrolla a través del MAES, a partir del análisis de las creencias y percepciones de los futuros profesores y profesoras de dicha etapa con respecto al desarrollo de la profesionalidad de los enseñantes y la construcción de la Identidad Profesional Docente (IPD), debido a la influencia que ejercen los esquemas de pensamiento inicial en el desarrollo de la práctica docente posterior (Hong, 2010; Moses et al., 2017) y a la necesidad de tener en cuenta tales aspectos en el proceso de formación del profesorado (Cheng et al., 2009; Ibáñez y Oliva, 2018).

Para abordar de forma analítica esta problemática se ha desglosado su tratamiento, al principio del proyecto, en dos problemas principales que han permitido formular dos objetivos generales y diversos objetivos más específicos, que están relacionados estrechamente con el desarrollo de los estudios integrados en esta memoria. Por tal motivo, también se dedicarán apartados diferentes en este capítulo para llevar a cabo la discusión de resultados de cada uno de estos estudios.

5.2.1. Discusión de resultados relacionados con el primer objetivo general

En el primer problema principal (PP1) de este proyecto se plantea el siguiente interrogante: ¿El futuro profesorado de educación secundaria se siente preparado para su desempeño profesional? Para responder a esta cuestión inicial es necesario conocer cómo el futuro profesorado de educación secundaria percibe la formación docente que recibe en el MAES y hasta qué punto el alumnado de este se siente competente para afrontar el ejercicio profesional en centros de enseñanza secundaria.

En relación con esta temática se estableció el primer objetivo general del proyecto de investigación (O1), que se corresponde con la necesidad de analizar las creencias del alumnado del MAES sobre la profesión docente, la formación inicial adquirida en el máster de profesorado y el nivel de desarrollo de las competencias docentes previstas en el mismo. Como ya se indicó en el tercer capítulo, la complejidad de este tema implicaba llevar a cabo varios estudios destinados a abordar los diversos aspectos que podían formar parte de esta problemática.

5.2.1.1. Discusión de resultados relacionados con el objetivo específico O1.1

En primer lugar, por tanto, se ha considerado necesario explorar las preconcepciones que el alumnado del MAES tiene sobre la profesión docente y la relación que establecen con los distintos modelos de enseñanza (E1.1). Antes de discutir los resultados sobre estos elementos, es importante tener presente el modelo de formación inicial docente que se lleva a cabo en el contexto español, en el que se desarrolla esta investigación, que se corresponde con un modelo consecutivo (Zuzovsky y Donitsa-Schmidt, 2017) porque esto podría explicar algunos de los resultados obtenidos.

En este sentido, se ha observado que una parte importante del alumnado del MAES considera que la profesión docente puede ser aprendida y mejorada con una formación inicial de carácter teórico-práctico y que antes de ser llegar a ser docente hay que adquirir conocimientos relevantes sobre psicología, pedagogía y didáctica (Escudero, 2009; Solís, et al., 2013). Asimismo, tales estudiantes están de acuerdo en que el principal objetivo del currículum de formación inicial docente es desarrollar las habilidades oportunas para involucrar al alumnado en el proceso enseñanza-aprendizaje y motivarlos a aprender (Pontes, 2008). A priori, estas percepciones estarían lejos de cumplir con algunos de los aspectos que Moya y Manso (2019) recogen como requisitos indispensables para mejorar la profesionalidad docente, tales como desarrollar competencias indagadoras e investigadoras que permitan al futuro profesorado ser capaz de reflexionar y autoevaluar su práctica docente, asumiendo la responsabilidad que ello supone.

Por otra parte, es importante comentar la existencia de una concepción bastante extendida entre el alumnado del MAES, relacionada con la hipótesis de que para ser docente es necesario mostrar un amplio conocimiento de la disciplina a impartir. Esta perspectiva, por una parte, se puede justificar por entender que las personas que se inscriben en el MAES son expertos en una materia determinada y pueden considerar que su nivel de dominio de la misma es suficiente para poder enseñarla (Eurydice, 2015). Por otro lado, esto podría explicar la conexión que establecen a su vez con los modelos de enseñanza más tradicionales, donde la principal meta es transmitir -de manera unidireccional (docente-alumnado)- los conocimientos relativos a cada asignatura (Darling-Hammond y Bensford, 2005; Prats, 2016) y que se puede corresponder, en algunos casos, con los modelos utilizados por el personal docente que los ha acompañado en las etapas educativas anteriores. Aunque a ello, habría que añadir la capacidad de comunicarlos de manera efectiva en el aula, tal y como apunta Recchia y Puig (2011).

Además de este modelo transmisivo, las creencias del alumnado del MAES muestran una conexión con otros dos modelos docentes. El modelo técnico que apuesta por combinar teoría y práctica y el modelo de enseñanza centrado en el alumnado (Ramírez, Cañedo y Clemente, 2012). Este último abriría camino hacia lo que proponen autores como Jones y Saye (2018), tratando de orientar al futuro profesorado a construir un conocimiento profesional adecuado y reflexionar sobre la práctica docente, siempre en busca de soluciones a los posibles problemas que surgen en el proceso enseñanza-aprendizaje.

El hecho de poder relacionar las creencias de este colectivo con distintos modelos de enseñanza nos lleva a reflexionar sobre la posible evolución del pensamiento inicial, ya que no tienen unos esquemas conceptuales rígidos e inamovibles sobre la profesión para la que se están formando, sino que sus concepciones tienen un carácter flexible y moldeable, como concluyeron Clark, Byrnes y Sudweeks (2015). Por lo tanto, esto también se correspondería con la afirmación de Rodríguez-Arteche y Martínez-Aznar (2018) al considerar que las creencias iniciales sobre la profesión docente evolucionan a través de la formación y la experiencia. Por tanto, se debe partir de la explicitación de tales creencias para diseñar un proceso de formación inicial que favorezca el intercambio de ideas y el desarrollo profesional. De este modo, se puede caminar hacia una formación eficaz que capacite al profesorado para responder a los retos y exigencias sociales, tratando de prevenir el abandono temprano de la profesión (Muñoz, 2019).

5.2.1.2. Discusión de resultados relacionados con el objetivo específico O1.2

La transformación del curso del CAP en el MAES, junto con la integración de la formación inicial del profesorado de secundaria en el EEES, fue un proceso que generó interesantes expectativas en todos los ámbitos y niveles; desde las instituciones supranacionales como la Comisión Europea y su reto de potenciar una política de formación docente orientada a desarrollar una formación contextualizada, internacional y significativa, hasta el propio alumnado de dicha titulación. En este sentido, tal y como aseguran Cantón et al. (2015), cumplir o no con estas expectativas tendrá una influencia en el proceso

formativo, ya que las expectativas tienden a estar vinculadas con las necesidades formativas que el futuro profesorado identifica en ellos mismos. Es por ello, que estas expectativas fueron analizadas con el objetivo de complementar las creencias sobre la profesión en general, ya discutidas previamente, y de detectar e identificar las preocupaciones del futuro profesorado antes de iniciar su desempeño profesional para mejorar los procesos formativos y reforzar la construcción de su IPD (Johnson, et al., 2020), como veremos más adelante.

A este respecto, un alto porcentaje del alumnado del MAES participante en este proyecto de investigación (superior al 80%) vincula sus expectativas más altas con aspectos relacionados principalmente con la metodología como elemento curricular y de forma más concreta con el uso de estrategias docentes, el diseño de actividades de aprendizaje, el aprendizaje de técnicas metodológicas que motiven e incentiven al alumnado y la elaboración de unidades didácticas. Muestran bastante interés, al mismo tiempo que reconocen su carencia competencial en estos aspectos, considerando que son fundamentales para el desarrollo profesional (Reoyo, et al., 2012; Zorkovic, 2016). Un porcentaje más bajo (entre el 60% y el 80%) de participantes hacen hincapié en variables relacionadas con el uso de las TIC (Valdés y Bolívar, 2014), el control de diferentes técnicas e instrumentos de evaluación, aspectos vinculados con la psicología (Moses, et al., 2017), la atención a la diversidad, la pedagogía adecuada para promover un clima positivo y una convivencia pacífica a nivel de aula y de centro (Beijaard, Verloop y Vermunt, 2000; Izadinia, 2016) y el desarrollo de la autoridad académica que a veces se ve dificultado por la imagen social que hay extendida sobre la educación en la actualidad (Cameron y Grant, 2017).

