

Departamento de Psicología



UNIVERSIDADE DA CORUÑA

Tesis Doctoral

**Metas Académicas, Deberes Escolares  
y  
Aprendizaje en Estudiantes de  
Secundaria**

**Academic Goals, Homework,  
and  
Learning in High School Students**

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# Metas académicas, deberes escolares y aprendizaje en estudiantes de secundaria

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UNIVERSIDADE DA CORUÑA



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A Coruña, 5 de junio de 2018

A handwritten signature in blue ink, consisting of the letters 'A' and 'E' in a stylized, cursive font.

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*A los amores de mi vida,  
por ser mi soporte vital.*

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## Resumen

### **Metas académicas, deberes escolares y aprendizaje en estudiantes de secundaria.**

El objetivo general de esta Tesis Doctoral ha sido profundizar en la realización de los deberes escolares atendiendo al concepto multidimensional de compromiso (*engagement*): compromiso motivacional, cognitivo y conductual. Se trata de aspectos claves que condicionan la calidad del proceso de realización de los deberes, del aprendizaje y del rendimiento académico. Para el abordaje de este objetivo se han diseñado y llevado a cabo varias investigaciones empíricas, que han dado lugar a seis publicaciones en revistas incluidas en el *Journal of Citation Reports*. El desarrollo de los estudios que componen esta Tesis Doctoral nos ha permitido extraer las siguientes conclusiones: a) entre los diferentes grupos poblacionales inmigrantes y nativos existen diferencias en los deberes y sus resultados; b) la implicación parental decrece a medida que los alumnos asisten a cursos superiores; c) deterioro progresivo en dos pilares importantes para el aprendizaje: la motivación y la implicación; y d) los deberes son vistos como una actividad rutinaria y sus actitudes hacia ellos suelen ser más negativas según los estudiantes van avanzando de curso, llegando a percibirlos más como una imposición de sus profesores que hay que realizar para obtener una buena nota que como una actividad motivadora, útil y favorecedora de aprendizajes profundos y significativos.

**Palabras clave:** deberes escolares, compromiso, metas académicas, aprendizaje, secundaria.

## Resumo

**Metas académicas, deberes escolares e aprendizaxe en estudantes de secundaria.** O obxectivo xeral desta Tese Doutoral foi profundar na realización dos deberes escolares atendendo ao concepto multidimensional de compromiso (*engagement*): compromiso motivacional, cognitivo e condutual. Trátase de aspectos claves que condicionan a calidade do proceso de realización dos deberes, da aprendizaxe e do rendemento académico. Para a abordaxe deste obxectivo deseñáronse e leváronse a cabo varias investigacións empíricas, que deron lugar a seis publicacións en revistas incluídas no *Journal of Citation Reports*. O desenvolvemento dos estudos que compoñen esta Tese Doutoral permitíronnos extraer as seguintes conclusións: a) entre os diferentes grupos poboacionais existen diferenzas nos deberes e nos seus resultados; b) a implicación parental decrece a medida que os alumnos asisten a cursos superiores; c) deterioro progresivo en dous pilares importantes para a aprendizaxe: a motivación e a implicación; e d) os deberes son vistos como unha actividade rutineira e as súas actitudes cara a eles adoitan ser máis negativas segundo os estudantes van avanzando de curso, chegando a percibilos máis como unha imposición dos seus profesores que hai que realizar para obter unha boa nota que como unha actividade motivadora, útil e favorecedora de aprendizaxes profundas e significativas.

**Palabras chave:** deberes escolares, compromiso, metas académicas, aprendizaxe, secundaria.

### **Abstract**

**Academic goals, homework, and learning in high school students.** The aim of this Doctoral Thesis has been to go deeper into homework performance, attending the multidimensional concept of engagement: motivational engagement, cognitive and behavioral. It is about the key aspects that determine the quality of homework performance process, the learning, and the academic achievement. To address the objective of this Doctoral Thesis several empirical studies have been designed and carried out, which have led to six publications on journals included on the Journal of Citation Reports. The development of studies that compose this Doctoral Thesis has allowed us to draw the following conclusions: a) between the different population groups there are differences in homework and its results; b) parental involvement decreases as students attend higher levels; c) there is a progressive deterioration in two important pillars for learning: motivation and involvement; and d) homework is seen as a routine activity and attitudes toward it tends to be more negative as they progress through school, perceiving it more as a teachers' imposition that must be done to obtain good grades than as a motivating activity, useful and flattering of deep and profound learning.

**Keywords:** Homework, engagement, academic goals, learning, Secondary Education.

## 1. Introducción

El presente trabajo de Tesis Doctoral tiene como objetivo analizar la implicación de los estudiantes en los deberes abordando tanto la dimensión motivacional del compromiso, como el componente cognitivo (en términos de las estrategias cognitivas y metacognitivas utilizadas) y el componente conductual –cantidad de deberes realizados de los prescritos por el profesor, tiempo dedicado y aprovechamiento de ese tiempo– del compromiso.

En los últimos años, los deberes escolares han recibido gran atención por parte de los medios de comunicación y se han convertido en un tema muy controvertido a nivel social. Hoy en día están siendo objeto de estudio y de análisis con importantes repercusiones e implicaciones sociales y educativas. Conscientes de la tremenda complejidad del tema, en la presente investigación se abordó el análisis del papel desempeñado por variables tanto de tipo cognitivo, motivacional y conductual como también otras de carácter contextual. Desde esta perspectiva, para la elaboración de esta Tesis Doctoral se han diseñado una serie de investigaciones que han dado lugar a los seis artículos que constituyen este trabajo.

En primer lugar, aunque en las seis investigaciones realizadas ya se establece el marco concreto que justifica cada una de ellas, se elaboró un breve marco teórico-general con el objeto de que sirviera como contexto-justificación tanto de la relevancia del tema tratado como de la pertinencia de las investigaciones realizadas. En este marco teórico se incluye información sobre los deberes escolares y su trayectoria. En el siguiente apartado se aborda el *engagement* o compromiso en los deberes escolares, centrándonos en el contexto y las características de los estudiantes, así como en el compromiso motivacional, conductual y cognitivo de los mismos en los deberes escolares.

A continuación se presenta la fundamentación teórica de cada uno de los objetivos de la Tesis Doctoral, para posteriormente dar paso a los seis estudios de los que consta el presente trabajo.

Una vez presentados los distintos estudios que conforman la presente Tesis Doctoral, puesto que en cierta medida las seis investigaciones se encuentran anidadas, se elaboró un apartado denominado “Discusión de los resultados”, en el que se trató de discutir, en su conjunto, los resultados obtenidos en ellas.

Finalmente, de los resultados de las investigaciones realizadas, y en relación con los datos de la investigación previa, se extrajeron un conjunto de conclusiones con consecuencias tanto a nivel de la práctica educativa como para el campo de la investigación futura.

## 2. Contexto y justificación

Los deberes escolares son una actividad educativa común y generalizada, de importancia cotidiana para muchos estudiantes, padres y profesores en casi todos los países. Definidos como aquellas “tareas asignadas a los estudiantes por los profesores que están destinadas a llevarse a cabo durante horas no escolares” (Cooper, 1989, p.7), los deberes escolares suelen observarse como un recurso que permite reforzar y consolidar los aprendizajes realizados en el aula. Se pretende que sirvan para mejorar las habilidades de estudio de los alumnos, sus actitudes hacia el trabajo y les enseñen que el aprendizaje no solo se produce dentro de las paredes del colegio. Desde esta perspectiva, los deberes se emplean con frecuencia como una estrategia instruccional capaz de optimizar el rendimiento académico de los estudiantes (Cooper, Robinson y Patall, 2006).

Atendiendo a la definición de Cooper (1989, 2001), el trabajo del alumnado en el hogar abarca gran cantidad de actividades que el alumno realiza con el objetivo de mejorar los conocimientos abordados en clase: estudiar para los exámenes, repasar, hacer esquemas, resúmenes, etc., que van más allá de lo que entendemos por deberes. Tampoco deben ser considerados deberes escolares las actividades supervisadas dentro de la escuela; en este sentido utilizar las horas lectivas para realizar los deberes no encaja con la idea de tareas destinadas al tiempo no lectivo. De la misma manera no se pueden considerar deberes escolares las tareas realizadas en clases particulares, ya que se trata más de un trabajo supervisado por un profesor particular que de un trabajo dirigido por el alumno y prescrito por el profesorado desde el aula.

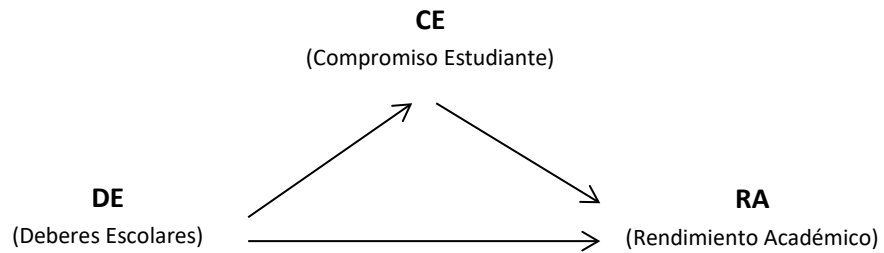
Entre los propósitos propiamente instruccionales por los que se recurre a la prescripción de deberes estarían: a) proporcionar a los estudiantes oportunidades para practicar, revisar o reforzar el material ya presentado en la clase y determinar si han entendido la lección y/o han obtenido las habilidades deseadas (Cooper, 2007); b) presentar nuevo material para ser tratado luego en clase (Pytel, 2007); c) brindar a los estudiantes la oportunidad de aplicar e integrar habilidades previamente aprendidas a situaciones nuevas y/u otras áreas de interés (Cooper et al., 2006); d) crear ocasiones para que los estudiantes usen diferentes recursos como internet, bibliotecas, libros de referencia, etc. (Brewster y Fager, 2000) y e) permitir a los estudiantes usar sus propias habilidades y capacidades para producir conocimientos creativos e individualizados (Horowitz, 2005).

Además de estos propósitos propiamente educativos, los deberes pueden convertirse en una herramienta capaz de ayudar a los estudiantes a desarrollar responsabilidad, autoconfianza y autodisciplina (Hetherington, 2005). Con los deberes escolares, los padres conocen más de cerca lo que aprenden sus hijos en la escuela y, de este modo, también se estrechan los vínculos familia-escuela (Cooper et al., 2006).

Los deberes escolares siguen siendo un tópico educativo polémico y continuamente debatido. Se trata de un debate ancestral que ha oscilado entre momentos en los que se sostenía que era una herramienta relevante para mejorar la competitividad de un país y tiempos en que casi se prohibía. En realidad, su historia es una historia cíclica donde la efectividad de su implementación ha sido durante mucho tiempo discutida entre los profesionales de la educación que han estado investigando el tema durante más de 75 años (Cooper et al., 2006; Corno, 1996). A principios del siglo XX surge un movimiento *antideberes*, especialmente en los EE.UU.; los educadores creían que estos no contribuían a mejorar el aprendizaje de los estudiantes y además resultaban ser una pesada carga para los estudiantes. Sin embargo, la guerra fría y el lanzamiento del satélite Sputnik por los rusos en la década de 1950 revirtieron estas actitudes negativas frente a los deberes escolares. Los estadounidenses comenzaron a cuestionarse la calidad y eficacia de su sistema educativo. El gobierno de los EE.UU. puso en marcha en 1957 la Ley de Educación de Defensa Nacional (NDEA), con el objetivo de promover el currículo de ciencias y matemáticas y, en este punto, la asignación de más deberes se promovió como un recurso necesario para acelerar la adquisición de conocimiento de los estudiantes y su competitividad. Sin embargo, a mediados de la década de los 60 y a lo largo de la década de los años 70, las teorías de aprendizaje volvieron a cuestionar el valor de los deberes, volviendo a sugerirse que la asignación de los mismos generaba una presión excesiva sobre los estudiantes. A pesar de esto y debido nuevamente a las preocupaciones sobre la pérdida de competitividad económica del país, el sistema educativo americano obligó a sus profesores a aumentar la prescripción de estas tareas para casa en las décadas de 1980 y 1990.