Por último, existe un grupo menor (entre el 40% y el 60%) que subraya sus principales expectativas y necesidades en aspectos relativos al funcionamiento y la organización de un centro educativo, así como a la legislación que lo regula. Esto último coincide con los hallazgos de Cantón et al. (2015) quienes también identificaron carencias formativas en el futuro profesorado en este sentido.

Así pues, se pone de manifiesto que existe cierta relación entre las creencias sobre la profesión docente y las necesidades formativas que el alumnado del MAES enfatiza ya que coinciden en la importancia y preocupación dedicada a la didáctica como disciplina científico-pedagógica que centra su atención en los procesos de enseñanza aprendizaje y los diversos elementos que en ellos intervienen (Sanya Pelini, 2017).

5.2.1.3. Discusión de resultados relacionados con el objetivo específico O1.3

Con el fin de cotejar si las expectativas y necesidades formativas, que los estudiantes tenían al inicio del MAES, se habían cubierto de manera eficiente, se analizó su percepción sobre el nivel de desarrollo competencial conseguido a lo largo del curso de formación inicial. Aunque la discusión sobre las competencias que debe adquirir el futuro profesorado de educación secundaria en España sigue activa a nivel científico-pedagógico (Tang, Wong y Cheng, 2016), puede apreciarse la existencia de un amplio consenso a nivel práctico, que queda reflejado en el currículum del MAES a nivel nacional. Por tanto, el instrumento utilizado para este estudio (E1.3) fue diseñado “ad hoc”, recogiendo entre sus ítems las competencias explícitas en dicho documento oficial. Tales competencias son muy variadas, aunque se consiguieron agrupar en tres bloques bien diferenciados: competencia personales y emocionales, competencias sociales y competencias académicas. Esta clasificación, a su vez, es compartida parcialmente con la que establecieron por una parte Amor Almedina y Serrano Rodríguez (2018), y por otra parte Muntaner et al. (2017).

En primer lugar, con respecto a las competencias personales, hay que destacar que los estudiantes del MAES se consideran más capacitados en el uso de estrategias que permiten incentivar el esfuerzo por parte del alumnado, además de fomentar diversas habilidades que les permitirán aprender por ellos

mismos y con otras personas. Esa capacidad de comunicación y cooperación resulta imprescindible, ya que de ellas depende el desarrollo de destrezas como el autoaprendizaje, la creatividad y la capacidad de poder adaptarse a contextos cambiantes (González y Wagenaar, 2006). Sin embargo, no se sienten tan preparados para promover entre el alumnado un espíritu emprendedor, crítico y reflexivo y hábitos para llevar a cabo una búsqueda de trabajo activa. Por otra parte, estos resultados coinciden parcialmente con los obtenidos por Virta et al. (2019), que consideran necesario ayudar al futuro profesorado de secundaria a adquirir las habilidades y estrategias oportunas para que puedan desarrollar bien su trabajo como docentes, aunque su formación previa ha seguido un modelo consecutivo.

Diversos autores consideran que un desarrollo adecuado de las competencias personales en el futuro profesorado repercutirá en su bienestar emocional, lo cual tendrá una influencia directa en su práctica docente (Muntaner et al., 2017). Recientemente, se ha producido un cambio sustancial en los sistemas educativos, centrándose en las competencias que van más allá de lo meramente cognitivo y académico, es decir, ampliando el foco hacia la capacidad de adaptación, la comunicación, la flexibilidad, la habilidad para entablar relaciones interpersonales en el contexto laboral, la empatía. De hecho, la literatura científica demuestra el potencial de la aplicación de la competencia emocional en la formación inicial docente por su efecto en el desarrollo de la docencia (Gutiérrez-Moret et al., 2016).

Este bloque de competencias necesita ser complementado con otras destrezas de carácter social. Los participantes del estudio se consideran más capaces de desarrollar estas últimas, resaltando su conocimiento y habilidad para promover y garantizar respeto por los derechos humanos y los principios de accesibilidad universal, equidad, no discriminación, así como para fomentar valores democráticos y una cultura de paz en las aulas donde se desarrollarán profesionalmente en un futuro próximo. Ser competente en estos aspectos, les permitirá diseñar espacios de enseñanza-aprendizaje inclusivos y equitativos, facilitando también el desarrollo de destrezas necesarias para ejercer un liderazgo democrático (Barbre, 2018). Sin embargo, identifican ciertas carencias para abordar el proceso de tutoría y mentoría con el alumnado.

5.2.1.4. Discusión de resultados relacionados con el objetivo específico O1.4

Por último, en la autoevaluación que hace el alumnado del máster sobre las competencias académicas, por lo general, identifican como fortaleza conocer la normativa y la estructura organizativa del sistema educativo y los centros escolares, así como los diversos modelos educativos que tienen más relevancia en la actualidad. En cambio, señalan como debilidad el manejo del currículum, las estrategias para personalizar la enseñanza en grupos heterogéneos y el manejo de diversas técnicas e instrumentos de evaluación. La capacidad de trabajar temas transversales, como la igualdad de género, en el proceso de enseñanza suscita determinadas dudas porque no parecen sentirse preparados para ello, aunque sí explicitan lo importante que consideran incluir espacios y actividades que fomenten la igualdad de género. Estos últimos resultados se complementan con el cuarto estudio de la primera fase (E1.4), donde parece evidente que existe una tendencia femenina para incorporar el diseño de prácticas educativas sobre género en el aula (Díaz de Grenu y Anguita, 2017). En general, se evidencia una necesidad de reforzar la formación relacionada con la igualdad de género, que contribuya a mejorar el nivel de desarrollo competencial adquirido (Walton, et al., 2018).

Conseguir el mayor nivel de desarrollo competencial durante la formación inicial del profesorado permite avanzar en la construcción de la profesionalidad docente (Ingleby, 2018), ya que no se puede entender el profesionalismo como un producto final sino más bien como un proceso continuo hacia el ejercicio responsable de la profesión. Asimismo, las creencias recogidas en el alumnado del MAES sobre la profesión y los modelos de enseñanza, así como su percepción sobre el desarrollo competencial

adquirido en la formación inicial identifican elementos clave para conseguir lo que Darling-Hammond et al. (2017) describen como un desarrollo profesional efectivo. Entre ellos, cabe destacar que el desarrollo profesional está directamente relacionado con las estrategias docentes aplicables en las diversas áreas de conocimiento, la capacidad de generar entornos de aprendizaje activos, ser autocrítico y reflexivo, adaptarse a contextos variados y crear espacios que faciliten la comunicación entre los distintos agentes que intervienen en la comunidad educativa para mejorar el sentimiento de pertenencia a una institución educativa con una cultura y filosofía determinadas.

Por tanto, los resultados discutidos hasta ahora permiten responder afirmativamente al interrogante planteado en torno al primer problema principal de este proyecto de investigación (P1), aunque conviene hacer hincapié en la necesidad de reforzar determinados aspectos del currículum del MAES, con el fin de formar a profesionales adecuados para afrontar los retos de la educación del siglo XXI. Para avanzar en el proyecto y, al mismo tiempo, partiendo de las evidencias que constatan la conexión directa entre el desarrollo de la profesionalidad docente y la construcción de la IPD (Cruess, Cruess y Sterinert, 2018; Noonan, 2019), damos paso a la discusión de la segunda pregunta de investigación.

5.2.2. Discusión de resultados relacionados con el segundo objetivo general

En el segundo problema principal (PP2) de este proyecto se plantea el siguiente interrogante: ¿Qué entiende el futuro profesorado de educación secundaria por Identidad Profesional Docente (IPD) y qué factores consideran que influyen en su construcción? Para responder a esta segunda cuestión principal se ha diseñado una investigación orientada a profundizar en aspectos abordados de forma cualitativa en varios estudios anteriores sobre la IPD del alumnado del MAES (Serrano, 2013; Serrano y Pontes, 2016).

Con objeto de avanzar en el análisis de esta temática se estableció el segundo objetivo general del proyecto de investigación (O2) y se diseñó un plan de trabajo destinado a estudiar cómo construye el alumnado del máster de profesorado de educación secundaria su propia identidad profesional docente durante el proceso de formación inicial que se desarrolla en el MAES, tratando de analizar los principales factores que influyen en la construcción de la IPD durante el citado proceso formativo.

Para desarrollar esta meta se ha realizado, en primer lugar, una revisión de la literatura científica destinada a conocer cómo abordan los programas de formación inicial del profesorado la IPD, cómo evoluciona la identidad docente en las diferentes etapas de la formación inicial y qué elementos influyen en su desarrollo (E2.1).

A partir de los resultados de dicha revisión bibliográfica, y teniendo en cuenta las evidencias científicas recogidas en la literatura sobre el tema, se diseñó y validó un cuestionario de investigación destinado a analizar las creencias del futuro profesorado de educación secundaria sobre el desarrollo de la IPD (E2.2), con vistas a contrastar los resultados de esta investigación con evidencias científicas previas. Este instrumento se aplicó en alumnado del MAES de diferentes áreas del conocimiento y se realizó un análisis de la influencia de diversos factores como el género o la especialidad del máster en el pensamiento inicial de los estudiantes del MAES sobre la IPD. Posteriormente se han llevado a cabo dos estudios más específicos relacionados con el análisis específico de la IPD de los estudiantes del área de ciencia y tecnología (E2.3) y del alumnado de la especialidad de inglés como lengua extranjera (E2.4).

5.2.2.1. Discusión de resultados relacionados con el objetivo específico O2.1

La construcción de la IPD se configura como un área de investigación relevante por su influencia directa en el desarrollo de la profesionalidad docente (Zhang et al., 2016) y en la calidad educativa (Stenberg

y Maaranen, 2020). El propio concepto ha sido abordado por un número amplio de personas expertas en la materia (p. ej. Beijaard, 2019; Izadinia, 2016; Leeferink, et al., 2020; Yuan, Liu y Lee, 2019) y, aunque ha sido estudiado desde diversas perspectivas, todas ellas coinciden en dos aspectos clave. Por una parte, el hecho de que no es una cualidad fija (Beijaard, et al., 2004), sino un atributo que está en continua evolución desde el inicio de su formación, pasando por toda su experiencia y carrera profesional, hasta el final de su desempeño (Cameron y Grant, 2017). Y por otra parte, la mayoría de los y las investigadoras consideran que la IPD debe empezar a forjarse desde el comienzo de la formación inicial y, por ello, se debe colocar como uno de los elementos clave dentro del currículum, considerándolo como el proceso central del devenir docente en el que se negocian y debaten sus propias percepciones y conocimientos previos en torno a los procesos de enseñanza-aprendizaje y su función como docentes (Lim, 2011).

En este sentido, eran varios los motivos que nos llevaron a realizar una revisión de la literatura para dar respuesta a la pregunta planteada en el segundo problema principal de la investigación (P2); (i) verificar si las creencias sobre la IPD siguen evolucionando, (ii) conocer si los programas de formación del profesorado incluyen este aspecto y, por último, (iii) qué elementos influyen en la evolución de la IPD. Asimismo, este estudio (E2.1) nos ha permitido conocer el estado de la cuestión e identificar determinadas necesidades y problemas que fueron abordados en los estudios posteriores que le siguen dentro del proyecto.

Para llevar a cabo esta revisión, se aplicó la declaración de PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analysis) para garantizar calidad, transparencia y precisión en el proceso. Se analizaron un total de 35 artículos publicados entre 1990 y 2019, ya que fue a final de la década de los noventa cuando los estudios sobre la IPD se empiezan a configurar como un área específica de estudio (Beijaard, et al., 2004). A lo largo de todos esos años, se identifica no solo un aumento progresivo en el número de publicaciones sino también una evolución significativa en cuanto a la metodología utilizada en estas. En los inicios, la mayoría de los estudios eran abordados desde una perspectiva mayoritariamente teórica, mientras que, con el transcurso del tiempo, se identifica un cambio hacia métodos de carácter empírico.

Entre los principales resultados de esta revisión hay que destacar, en primer lugar, que el concepto de IPD ha ido madurando y acotando durante este tiempo. Esta evolución se identifica principalmente en la caracterización de los múltiples factores que se relacionan con este concepto, pasando de asociarlo a elementos de carácter más personal e individual como la motivación, la autoestima, la confianza y las experiencias previas (p. ej. Green, 2015; Nicotra, et al., 2012), a otros factores de carácter contextual como las interacciones entre tutores y tutorizados, entre compañeros de profesión e incluso con la influencia que la imagen social de la profesión tiene en el desarrollo profesional (p. ej. Sarasa y Solís, 2017; Yuan, Liu y Lee, 2019).

En segundo lugar, se observa que los estudios más teóricos han analizado principalmente programas formativos e informes internacionales (Eurydice). Los resultados muestran que es necesario adaptar los programas de formación inicial del profesorado a las competencias que se necesitan para hacer frente a las demandas educativas de la sociedad actual y reforzar la formación en aspectos pedagógicos y psicológicos que contribuyan a la construcción de la IPD, dejando en un segundo plano la formación centrada en el perfeccionamiento de los contenidos específicos de la disciplina en cuestión. Estos resultados coinciden con las conclusiones alcanzadas en los estudios realizados por Lorenzo Vicente et al. (2014) y Avraamidou (2014). Tales autores hacen hincapié en dotar al futuro profesorado de estrategias prácticas eficientes y a desarrollar actitudes o valores que les permitan afrontar la enseñanza con confianza. Por lo tanto, estos programas formativos deberían centrarse en aprender a enseñar, aprender a ser docente, a pensar como docente y a actuar como docente (Kim, 2013), en definitiva, a identificarse con la profesión.

Por otra parte, los estudios de carácter más empírico abordan la construcción de la IPD en distintos momentos (comienzo de la formación inicial docente, desarrollo de la formación inicial docente y principios de su carrera profesional). Dependiendo de dicho momento, el foco de atención se centra en unos u otros aspectos. En el inicio de la formación inicial, que en nuestro contexto se correspondería con el inicio del MAES, se suelen abordar algunos aspectos que tienen vinculación con la IPD como la presentación de las diferentes competencias que han de desarrollar para llegar a ser buenos profesionales de la educación (Manso y Martín, 2014) y el reconocimiento social de la profesión (Torriente y Villardón-Gallego, 2018).

Conforme va avanzando el proceso formativo, se analizan algunas interdependencias complejas que pueden definir la IPD. Una de las más relevantes tiene que ver con las relaciones que se establecen entre el profesorado en formación y el profesorado en ejercicio durante el periodo de prácticas (Izadinia, 2016; Kim, 2013), así como al rol del docente mentor (Izadinia 2015; Evans y Abbott, 1997). Los resultados de tales estudios están en línea con las conclusiones de la investigación realizada por Leeferink, et al. (2019), quienes consideran que el proceso de aprendizaje en el lugar de trabajo está dominado por la identidad profesional de cada estudiante y que esta identificación surge como resultado de las posibles fricciones entre los aspectos personales y profesionales al tratar de convertirse en docentes. Estas relaciones interpersonales y profesionales son decisivas en la confianza del profesorado, ya que el tipo de apoyo recibido durante el periodo formativo afecta positiva o negativamente en su desarrollo profesional (Izadinia, 2016). Así mismo, al inicio de la carrera profesional de los docentes se analizan otros factores que siguen moldeando la IDP y que surgen de las primeras tensiones o de los conflictos que suelen experimentar en esta primera etapa los docentes noveles (Cameron y Grant, 2017; Pillen et al., 2013). Entre ellos, cobran especial importancia la ética profesional (Sanz Ponce y Hirsch Adler, 2016), la resolución de conflictos, el manejo de la autoridad y la responsabilidad (Pillen, Del Brok y Beijaard, 2013).