De una forma u otra, parece evidente que la historia de los deberes escolares ha sido más sensible a las presiones sociales y económicas que a los resultados de la investigación sobre su eficacia y sus implicaciones en el ámbito escolar. El debate hoy sobre el valor y los efectos de los deberes escolares sigue abierto (Gill y Schlossman, 2004; Vatterott, 2009), y es por ello que consideramos la necesidad de continuar investigando. Ciertamente se ha estudiado a fondo la relación entre deberes escolares y

rendimiento académico, pero en gran medida relacionado con el tiempo que se dedica o con la cantidad de deberes que se realizan; pero muy poco sobre el compromiso del estudiante como variable clave en dicha relación. Esto quiere decir que el compromiso del estudiante (CE) con los deberes mediaría, al menos parcialmente, entre deberes escolares a realizar (DE) y el rendimiento académico (RA).





### 3. Compromiso en los deberes escolares

El constructo de compromiso del estudiante (*student engagement*) resulta cada vez más prominente en la literatura y ha captado el interés de investigadores internacionales de una gran gama de disciplinas, incluida la Psicología Educativa y del Desarrollo, en estas últimas dos décadas. El compromiso académico se definió como “la implicación psicológica y el esfuerzo dedicado por el estudiante a aprender, comprender o dominar los conocimientos, habilidades o destrezas que supone la actividad académica” (Newmann, 1992, p.12). La participación del estudiante, en términos de compromiso y esfuerzo con esa actividad académica, implicará la observación continuada a la interacción individuo-contexto y debe interpretarse como un constructo multidimensional altamente interactivo que abarca la conducta, la emoción y la cognición. Desde esta perspectiva multifacética, la investigación ha comenzado a abordar el compromiso del estudiante con sus deberes escolares diferenciando atributos emocionales, cognitivos y conductuales (Guthrie, Wigfield y You, 2012).

Uno de los primeros desarrollos teóricos en esta línea ha sido el modelo procesual de Cooper (2001), donde se consideraba la competencia, la motivación y el curso de los alumnos, así como las diferencias individuales y los deberes escolares, factores exógenos del proceso y como factores endógenos los referidos a la tarea, el hogar y la comunidad. Posteriormente, el modelo de Xu y Corno (2003, 2006), centrado en los aspectos autorregulatorios del aprendizaje, puso el énfasis en la preparación, la gestión y la monitorización de las emociones durante el proceso de realización de los deberes.

Actualmente, la investigación toma como referente el modelo propuesto por Trautwein y sus colaboradores (Trautwein y Köller, 2003; Trautwein, Lüdtke, Schnyder y Niggli, 2006); un modelo que pretende integrar aportaciones anteriores. Sustentado en teorías motivacionales como la teoría expectativa-valor (Eccles, 1983; Pintrich y de Groot, 1990) o la teoría de la autodeterminación (Deci y Ryan, 2002), y en teorías del aprendizaje e instrucción bien consolidadas (Boekaerts, 1999), los autores proponen un modelo complejo y a la vez parsimonioso (Trautwein y Köller, 2003) que, diferenciando tres agentes protagonistas en el proceso de realización de los deberes (estudiantes, profesores y padres), atiende a las variables más importantes propias de dicho proceso.

En base a estas propuestas teóricas, la Tesis Doctoral que se presenta se organiza diferenciando tres bloques de variables: variables contextuales, compromiso de los estudiantes en los deberes y rendimiento académico (ver Figura 1).

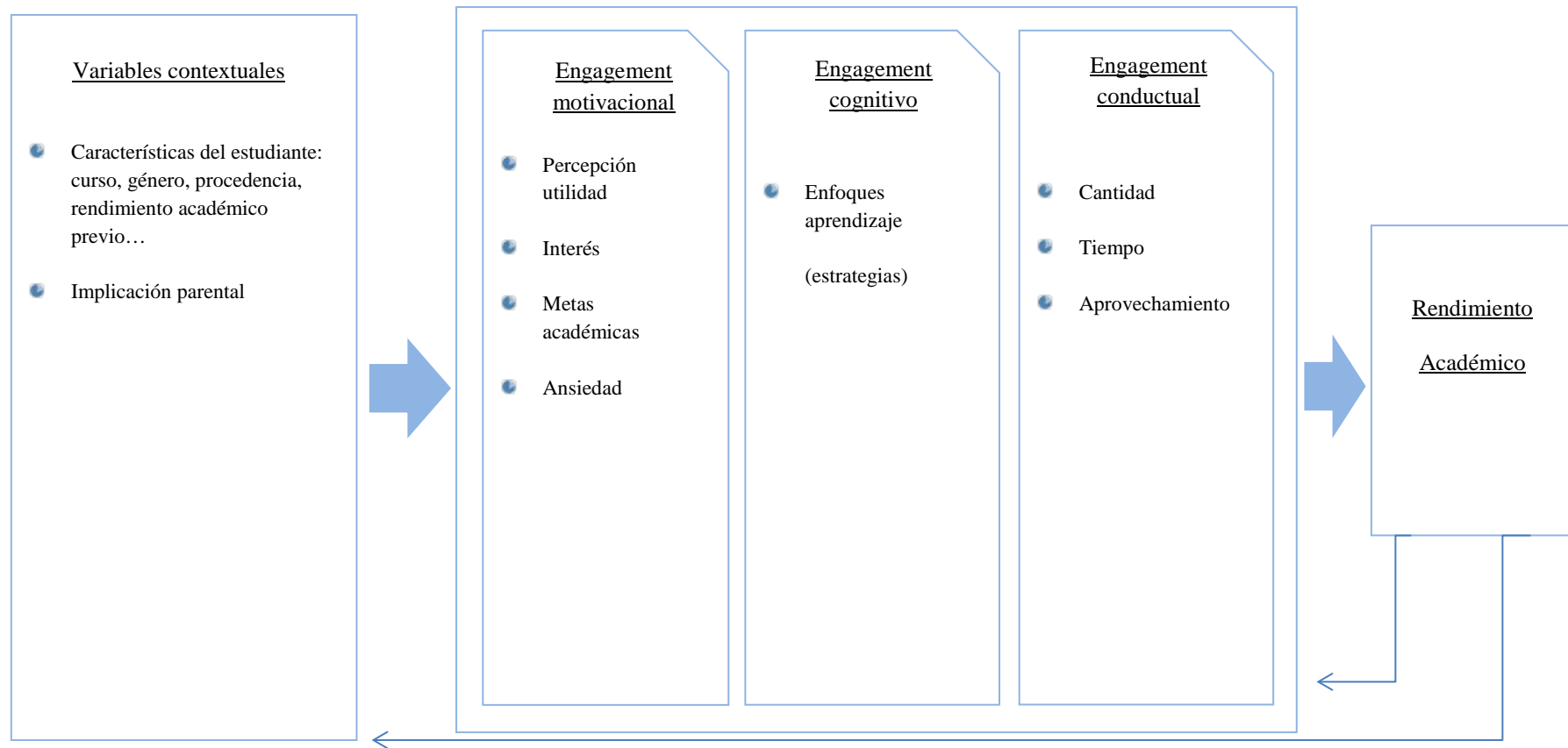


Figura 1. Modelo multinivel del *engagement* en los deberes escolares (adaptado de Trautwein, Lüdtke, Schnyder et al., 2006, p.440). En el modelo se incluyen únicamente las variables tratadas en esta investigación.