En tercer lugar, a pesar de que es complejo conseguir -entre los estudios previamente discutidos- un consenso en la delimitación de qué factores definen la IPD, éstos se podrían clasificar en dos grandes categorías que se complementan entre ellas: factores personales o internos y factores contextuales o externos. Esta clasificación, además, estaría en consonancia con la que recientemente han definido Rodríguez y Mongarro (2019).

5.2.2.2. Discusión de resultados relacionados con el objetivo específico O2.2

La revisión de la literatura realizada en este estudio teórico (E2.1) pone de manifiesto el papel que desempeña el proceso de formación inicial y las creencias del profesorado en formación en el progreso y desarrollo de la IPD. Sin embargo, al llevar a cabo la citada revisión no hemos encontrado ningún instrumento validado que nos permitiese profundizar en el análisis de las concepciones previas y creencias que tiene el alumnado del MAES y que permitiese analizar el proceso de construcción de la IPD de manera global. Por ello, tras identificar este problema se consideró necesario realizar un nuevo estudio empírico (E2.2) destinado a diseñar y validar un instrumento de investigación, que posibilitase al personal investigador lograr un mayor conocimiento sobre cómo se entiende y evoluciona la IPD. De igual modo, este instrumento también podría ser útil para realizar una evaluación diagnóstica en diferentes momentos del proceso de formación inicial docente y considerar estos aspectos en los currículos de la formación inicial docente con vistas a tratar de mejorar la formación de los futuros docentes, reforzar la IPD y prevenir el agotamiento emocional al comienzo de su carrera.

Como se ha indicado anteriormente el instrumento de investigación utilizado en este estudio empírico (E2.2) incluye 31 ítems del tipo escala Likert, formados por proposiciones donde los y las estudiantes del MAES pueden expresar su grado de acuerdo o desacuerdo en cinco niveles. Para

seleccionar, formular y organizar los ítems del citado cuestionario se tuvieron en cuenta las evidencias científicas existentes hasta el momento. Tras aplicar los estadísticos oportunos, se confirmó la estructura del instrumento en torno a cuatro bloques temáticos. El primero de ellos recoge información sobre cómo el futuro profesorado de educación secundaria entiende la IPD. La importancia de este bloque queda respaldada por estudios previos que resaltan la necesidad de indagar, en primer lugar, cómo entienden el propio concepto antes de profundizar en cómo se construye (Beauchamp y Thomas, 2009; Beijaard, et al., 2004; Serrano, 2013; Salazar y McCluskey, 2017). El segundo bloque incluye ítems que nos permiten conocer las posibles diferencias que se pueden encontrar en la IPD en función a la etapa educativa en la que se ejerce la profesión docente. Esto es interesante porque los modelos formativos no coinciden (modelo consecutivo vs. modelo paralelo) y eso puede tener una repercusión en la IPD como anticipaban Lenuta et al. (2013).

El tercer bloque del instrumento se diseñó tomando como referencia los hallazgos de Green (2015) que conectan la vocación con la identidad docente y evidencian la relación entre las experiencias profesionales previas en otros ámbitos diferentes al educativo y la formación de su identidad como docentes. La fortaleza de esa identidad previa como profesionales y expertos en otras áreas condicionan sus actitudes vocacionales y esto, a su vez, perfila en un sentido u otro la IPD. Por lo tanto, este bloque ayuda a conocer las razones por las que consideran que la identidad profesional del profesorado de educación secundaria se forja de manera distinta a la de otros profesionales. En la cuarta parte, este instrumento cierra con un último módulo donde se recogen los principales factores que contribuyen al desarrollo de la IPD, con vistas a analizar cuáles de estos factores tienen más o menos importancia para los futuros docentes. Tales factores fueron seleccionados a partir otros estudios previos (p. ej. Huu, Ngoc Tai, 2017; Shwartz y Dori, 2020; Timostsuk y Ugaste, 2010).

La elaboración de este instrumento no solo ofrece la oportunidad de seguir investigando sobre IPD y avanzar en la calidad de la educación y de la formación docente (Zhang, et al., 2016), sino que también permite avanzar en los métodos de investigación utilizados y reforzar la investigación cuantitativa que no es abundante en este campo (Aykaç, et al., 2017).

5.2.2.3. Discusión de resultados relacionados con el objetivo específico O2.3

El cuestionario elaborado en el estudio anterior nos ha permitido recoger información sobre las creencias del alumnado del MAES de las distintas especialidades (Biología y Geología, Ciencias Sociales, Geografía e Historia, Dibujo, Imagen y Artes Plásticas, Economía, Empresa y Comercio, Educación Física, Física y Química, Lengua Castellana y Literatura, Lengua Extranjera: Inglés, Matemáticas e Informática, Música, Orientación Educativa y Tecnología), con objeto de poder analizar y discutir los resultados de todo lo realizado anteriormente, contribuir al área de estudio y generar implicaciones en el currículum formativo de este máster en particular. Teniendo en cuenta que la especialidad puede ser una variable determinante en la construcción de la IPD (Recchia y Puig, 2011), en primer lugar, se llevó a cabo un estudio complementario (E2.3) en el que se analizaron las creencias del futuro profesorado del área de ciencias, que incluía al alumnado de las especialidades de Física-Química y Biología-Geología y de los estudiantes del área de Tecnología, recogiendo en este grupo al alumnado de las especialidades de Tecnología e Informática. Debido a que no se encontraron diferencias significativas entre las creencias del alumnado de Ciencia y de Tecnología, se consideró la muestra como un único grupo. Estos resultados coinciden con Solís et al. (2013) y Pontes, Poyato y Oliva (2018) quienes encontraron amplias similitudes entre estos grupos en las concepciones referentes a la actividad docente.

Una vez integrados ambos grupos en una única muestra, se observó que tales sujetos relacionan la IPD con determinadas cualidades que consideran primordiales para el ejercicio de la profesión docente,

entre las que destacan el compromiso con la educación, la autoestima, la capacidad para adaptarse a los cambios vertiginosos de la sociedad, la capacidad de reflexión y autocrítica, motivar al alumnado, dominar las técnicas de comunicación positiva, resolver conflictos y saber gestionar el trabajo en aula. Avraamidou (2014), Smith y Darfler (2012) y otros expertos ya apuntaron la influencia de estos elementos en el desarrollo de la IPD durante el proceso de formación inicial. Además, los resultados obtenidos también vinculan la construcción de la IPD al desarrollo competencial. Esto coincide con los resultados obtenidos por Manso Ayuso y Martín Ortega (2013), quienes a partir de una investigación de corte cualitativo concluyeron que el desarrollo de la IPD está directamente relacionado con la adquisición de competencias docentes y, entre ellas, se resalta la capacidad de reflexionar sobre la práctica docente.

Por otra parte, los y las participantes mostraron tener creencias muy extendidas sobre las estrategias docentes que se utilizan en los distintos niveles educativos dentro de su especialidad, lo que ya puso de manifiesto Bakar (2016) al afirmar la necesidad de dotar de una formación específica al futuro profesorado de Ciencia y Tecnología sobre estrategias didácticas aplicables en las distintas etapas y contextos. En cuanto a las diferencias en la forma en que el profesorado y otros profesionales con formación universitaria construyen su identidad profesional, el alumnado de este estudio (E2.3) muestra un alto grado de acuerdo con la opinión de que las relaciones interpersonales en los contextos laborales tienen una gran influencia en el ámbito de la educación. Esta percepción está en línea con otras investigaciones previas que apuntaban que el contacto con compañeros y compañeras del mismo ámbito y el conocimiento del contexto real donde se desarrollarán profesionalmente como docentes favorece el desarrollo de la IPD (Cameron y Grant, 2017; Trevallion, 2018).

Finalmente, se evidenció que los factores a los que le atribuyen una mayor influencia en la IPD son las prácticas (Izadina, 2016; Leeferink, et al., 2019) y la vocación (Salazar Noguera y McCluskey, 2017). Este estudio arrojó unos datos relevantes con respecto a la variable género, siendo ésta la responsable de las diferencias encontradas entre las respuestas de las cuatro dimensiones del instrumento. Por lo tanto, hombres y mujeres del área de Ciencia y Tecnología difieren en aspectos clave como la importancia asociada al periodo de prácticas y la influencia del prestigio social de la profesión sobre su IPD (Huu y Ngoc, 2017), entre otros. En este sentido, Monroy y Hernández (2014) también encontraron diferencias por motivos de género en los estudios relacionados con la profesionalidad docente y el pensamiento inicial del alumnado de titulaciones de educación. Por consiguiente, esto puede estar relacionado con el hecho de que hombres y mujeres, globalmente, se forman de manera diferente en relación con la sociedad y la familia (Blinova, 2010), o con la existencia de estereotipos sociales que apuntan hacia un proceso progresivo de feminización de la enseñanza (Kapitanoff y Pandey, 2017).

5.2.2.4. Discusión de resultados relacionados con el objetivo específico O2.4

Tras el estudio anterior llevado a cabo con estudiantes del área de Ciencia y Tecnología se consideró conveniente realizar un estudio similar con una muestra específica del ámbito de las Humanidades (E2.4). Así se encontraron resultados similares a los anteriores al estudiar las creencias sobre la IPD entre el alumnado del MAES de la especialidad de Inglés como Lengua Extranjera (ILE). El motivo principal que nos llevó a centrarnos en esta muestra tiene que ver con el hecho de que parece que quienes enseñan inglés como lengua extranjera, sin ser nativos de dicha lengua, se enfrentan a un dualismo de personalidades (Treve, 2021; Vega, Irgens y Bailey, 2021) que podría repercutir directamente en sus creencias sobre la profesión docente y, en consecuencia, en la construcción de su IPD.

La construcción de la IPD en el profesorado de lenguas es un tema que está generando gran interés en la literatura científica y también está siendo muy discutido a nivel de políticas educativas (Hashemi, Karimi y Mofidi, 2021), hasta el punto de que el debate sobre si es mejor contar con profesionales nativos

en la lengua a enseñar, independientemente de su formación pedagógica, o con expertos en pedagogía y enseñanza de lenguas extranjeras sigue vivo (Dervić y Bećirović, 2019; Zhu, et al., 2020). En este sentido, se formuló el objetivo de explorar sus creencias sobre la noción de IPD y analizar qué factores influyen en su desarrollo, haciendo uso del instrumento validado previamente. Asimismo, también nos interesaba analizar si la variable género tenía el mismo comportamiento que en estudios anteriores. Esta decisión se justificó en un doble sentido. Por un lado, porque en un estudio cualitativo preliminar, el alumnado participante sugería que esto podría afectar en su manera de entender la profesión docente. Por otro lado, debido a que hay escasa evidencia científica sobre si los futuros profesores y las futuras profesoras coinciden o no en sus percepciones sobre la profesión docente, la construcción de la IPD y el desarrollo profesional (Egmir y Celik, 2019; Kapitanoff y Pandey, 2017).

Se encontraron semejanzas y diferencias en torno a cómo el futuro profesorado de ILE y de Ciencia y Tecnología entiende la IPD. Ambos grupos asocian este concepto con la habilidad de gestionar el aula, resolver conflictos que pueden surgir a raíz de las diversas relaciones interpersonales, coincidiendo a su vez con otros estudios previos (Meijer et al., 2011). Sin embargo, mientras que el futuro profesorado de Ciencia y Tecnología resalta el uso de las TIC como variable vinculada al desarrollo de la identidad profesional, el futuro profesorado de ILE no lo entiende así. Tampoco existe un acuerdo entre ambos grupos en que la autoestima y la imagen que la sociedad en general tenga sobre la profesión docente pueden definir la IPD. En este caso es el profesorado de ILE quien no valora esta asociación, lo que contradice evidencias previas (Day, 2018; Torriente y Villardón-Gallego (2018). Con respecto a los factores que influyen en la construcción de la IPD, sí existe un importante grado de convergencia en las respuestas de ambos grupos, priorizando el periodo de prácticas como decisivo (Deng, et al., 2018; Schaefer y Clandinin, 2019). Tanto las diferencias como las similitudes encontradas entre estos grupos refuerzan la idea de estudiar la IPD desde las distintas áreas de conocimiento, como ya indicaron hace tiempo Recchia y Puig (2011).

En la muestra del profesorado de Inglés en formación inicial también se aprecia, una vez más, la existencia de diferencias significativas en las creencias sobre la IPD en función del género, coincidiendo con el estudio de Egmir y Celik (2019), quienes demostraron que las creencias e identidades educativas del futuro profesorado difieren de modo relevante entre hombres y mujeres. En este estudio, los ítems en los que difieren más hombres y mujeres se relacionan principalmente con los factores que contribuyen a la IPD (recursos educativos, formación psicopedagógica, desarrollo de un proyecto profesional, etc.) y no tanto con el entendimiento y concepciones de esta.

En definitiva, se podría dar respuesta a la cuestión planteada en el segundo problema principal de esta investigación (P2), indicando que el futuro profesorado de educación secundaria relaciona la Identidad Profesional Docente con el hecho de poseer una capacidad adecuada para enseñar, sentir un alto nivel de compromiso y motivación hacia la profesión docente, saber adaptarse a los cambios educativos en función a las diferentes circunstancias, ser reflexivo o autocrítico, saber gestionar el trabajo del aula y poseer la capacidad de resolución de conflictos. Igualmente, los estudiantes del MAES consideran que los factores que tienen una influencia mayor en la construcción y evolución de la IPD son el periodo de prácticas realizado durante la formación inicial, que les brinda la oportunidad de aprender a partir de experiencias reales con compañeros de profesión y les pone en camino de desarrollar un proyecto profesional que alimente la motivación diaria.

5.3. CONCLUSIONES

De manera general, este proyecto de investigación pretende mejorar la calidad de la formación inicial del profesorado de educación secundaria que se desarrolla en el MAES, proponiendo al futuro profesorado de esta etapa una reflexión sobre los factores que influyen en el desarrollo de la profesionalidad

docente y en el proceso de identificación con dicha profesión. En este proyecto de investigación ambos aspectos, aunque están estrechamente relacionados, se han abordado por separado con vistas a encontrar respuestas a los dos problemas principales formulados al principio (P1 y P2) y desarrollar los objetivos generales (O1 y O2) relacionados con tales problemas. A continuación, se procederá a mostrar las principales conclusiones obtenidas en las dos partes que integran el conjunto de la investigación.

5.3.1. Conclusiones derivadas del desarrollo del primer objetivo general (O1)

El primer objetivo general (O1) de este proyecto consiste en analizar las creencias del alumnado del MAES sobre la profesión docente, la formación inicial adquirida en el máster de profesorado y el nivel de desarrollo de las competencias docentes previstas en el mismo. Como se ha comentado anteriormente esta meta general se ha desglosado en cuatro objetivos más específicos que han servido de base al desarrollo de cuatro estudios empíricos, publicados como artículos de revistas, que se han incluido en esta memoria. A continuación, se resumen las principales conclusiones obtenidas en tales estudios.

Al realizar el primer estudio sobre desarrollo profesional docente (E1.1) hemos tratado de desarrollar el objetivo específico O1.1, procediendo a explorar las creencias del alumnado del MAES sobre la profesión docente y su relación con los principales modelos didácticos. Conocer las ideas y representaciones de este alumnado se convierte en una estrategia clave para la revisión, cuestionamiento y mejora del currículum de formación inicial docente y el cumplimiento de las demandas sociales y del EEES. De manera más concreta, las percepciones de los participantes al respecto podrían estar justificadas, en gran medida, por el modelo de formación utilizado en el MAES, el modelo consecutivo, puesto que esto explicaría la relevancia que conceden a la disciplina frente a la didáctica de la misma. Asimismo, se hace evidente la necesidad de modificar la cultura formativa establecida para prevenir que se repliquen modelos didácticos que experimentaron siendo discentes en etapas educativas anteriores. Para ello, es necesario reforzar la importancia de desarrollar competencias investigadoras en el futuro profesorado no solo para reorientar su pensamiento docente y mejorar la calidad educativa, sino también, porque existen evidencias científicas que apuntan que estas competencias van ligadas a otras destrezas y habilidades indispensables en el ejercicio de la profesión, como puede ser la autonomía, la cooperación y colaboración, el trabajo en equipos multidisciplinares, la búsqueda de información de carácter científico, la gestión de proyectos y del aula, el pensamiento crítico y la transferencia, entre otras.