En el estudio de la implicación de los estudiantes en los deberes abordaremos tanto la dimensión motivacional del compromiso, como el componente cognitivo (en términos de las estrategias cognitivas y metacognitivas utilizadas) y el conductual – cantidad de deberes realizados, tiempo dedicado y aprovechamiento de ese tiempo– del compromiso (Véase Figura 1).

El compromiso o *engagement* motivacional y/o emocional se aborda aquí entendiendo que la actitud del estudiante hacia los deberes escolares dependerá de variables relativas al valor de la tarea –percepción de utilidad e interés–, orientación a metas y tasas de ansiedad (Christenson, Reschly y Wylie, 2012). El compromiso o *engagement* cognitivo se entiende como un proceso psicológico que involucra la atención y el esfuerzo dedicado a la realización de los deberes escolares en términos de profundidad del procesamiento y/o el empleo de estrategias metacognitivas (Zimmerman, 1990). En este sentido se diferencia entre procesos o enfoques profundos y superficiales adoptados por los estudiantes para enfrentarse con los deberes (Rosário, Núñez, Valle, Paiva y Polydoro, 2013). Tanto el compromiso cognitivo como el compromiso emocional y/o motivacional, manifestado habitualmente a través de las percepciones y creencias de los estudiantes, se consideran menos observables que el conductual (Appleton, Christenson y Furlong, 2008).

Así, el compromiso conductual, entendido como la implicación y la participación en actividades académicas como los deberes escolares, se aborda a través de variables como la cantidad de deberes realizados, el tiempo dedicado y la gestión o aprovechamiento del tiempo.

Por lo que respecta a las variables contextuales, se consideran aquí tanto variables personales del alumno, –género, curso, rendimiento previo y procedencia–, como variables referidas al papel de otros agentes implicados en el proceso de los deberes –padres, profesores–.

El estudio del compromiso con los deberes, sobre el que pivota esta Tesis Doctoral, se asocia en este trabajo con el rendimiento académico operativizado en las calificaciones académicas reales obtenidas por los alumnos.

Sobre esta propuesta estructural, se asumen presupuestos interactivos de funcionalidad, hipotetizando que el rendimiento de los alumnos vendrá explicado en buena medida tanto por el compromiso (motivacional, cognitivo y conductual) como por una serie de factores contextuales (socio-demográficos, familiares y escolares).

Concretamente, esperamos que el rendimiento académico se encuentra en parte explicado, de modo directo, por la magnitud y la calidad de la implicación del estudiante en los deberes escolares (p.e., emocional, cognitiva y conductual) así como por la implicación parental (p.e., expectativas de competencia, comunicación padres-hijos en relación a la escuela, calidad y cantidad de ayuda con los deberes). Atendiendo al modelo propuesto también se plantea que determinadas variables personales, como el género, habilidades cognitivas, curso o procedencia, y la percepción y actitud de los estudiantes (p.e., utilidad) repercutan en su compromiso con los deberes y, en último término, en su rendimiento académico.

Atendiendo a esta fundamentación, el estudio del compromiso o *engagement* en los deberes escolares se abordará, en primer lugar, atendiendo a las características contextuales y personales y su incidencia en el compromiso en los deberes escolares. Nos centraremos posteriormente en el compromiso motivacional, incorporando tanto medidas de respuesta emocional vinculadas a la realización de deberes como a variables relativas al valor atribuido a los deberes y al ámbito académico en general. Los vínculos entre el compromiso motivacional y el conductual así como entre el compromiso motivacional y el cognitivo serán también objeto de estudio en este trabajo. Finalmente, se analizará el *engagement* cognitivo y conductual en los deberes escolares y su incidencia en el rendimiento académico.

### **3.1. Contexto y características de los estudiantes y compromiso en los deberes escolares**

Las características de los estudiantes y el contexto en el que se desenvuelven juegan un papel fundamental en su compromiso con los deberes escolares. Concretamente, por ejemplo, se ha evidenciado que la familia y el entorno escolar están significativamente relacionados con el compromiso del alumno (Lohman, Kaura y Newman, 2007). Del mismo modo, características del estudiante como el género, la etapa educativa o el curso al que pertenecen los estudiantes, así como, por ejemplo, su procedencia, pueden tener repercusiones importantes en el proceso de realización de los deberes.

Mientras que Xu (2007) sugiere que la implicación en los deberes no está relacionada con el curso, otros autores (p.e., Hong y Milgram, 2000; Hong, Pen y Rowell, 2009) encontraron que los alumnos mayores estaban menos involucrados,

persistían y se divertían menos haciendo los deberes que los alumnos más jóvenes. En un estudio realizado con población española (desde 5° de primaria hasta 4° de ESO) se concluyó que en los cursos superiores los alumnos realizaban menos deberes de los prescritos por sus profesores y mostraban un peor aprovechamiento del tiempo (Núñez, Suárez, Cerezo et al., 2015). Sin embargo, Gill y Schlossman (2004) apuntan que, aunque la cantidad de deberes que el alumnado realiza se incrementa considerablemente con la edad, la cantidad de tiempo dedicado lo hace solo levemente. Xu (2007, 2010), por su parte, sugiere que la implicación o *engagement* conductual en los deberes no guarda relación con el curso, lo cual parecen apoyar Wagner, Schobel y Spiel (2008) quienes tampoco han encontrado efectos del curso sobre el tiempo dedicado a los deberes.

Algo similar al curso y al compromiso conductual sucede con el curso y el compromiso motivacional del estudiante con sus deberes. Algunas investigaciones sugieren que la motivación disminuye a medida que se avanza de curso (Hong et al., 2009; Trautwein, Lüdtke, Kastens y Köller, 2006; Wigfield et al., 1997). Cuando los niños y las niñas empiezan la escuela sienten una gran emoción por la idea de los deberes, pero al cabo de un período extraordinariamente corto de tiempo, este interés y emoción decrecen alarmantemente (Coutts, 2004). En un estudio realizado por Bryan, Nelson y Mathur (1995), una proporción significativa del alumnado en los primeros años de la ESO indica que los deberes escolares son aburridos, y estos resultados están en consonancia con los obtenidos por Xu (2004) en un estudio llevado a cabo en los cursos más altos. De la misma forma, en la investigación de Chen y Stevenson (1989), más del 60% de los estudiantes de los últimos cursos de la ESO mostraban una actitud negativa hacia los deberes escolares.

En lo que respecta al género, los resultados de investigaciones previas señalan que las chicas suelen trabajar más, de una forma más planificada y se esfuerzan más en los deberes (Younger y Warrington, 1996). Efectivamente, como ya sugirieron Harris, Nixon y Rudduck (1993), las niñas organizan mejor su tiempo en relación con los deberes escolares, trabajan de un modo más constante y consistente a la hora de hacer los deberes, realizando un trabajo más detallado y coherentemente planificado y mostrando más esfuerzo y mejores actitudes ante las adversidades (Younger y Warrington, 1996). Las niñas realizan más cantidad de deberes de los prescritos y emplean más tiempo en la realización de los mismos que sus compañeros (Núñez, Suárez, Cerezo et al., 2015; Trautwein, 2007), al tiempo que utilizan más estrategias

para realizar los deberes (Xu, 2007) y controlan mejor que ellos sus emociones negativas ante tales tareas. En líneas generales, las niñas suelen emplear mejores estrategias a la hora de hacer los deberes (Xu, 2007) y dedican más tiempo a realizar los deberes (Trautwein, 2007; Wagner et al., 2008).

Por otro lado, un amplio número de trabajos (Covington, 1998; Harris et al., 1993; Jackson, 2003) sugieren que las niñas no sólo dedican mayores esfuerzos a realizar los deberes, sino que muestran actitudes más positivas hacia ellos que los niños. Además, las niñas se muestran menos propensas a asistir a clase sin hacer los deberes y suelen considerarlos menos aburridos que los niños (Xu, 2006). Según Xu (2010) ellas dedican mayores esfuerzos en gestionar su espacio de trabajo, regular su proceso motivacional y controlar aquellas emociones negativas que pueden surgir durante la realización de los deberes escolares.

Por otro lado, puesto que cada vez hay una mayor multiculturalidad en nuestras aulas, cabe explorar la relación entre deberes y rendimiento académico en las poblaciones inmigrantes y nativas. Dadas las particulares características personales de la población inmigrante (lingüísticas, de adaptación, actitudinales, del contexto, etc.) podemos hipotetizar diferencias tanto en el compromiso con la realización de deberes cómo en la relación entre deberes y aprovechamiento escolar respecto a la población nativa. A pesar de su potencial relevancia, no disponemos todavía de literatura previa suficientemente solvente que nos permita contrastar estas hipótesis (Bang, 2011; Mau y Lynn, 1999).

Además de las características personales del estudiante, otras variables contextuales como la implicación parental podrían tener incidencia en su compromiso con los deberes escolares. La literatura sobre la participación de los padres en los deberes escolares es especialmente consistente a la hora de ilustrar la profunda influencia que los padres pueden tener en este punto (Bang, Suárez-Orozco, Pakes y O'Connor, 2009). El apoyo parental a la autonomía de los hijos, y/o un control parental limitado, que se evidencia en conductas cálidas y de apoyo por parte de los padres predicen, en general, el bienestar emocional de los estudiantes (Wang, Biddle y Elliot, 2007). Los estudios respaldan la relación positiva entre el apoyo parental a la autonomía de sus hijos y una mejor regulación del comportamiento, gestión emocional y competencia social de los estudiantes (Soenens y Vansteenkiste, 2005).

En relación al papel de la implicación parental en los deberes escolares, Patall, Cooper y Robinson (2008) observaron efectos positivos de la implicación parental,

entre otras variables, en la actitud de los alumnos ante los deberes. En tres estudios longitudinales, Van Voorhis (2011) encontró una relación positiva entre la implicación parental guiada por una intervención sistemática y el rendimiento de los estudiantes en Matemáticas, Ciencias y Lengua. Por otra parte, aunque algunos estudios también mostraron una relación positiva entre implicación parental y rendimiento (Cooper, Jackson, Nye y Lindsay, 2001; Pomerantz y Eaton, 2001), otros hallaron una relación negativa y algunos, incluso, resultados mixtos (Dumont et al., 2012)

Es muy posible que la incidencia sobre el compromiso en los deberes de los alumnos dependa del tipo de implicación parental (Núñez, Suárez, Rosário et al., 2015). De hecho, Dumont et al. (2012) ya sugería que la relación con el rendimiento, la actitud o el autoconcepto de los niños dependía de la calidad de la implicación parental. El apoyo y *feedback* de los padres constituye un factor de gran importancia para la implicación de sus hijos en la realización de los deberes (Epstein y Van Voorhis, 2001), de tal forma que un apoyo afectivo y emocional, animando a sus hijos a implicarse, puede contribuir positivamente a mejorar su motivación e interés por la realización de los deberes escolares.

Tras este breve recorrido por algunas de las características del contexto y personales de los estudiantes que pueden ser relevantes a la hora de valorar el *engagement* en los deberes escolares, profundizamos en los apartados que siguen en la relación entre el compromiso motivacional y el compromiso cognitivo y conductual del alumno y su incidencia sobre el rendimiento académico.

### **3.2. Compromiso motivacional en los deberes escolares**

Entendemos por compromiso o *engagement* motivacional tanto las emociones y estados afectivos de los estudiantes cuando interactúan con sus experiencias de aprendizaje, y específicamente con los deberes escolares, como las actitudes hacia la escuela en términos evaluativos. Así, además de abordar la ansiedad, entendemos que el compromiso motivacional dependerá de la percepción de utilidad, interés y valor atribuido por los estudiantes a las actividades académicas, tal y como se sostiene desde la teoría de expectativa-valor de la motivación (Eccles, 1983).