El segundo estudio sobre desarrollo profesional docente (E1.2) se ha centrado en explorar las creencias del alumnado del MAES sobre las necesidades formativas para ejercer la docencia y cómo se relacionan tales aspectos con la construcción de la IPD, según lo previsto en la formulación del objetivo específico O1.2 de esta investigación. En primer lugar, hay que tener en cuenta que existen diferentes paradigmas para examinar las bases conceptuales y llevar a cabo un análisis pormenorizado de la formación inicial del profesorado. Estos podrían agruparse en una formación basada en competencias, basada en la personalidad y basada en la indagación, siendo la primera de ellas la más extendida en el MAES en nuestro país. Por lo tanto, abordar la formación inicial desde solo uno de ellos supone un riesgo de fragmentación del papel y la imagen del docente que dificulta la capacidad de visualizar e interiorizar los diferentes sus diferentes roles. Es por ello que consideramos que la formación inicial es un momento crucial en el que el estudiantado debe comenzar a crear una identidad docente sólida que le apoye y sustente en su futuro desarrollo profesional. El conocerse como docente, establecer relaciones con futuros compañeros de profesión, el sentimiento de pertenencia a un colectivo y trabajar la dualidad en el rol docente-discente es imprescindible en esta fase formativa. Además, ayudará a minimizar las necesidades formativas que surgirán en el desempeño profesional a lo largo de su carrera ya que proveerá al futuro profesorado de una autoestima fuerte que le permita anteponerse ante cualquier situación identificada como amenaza.

Al llevar a cabo el tercer estudio sobre desarrollo profesional docente (E1.3) hemos tratado de desarrollar el objetivo específico O1.3, procediendo a analizar el nivel de desarrollo de las competencias adquiridas por el alumnado del máster de educación secundaria durante su formación inicial. De manera específica, este artículo nos permite avanzar en los resultados del E1.2 ya que al mismo tiempo que se identifican cuáles son aquellas competencias en las que los participantes se sienten menos formados y que, por lo tanto, nos llevaría a revisar la organización del currículo para priorizar lo que parece no estar funcionando como debiera, también vuelve a llevarnos a la reflexión de la conexión entre el desarrollo competencial y la construcción de la IPD. Ambos deben de entenderse como complementarios. Sentir y tener necesidades formativas a nivel competencial puede derivar en una crisis de identidad profesional que conlleve incluso al abandono temprano de la carrera. De igual modo, esta problemática tiende a ser más frecuente en los modelos formativos consecutivos, por lo que habría que reflexionar al respecto y diseñar módulos que combinen el desarrollo competencial necesario con la construcción y el desarrollo de la IPD, abordando así diferentes paradigmas al mismo tiempo y con un objetivo común.

El cuarto y último estudio sobre desarrollo profesional docente (E1.4) se ha centrado en conocer cómo valoran los futuros docentes de educación secundaria la formación adquirida en el MAES y la importancia atribuida al desarrollo de espacios de aprendizaje que favorezcan el respeto y la igualdad de género, según lo previsto en la formulación del objetivo específico O1.4 de esta investigación. La formación en contenidos transversales como la igualdad de género es identificada como una carencia entre los participantes ya que afirman tener dudas sobre cómo trabajarlo en el proceso de enseñanza-aprendizaje, a pesar de estar convencidos de la importancia de los estos. Por lo tanto, concluimos que es imprescindible proporcionar un enfoque práctico para integrar la igualdad de género en la formación pedagógica que ayude a los futuros docentes a explorar sus experiencias personales de género, identificar posibles problemas que encuentren los adolescentes en esta temática y saber responder a ellos de manera eficiente. Esto supondría un cambio en sistema ya que un enfoque educativo transformador de género va más allá del reconocimiento de las disparidades de género dentro del sistema educativo y la experiencia de aprendizaje del discente, y se esfuerza por aprovechar todo el potencial de la educación como herramienta para cambiar las actitudes y prácticas dentro y fuera del sistema educativo y así contribuir a un entorno más amplio de justicia de género para chicos y chicas en toda su diversidad.

5.3.2. Conclusiones derivadas del desarrollo del segundo objetivo general (O2)

El segundo objetivo general (O2) de este proyecto consiste en tratar de conocer cómo construyen los futuros docentes de enseñanza secundaria su IPD durante el desarrollo del MAES, analizando las posibles diferencias entre diversas áreas de conocimiento en este proceso. Así mismo, esta meta general se ha desglosado en cuatro objetivos más específicos que han servido de base al desarrollo de cuatro estudios, publicados como artículos de revistas, que se han incluido en esta memoria. A continuación, se resumen las principales conclusiones obtenidas en tales estudios.

Al realizar el primer estudio sobre Identidad Profesional Docente (E2.1) hemos tratado de desarrollar el objetivo específico O2.1, procediendo a analizar cómo evoluciona la IPD durante el proceso de formación inicial del profesorado de educación secundaria, analizando cómo se aborda este tema en los programas de formación docente y qué factores pueden influir en su desarrollo. La revisión de la literatura científica nos lleva a concluir que el concepto de IPD ha pasado de ser abordado desde una perspectiva individualista a otra mucho más contextualizada que permite un análisis detallado de la misma y la identificación de las diferentes variables que influyen en su construcción. A su vez, se confirma que esta evoluciona desde el comienzo de la formación inicial, donde cobra especial importancia el periodo de prácticas, hasta el final de la carrera profesional y que tiene un estrecho vínculo con el desarrollo competencial como comentábamos en las conclusiones del objetivo anterior (O1). De igual manera, esta

revisión nos posibilita identificar por dónde debía seguir avanzando la investigación en este campo y diseñar los siguientes estudios recogidos en esta memoria.

El segundo estudio sobre sobre Identidad Profesional Docente (E2.2) se ha centrado en el diseño y validación de un instrumento adecuado para analizar las creencias del alumnado del máster de profesorado de educación secundaria sobre el desarrollo de la IPD en el proceso de formación, según lo previsto en la formulación del objetivo específico O2.2 de esta investigación. Este estudio pretendía cubrir un vacío que se identificó en la revisión de la literatura científica ya que había una abundancia de investigaciones de corte cualitativo y no existía ningún instrumento que permitiese la recogida de información sobre las percepciones del futuro profesorado durante su etapa de formación inicial a cerca de la IPD desde una perspectiva cuantitativa. Por lo tanto, este estudio supone un gran avance no solo por su diseño y validación, sino también porque incluye aspectos, como la construcción de la IPD en los distintos niveles educativos, que no habían sido estudiados hasta la fecha y que demuestran su vínculo con el desarrollo de la IPD.

Al llevar a cabo el tercer estudio sobre sobre Identidad Profesional Docente (E2.3) hemos tratado de desarrollar el objetivo específico O2.3, procediendo a analizar las creencias sobre la construcción de la IPD en el alumnado del máster de profesorado de educación secundaria de las áreas de conocimiento de Ciencias Experimentales y de Tecnología. A partir de la discusión de sus resultados es importante destacar que el futuro profesorado de estas áreas de conocimiento evidencia la relación existente entre la construcción de la IPD con las habilidades docentes vinculadas principalmente con el enfoque de formación constructivista. En este sentido, concluimos que el constructivismo pedagógico como proceso formativo en el que las experiencias e interacciones con iguales y con el entorno tienen un rol imprescindible puede ser adecuado para trabajar la IPD durante la formación inicial del profesorado, aunque este debería ser trabajado juntamente con un enfoque reflexivo que potencie la toma de conciencia y la autocrítica sobre uno mismo a nivel personal y profesional. Por lo tanto, esto llevaría a repensar no solo el currículo de dicha titulación, sino también las estrategias metodológicas que se utilizan en la misma con el objetivo de priorizar la IPD como un elemento indispensable para el desarrollo de la profesionalidad docente.