En este punto, la investigación sugiere que tanto el compromiso emocional, referido al aburrimiento, felicidad o ansiedad que se despierta en los estudiantes ante lo académico (Connell y Wellborn, 1991), como el valor, utilidad e interés pueden determinar en, gran medida, la implicación cognitiva y conductual de los alumnos en



sus deberes (Valle, Pan, Regueiro, Suárez, Tuero y Nunes, 2015). El comportamiento de los estudiantes al abordar sus deberes puede diferir en función del interés que los deberes les generen y la ansiedad que les provoquen, pero también en función del valor que les atribuyan y de cómo de útiles los perciban.

De modo similar a lo que ocurre con el compromiso conductual y cognitivo, el compromiso motivacional tiende a disminuir con la transición a la adolescencia (Galton, Hargreaves y Pell, 2003; Wigfield y Eccles, 1994). El compromiso o *engagement* motivacional no se mantiene estable en el tiempo, de tal modo que, por ejemplo, durante la adolescencia, las variables emocionales y motivacionales adquieren especial relevancia. En este periodo de la vida de los jóvenes, más allá de la familia, los compañeros, los profesores y las actividades extraescolares, la motivación se convierte en un poderoso factor que mantiene la implicación de los alumnos en su vida académica (Mahatmya, Lohman, Matjasko y Farb, 2012).

El estudio de la implicación motivacional en el ámbito académico ha dirigido su foco de atención en las últimas décadas a los propósitos o metas que tienen los estudiantes, asumiendo que la orientación a múltiples metas puede incidir en diferentes medidas de compromiso motivacional (tales como la autoeficacia percibida, persistencia, interés, ansiedad...) (p.e, Carr y Weigand, 2008; Wang et al., 2007). En toda actividad de aprendizaje, los individuos pueden perseguir objetivos múltiples, metas vinculadas al dominio, la búsqueda de aprobación social, objetivos vinculados a la imagen o al rendimiento, etc., de un modo más o menos armónico, que seguramente cambiarán con el paso del tiempo o dependiendo del tipo de actividad y que, en último término, afectarán al compromiso académico del aprendiz (Carr, 2012; Standage y Treasure, 2002; Wang, Chatzisarantis, Spray y Biddle, 2002).

Desde que Elliot y Thrash (2001) introdujeron el concepto de metas complejas (*goal complexes*), han sido numerosos los intentos de desarrollar los diferentes marcos teóricos sobre las metas de logro con el fin de clarificar las condiciones específicas que optimizan el compromiso en situaciones de rendimiento (p.e., Vansteenkiste et al., 2014). En este sentido, sigue siendo pertinente conocer cómo los estudiantes combinan las metas frente a tareas concretas, como por ejemplo, ante los deberes escolares (Harackiewicz y Linnenbrink, 2005). Por las características propias de los deberes escolares y el contexto específico en el que estos se realizan, se requerirá, seguramente, de un perfil motivacional diferente del que puede sostener el compromiso con las actividades regulares realizadas dentro del aula.

### **3.3. Compromiso cognitivo en los deberes escolares**

El proceso de realización de los deberes se centra en lo que hace el estudiante cuando se enfrenta a los deberes, es decir, en cómo realiza su trabajo y en cómo gestiona los recursos personales y ambientales cuando hace los deberes. Esta implicación cognitiva del estudiante en los deberes escolares parece estar fuertemente vinculada a la implicación motivacional (Connell, Spencer y Aber, 1994; Skinner, Wellborn y Connell, 1990); asumiendo que, tal y como se ha evidenciado, los estudiantes que sostienen enfoques de aprendizaje más profundos obtienen mejores resultados de aprendizaje en términos de rendimiento académico.

Todo parece indicar que tanto las respuestas emocionales como la actitud hacia los deberes (compromiso motivacional) influyen en cómo el estudiante se enfrenta a la realización de los mismos: en el tipo de estrategias y de recursos cognitivos que pone en marcha al hacer los deberes (compromiso cognitivo). El que los estudiantes opten por unas estrategias de trabajo más profundas al hacer los deberes depende de muchos factores, pero seguramente los motivos y las razones por los cuales se hacen los deberes, junto con las metas que desean alcanzar, son las variables motivacionales más determinantes a la hora de implicarse con un mayor o menor grado de profundidad al trabajar con los deberes escolares (Rosário et al., 2010; Rosário, Núñez, Ferrando et al., 2013).

De este modo, podemos encontrarnos con estudiantes que se enfrentan a los deberes con la intención de aprender y reforzar los conocimientos adquiridos en clase tratando de resolver las dudas que surgen al hacer la tarea y relacionándola con lo que aprendieron previamente (Valle, Pan, Regueiro et al., 2015) y con estudiantes que tienen por objeto terminar los deberes cuanto antes para poder dedicarse a otras actividades más divertidas, preocupados de llevarlos hechos porque hay que entregarlos y corregirlos en clase, pero poco comprometidos en sacar provecho de su realización para avanzar en sus aprendizajes. El compromiso cognitivo con los deberes es mayor en el primer caso, pues estos estudiantes dedican un mayor esfuerzo mental, crean más conexiones entre las ideas y logran una mejor comprensión de los contenidos (Valle, Pan, Regueiro et al., 2015).

### 3.4. Compromiso conductual en los deberes escolares

El compromiso conductual, es decir, la implicación propiamente ejecutiva del alumno en los deberes se aborda tomando en consideración tres variables que configuran la dimensión conductual del modelo propuesta en este trabajo (ver Figura 1): la cantidad de deberes realizados de los prescritos, el tiempo dedicado a los deberes y la gestión de ese tiempo.

La investigación ha abordado reiteradamente como medida de compromiso conductual el tiempo dedicado a los deberes. En este punto, la literatura existente ha puesto de manifiesto discrepancias respecto de la relación entre el tiempo dedicado a los deberes y el rendimiento académico. Mientras que en algunos meta-análisis (p.e., Cooper, 1989; Cooper y Valentine, 2001) se informa de una relación positiva entre ambas variables, en otros estudios se observó una relación débil, nula o negativa (p.e., Tam, 2009; Trautwein, 2007; Trautwein, Köller, Schmitz y Baumert, 2002). Efectivamente, por ejemplo, Trautwein, Lüdtke, Schnyder et al. (2006) encontraron que los alumnos que emplean más tiempo en los deberes no tienen por qué ser mejores estudiantes, sino que puede deberse a que presentan mayores dificultades o a problemas de concentración y/o motivación. Al mismo tiempo, añaden que el esfuerzo que un alumno emplea en su realización no tiene por qué estar necesariamente relacionado con el tiempo que tarda en realizarlos. Así, más que el tiempo dedicado a los deberes, lo verdaderamente importante es el uso o aprovechamiento que se hace de ese tiempo. En esta línea, los resultados obtenidos en algunos trabajos (Núñez, Suárez, Cerezo, et al., 2015; Núñez, Suárez, Rosario et al., 2015) mostraron que la relación entre el tiempo dedicado a los deberes y el rendimiento académico era negativa (a mayor tiempo empleado en la realización de los deberes menor es el rendimiento obtenido). Estos resultados fueron interpretados aludiendo a que quizás el problema estaba en cómo de eficaces eran los estudiantes en la gestión del tiempo utilizado en la realización de los deberes. Tenía sentido pensar que cuanto peor es la gestión del tiempo, mayor cantidad de tiempo será necesario para realizar un número determinado de deberes.

Algunos estudios (p.e., Skaggs, 2007) encontraron una relación curvilínea entre el tiempo dedicado a los deberes y el logro académico y, en este sentido, en el trabajo de Fernández-Alonso, Suárez-Álvarez y Muñiz (2014) se sugieren los 60 minutos como tiempo más recomendable de dedicación a la realización de los deberes escolares.

Lo que parece claro es que el tiempo invertido en la realización de los deberes escolares, aunque sea importante, por sí solo no define el compromiso de los alumnos con los mismos. De hecho, es posible que tanto los alumnos académicamente más exitosos como los menos exitosos de secundaria emplean la misma cantidad de tiempo en los deberes escolares, lo que pone en duda la asociación entre tiempo invertido en los deberes y las calificaciones académicas obtenidas (Rosário, Mourão, Núñez, González-Pienda y Valle, 2006).

Los deberes escolares casi siempre se han considerado como un importante vehículo para el desarrollo de estrategias de autorregulación, destacando la gestión del tiempo como una de las más relevantes. La gestión o aprovechamiento del tiempo implica planificar, supervisar y regular el uso del tiempo. De hecho, estas habilidades de autorregulación son fundamentales para el éxito académico en general. El manejo del tiempo dedicado a los deberes es un área donde el nivel de autorregulación de los alumnos juega un papel predominante.

Los resultados obtenidos con diferentes muestras sugieren que la gestión del tiempo es una de las variables de la implicación conductual con los deberes que más predice el rendimiento académico. En un estudio llevado a cabo en Educación Primaria por Valle, Pan, Núñez, Rosário, Rodríguez y Regueiro (2015) se pone de manifiesto que el aprovechamiento predice positiva y significativamente el rendimiento académico en Matemáticas e Inglés; mientras que el tiempo dedicado a la realización de los deberes, una vez más, no parece ser relevante. Por tanto, en consonancia con otros estudios (Trautwein, Schnyder, Niggli, Neumann y Lüdtke, 2009), a mayor número de deberes realizados de los prescritos, mayor es el rendimiento académico obtenido por los alumnos. A esto hay que añadir que, además de esta variable, también resulta relevante el aprovechamiento del tiempo dedicado a la realización de los deberes. Esto se halla en consonancia con otro de los estudios realizados por Valle, Pan, Regueiro et al. (2015), que indica que los estudiantes que gestionan bien su tiempo de trabajo (y no necesariamente los que dedican más tiempo) son quienes más profundamente trabajan sobre los deberes escolares.

#### **4. Objetivos de la investigación**

En las últimas décadas se ha desarrollado una amplia investigación en torno al tema de los deberes escolares. Se han llevado a cabo diversos estudios a gran escala que han generado resultados importantes acerca de variables asociadas con los deberes escolares. Esta línea de investigación se ha vuelto cada vez más comprehensiva y más completa. Los investigadores han explorado una serie de variables que deben ser controladas con la finalidad de conocer los efectos de la realización deberes sobre el aprendizaje y el rendimiento. De hecho, Cooper (2001) sostiene que los deberes se ven influenciados por más factores que cualquier otra estrategia de enseñanza. Así, se ha analizado el papel desempeñado por variables tanto de tipo cognitivo-motivacional como también otras vinculadas con la implicación conductual de los estudiantes en los deberes escolares o de carácter contextual.

Los datos aportados por los estudios previos revisados sobre el compromiso conductual y motivacional sugieren, en general, que las variables tanto motivacionales como las de implicación en los deberes escolares decrecen a medida que el alumnado se encuentra en cursos progresivamente superiores. No obstante, esta afirmación no parece concluyente pues los datos aludidos provienen de múltiples estudios donde se investiga con estudiantes de uno o dos cursos. De ahí el interés de llevar a cabo una investigación con la que se obtengan datos procedentes de una amplia muestra de estudiantes de Educación Secundaria, etapa en la que no han sido estudiados en profundidad los cambios conductuales que se producen a medida que se avanza de curso ni los motivos asociados a esos cambios.

Por otra parte, los escasos estudios realizados con población inmigrante sobre los deberes escolares aportan datos algo confusos y muy generales, en los que la relación entre esta población y los deberes se explora grosso modo. Tampoco se aborda específicamente la relación entre el compromiso del alumno en los deberes y el rendimiento académico. Estas dos razones son las que nos llevan a la necesidad de realizar una investigación que lleve a cabo análisis tan necesarios como el compromiso conductual de los estudiantes inmigrantes, un gran colectivo en nuestras aulas que merece tomarse en cuenta.

En la implicación parental, a diferencia de otros trabajos que se han centrado principalmente en el estudio a nivel general de esta variable o exclusivamente en los deberes, se hace necesario analizar varios tipos de implicación parental percibida y sus

relaciones con el rendimiento académico, ya que anteriormente nunca se han llevado a cabo tales análisis. Por un lado, es importante estudiar variables de implicación parental directamente relacionadas con los deberes: percepción de acompañamiento parental durante la realización de los deberes, percepción de implicación parental en forma de apoyo y percepción de implicación parental en forma de control. Por otro lado, también estudiar variables de implicación parental indirectamente relacionadas con los deberes, teniendo en cuenta que si bien esa implicación no se pone en práctica directamente sobre la realización de los deberes repercute igualmente en la misma.