El cuarto y último estudio sobre Identidad Profesional Docente (E2.4) se ha centrado en analizar las creencias de los futuros docentes de educación secundaria de Inglés como Lengua Extranjera (ILE) sobre la construcción de la IPD, según lo previsto en la formulación del objetivo específico O2.4 de esta investigación. Según la literatura científica existente en torno al proceso de construcción de la IPD, determinados aspectos como la autoestima y la seguridad en sí mismo tienen una influencia directa en esta. El futuro profesorado de ILE, en ocasiones, se enfrenta a un dualismo de personalidades que podrían afectar a sus creencias sobre su rol como docentes y, por lo tanto, en el desarrollo de su IPD. Hay algo que no se puede ignorar en este colectivo y tiene que ver con la naturaleza disciplinaria de la enseñanza del inglés, que por sí misma viene siendo un factor crítico que afecta no solo a la identidad sino también al desarrollo profesional de los docentes de dicha asignatura. Existe un cuestionamiento continuo sobre la legitimidad de su conocimiento y competencia sobre dicha lengua, diferente a su lengua materna y, por lo tanto, permanece el debate sobre si se debe priorizar la competencia lingüística o la metodológica para su impartición.

En este sentido, el hecho de trabajar y cuidar una construcción sólida de la IPD en la formación inicial cobra especial importancia en esta área de conocimiento con el objetivo de prevenir posibles índices de burnout y reducir los niveles de ansiedad. En definitiva, tras varios años desde la implantación del MAES, es momento de repensar su currículo, así como de revisar la formación y práctica pedagógica de quienes imparten docencia en esta titulación para garantizar que la IPD se trabaja de manera explícita a lo largo de sus módulos genéricos y específicos y, con especial interés, durante el periodo de prácticas cuando tienen un primer contacto directo con la realidad educativa donde desempeñarán su profesión.

Por último, con respecto a estos dos últimos estudios (E2.3 y E2.4), debemos subrayar el rol que juega la variable género en la construcción y desarrollo de la IPD. Hasta el momento, existía cierta controversia sobre la influencia que el género puede tener en dicho proceso, por lo que decidimos introducirla en nuestro proyecto de investigación. Ambos estudios evidencian que hombres y mujeres tienen creencias diferentes en lo relativo a cuáles son los factores que contribuyen a la formación de la IPD durante el proceso de formación inicial docente. Aunque la literatura tiende a justificar estas diferencias por la existencia de estereotipos a nivel social que definen la profesión docente como feminizada por su vínculo con los cuidados, sería interesante profundizar en dichas diferencias e intentar conocer cuáles pueden ser las causas detrás de estas. Asimismo, parece quedar claro que no se puede entender la IPD desde una perspectiva aislada, sino que debe ser estudiada a partir de la combinación de variables tanto individuales como contextuales.

5.4. LIMITACIONES DE LA INVESTIGACIÓN Y FUTURAS LÍNEAS DE TRABAJO

Finalmente se apuntan las posibles limitaciones de esta investigación y se indican algunas vías de trabajo que tenemos la intención de continuar tras la finalización de esta Tesis Doctoral, con objeto de seguir aportando datos que contribuyan a mejorar la comprensión del desarrollo de la Identidad Profesional Docente y apuntar propuestas que ayuden a mejorar la calidad de la Formación Inicial del Profesorado de Secundaria (FIPS).

Todo proceso de investigación tiene una serie de limitaciones que, a su vez, pueden convertirse en una oportunidad para sugerir posibles líneas futuras de estudio. En concreto, en este proyecto de investigación, una de las principales limitaciones que podemos encontrar tiene que ver con que los resultados de la mayoría de los estudios, tanto del primero como del segundo objetivo general, parten de las autopercepciones de los participantes, en este caso, alumnado del MAES, por lo que esto podría suponer una limitación por la subjetividad de estos. En tal sentido, la aplicación de los mismos instrumentos de investigación a otros contextos de formación inicial docente podría generar unos resultados diferentes.

Por otra parte, también se podría mencionar como limitación del proyecto los tiempos de revisión y evaluación de las distintas revistas con las que se ha trabajado ya que esto ha dificultado el cumplimiento de un cronograma diseñado a priori y ha supuesto ciertos retrasos en el mismo. Aun así, esto también ha generado un aprendizaje muy enriquecedor gracias a la comunicación continua con las personas revisoras y editoras de las revistas; sus aportaciones y sugerencias han conseguido que la calidad final de los diferentes estudios fuese muy rigurosa.

Otra limitación de la investigación está relacionada con los instrumentos utilizados en los diferentes estudios, todo ellos en forma de escala. Sería interesante y enriquecedor combinar estos con entrevistas para poder profundizar en determinados aspectos que resultan de gran interés. Asimismo, se puede identificar una debilidad en la muestra; con el objetivo de ampliar el contexto de esta, se podrían recoger información en el alumnado del MAES de otras universidades en el ámbito nacional.

A la vista de todos los resultados obtenidos en los diferentes estudios, nos proponemos seguir trabajando en esta línea de investigación para conocer el proceso de construcción de la IPD en el futuro profesorado de otras áreas de conocimiento, así como, analizar qué supondría una construcción positiva de la IPD en toda la muestra recogida para, a partir de ahí, inferir determinadas propuestas de modificación al currículo del MAES.

Por un lado, se plantea la posibilidad de diseñar un estudio de caso longitudinal en el que se analicen los posibles cambios de identidad profesional desde el último año previo al servicio (MAES) y durante los primeros años de ejercicio profesional. La investigación sobre dicha transformación es importante para el campo de conocimiento de la identidad docente, ya que toma las experiencias previas al servicio como una influencia notable y revela las características del cambio de identidad desde una perspectiva más evolutiva.

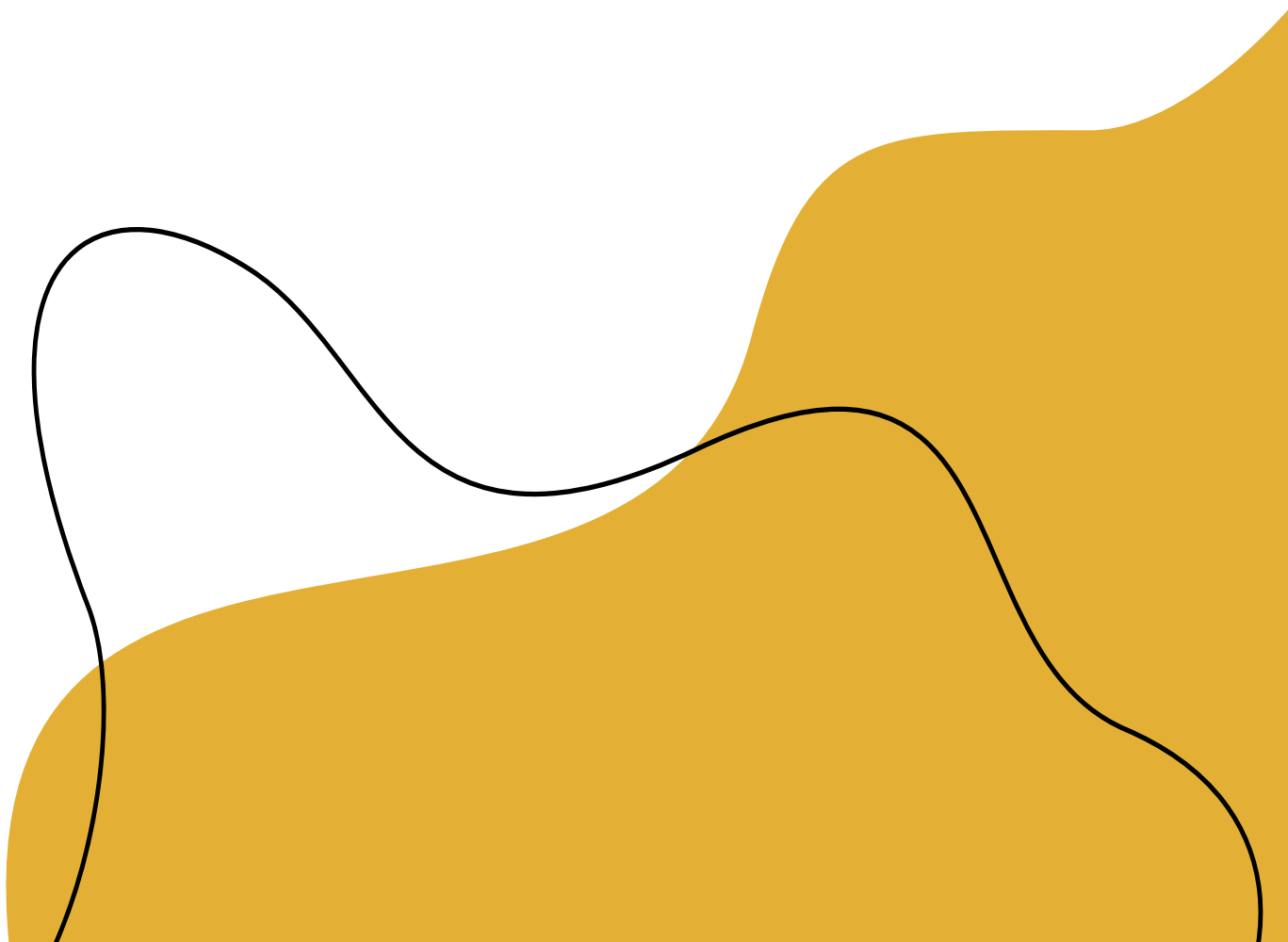
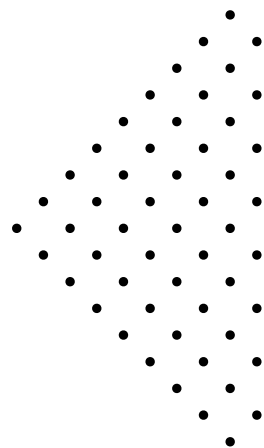
De igual modo, la mejora de la calidad de la formación inicial del profesorado es una tarea ardua que no solo debe centrarse en el currículo formativo, sino que requiere de la generación de sinergias que comprometan a todos los agentes implicados. En este sentido, como futura línea de investigación, nos plantemos trabajar conjuntamente no solo con el alumnado del MAES como fuente de información para conocer sus creencias, expectativas y necesidades formativas, sino también involucrar al profesorado que imparte docencia en el MAES, indagar sobre su identidad profesional como docentes e investigadores, ya que difícilmente podrán contribuir al desarrollo de la IPD de su alumnado si identifican debilidades en sí mismos al respecto. De igual manera, sería interesante colaborar con profesorado de educación secundaria en ejercicio a través de los Centros del Profesorado para crear una triangulación en cuanto a los participantes: profesorado MAES, alumnado MAES y profesorado de educación secundaria en ejercicio.

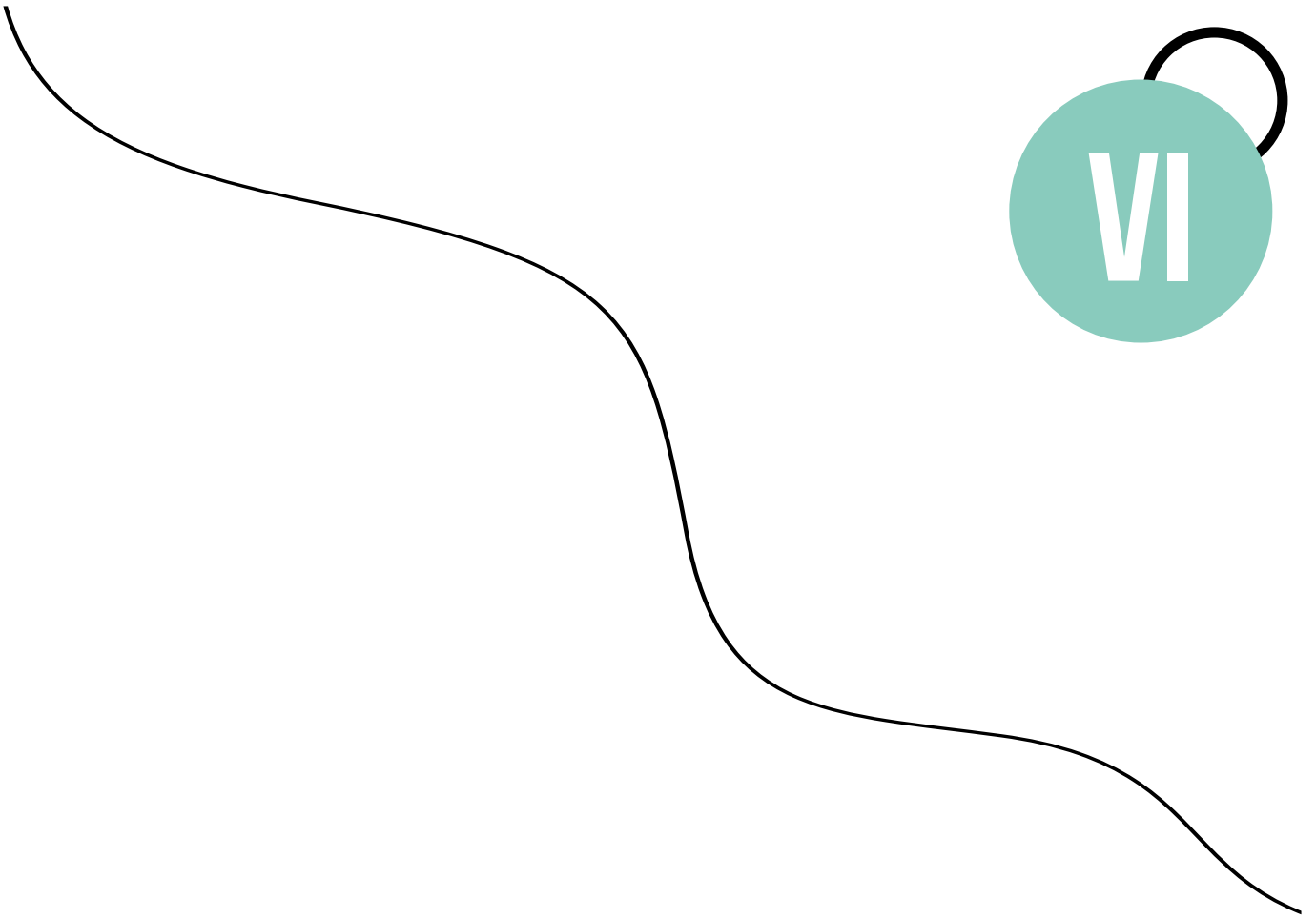
Asimismo, como línea de investigación para seguir avanzando se contempla la posibilidad de profundizar en el estudio de las relaciones entre la construcción de la IPD y el desarrollo de competencias efectivas para la actividad docente durante el MAES. Por ello, es necesario ahondar en aspectos relevantes para la IPD, según las creencias del alumnado del MAES, tales como: i) Dominar y utilizar las técnicas de comunicación docente en el aula; ii) Integrar en la docencia las nuevas Tecnologías; iii) Desarrollar la capacidad de gestionar el trabajo en el aula y resolver posibles conflictos; iv) Adoptar una postura reflexiva y autocrítica con respecto a la práctica docente, entre otros.

Por último, tomando una perspectiva de carácter internacional y la referencia de los datos recogidos en informes a nivel supranacional como Eurydice, comparar resultados relacionados con las creencias del futuro profesorado sobre el desarrollo profesional docente y la construcción de la IPD en modelos de formación docente consecutivos y paralelos también permitiría identificar fortalezas y debilidades de ambos y trabajar sobre sus currículo persiguiendo la mejorar de la calidad educativa en todos los niveles.

En definitiva, reducir la brecha entre la investigación en educación (literatura y evidencias científicas), la formación del profesorado (currículo y prácticas pedagógicas) y la práctica educativa (desarrollo y ejercicio profesional) sigue siendo una tarea pendiente a la que nos gustaría contribuir desde esta línea de investigación con el objetivo final de conseguir una mejora de la calidad y equidad educativas tal y como se nos requiere desde los Objetivos de Desarrollo Sostenible y la Agenda 2030.

CAPÍTULO VI





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