En lo que respecta al compromiso motivacional, al igual que sucede con el conductual, también persisten numerosas lagunas sin resolver. Una de ellas tiene que ver con saber si los estudiantes combinan las metas de manera simultánea o si, por el contrario, hay una alternancia entre ellas ante una tarea concreta, tal como los deberes escolares. Esto, sumado a que las características de los deberes escolares y el contexto en el que se realizan requieren una calidad de motivación diferente de las actividades realizadas en el aula, justifica la necesidad de llevar a cabo un estudio que contribuya al conocimiento en este campo.

Finalmente, una gran parte de las relaciones entre las variables motivacionales, cognitivas y conductuales implicadas en el aprendizaje autorregulado se han estudiado tomando como referente las tareas y actividades que lleva a cabo el aprendiz dentro del aula. Sin embargo, existe un cierto desconocimiento de las relaciones que se producen entre estas variables a lo largo del proceso de realización de los deberes escolares.

En base a ello, se fundamentan y construyen los tres grandes objetivos de la presente investigación que corresponden con los seis estudios empíricos que constituyen esta Tesis Doctoral:

1. *Analizar si existen diferencias en el compromiso conductual del estudiante (cantidad de deberes realizados, tiempo dedicado a los deberes y aprovechamiento del tiempo) en función de variables contextuales como la edad, curso, género, procedencia, así como en función del rendimiento previo y de la implicación parental.*

En primer lugar, estudiamos los cambios en la implicación conductual y en el compromiso motivacional con los deberes (motivación intrínseca, interés, utilidad percibida y ansiedad) a lo largo de la escolaridad obligatoria controlando el posible efecto del rendimiento académico previo. Por otra parte, constatando

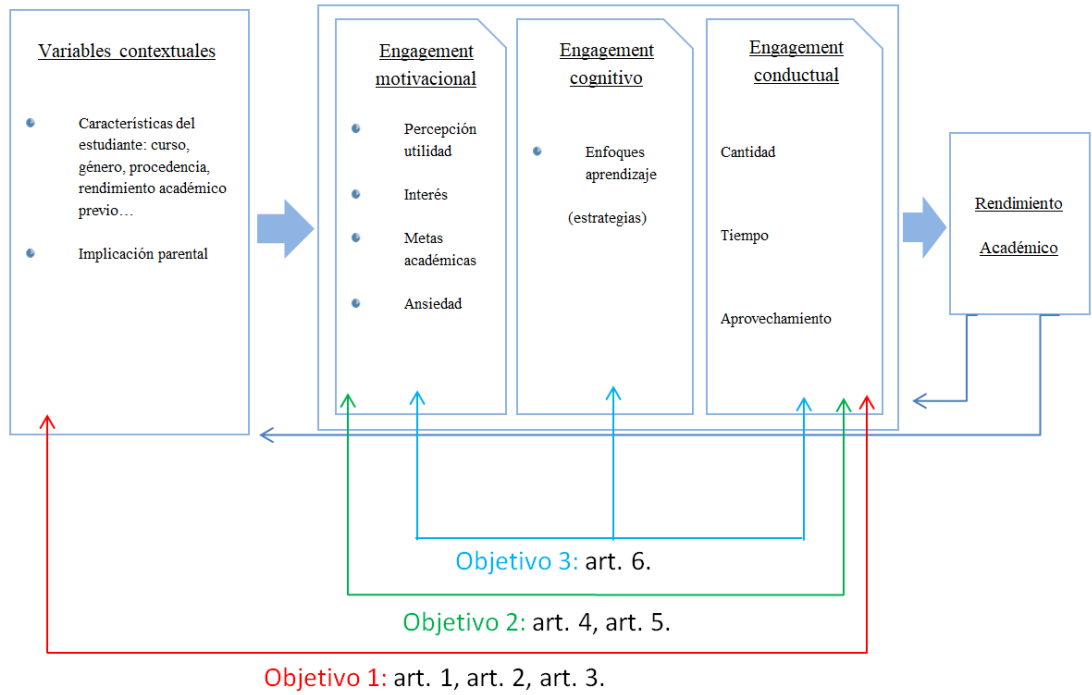
que la literatura existente no ha abordado todavía la implicación en los deberes escolares en función de la procedencia, este trabajo trata de comprobar si existen diferencias en el compromiso conductual con los deberes entre población inmigrante y población nativa y examinar la relación entre esta implicación y el rendimiento en alumnado inmigrante. Finalmente, el estudio de las variables contextuales vinculadas al primer objetivo se completa con el análisis de las diferencias en la implicación parental en los deberes en función del rendimiento académico en secundaria. A diferencia de otros trabajos previos que abordan la implicación parental a nivel general o centrada exclusivamente en los deberes, en este trabajo se diferencia entre una implicación parental en forma de apoyo y una caracterizada por el control, pero también se estudian variables de implicación parental indirectamente relacionadas con los deberes.

2. *Analizar la relación entre los compromisos motivacional y conductual del estudiante con los deberes escolares.*

Concretamente, se estudia la relación entre el compromiso conductual y el compromiso motivacional a lo largo de la escolaridad obligatoria. Desde una perspectiva centrada en la persona (*person-centred approach*), diferenciamos también perfiles motivacionales, atendiendo a la orientación a metas de los estudiantes, y analizamos su vinculación con el compromiso motivacional y comportamental, así como respecto al rendimiento académico.

3. *Estudiar la incidencia del compromiso motivacional y el conductual sobre el rendimiento académico; así como la mediación del compromiso cognitivo en esta relación.*

Con este último objetivo abordamos la incidencia del compromiso motivacional y el enfoque de trabajo que ponen en marcha los estudiantes cuando se enfrentan a los deberes escolares sobre el compromiso conductual y su vinculación con el rendimiento académico.





## 5. Estudios empíricos

### 5.1. Publicaciones

- I. Regueiro, B., Suárez, N., Valle, A., Núñez, J. C., & Rosário, P. (2015). Homework motivation and engagement throughout Compulsory Education. *Revista de Psicodidáctica*, 20(1), 47-63. doi:10.1387/RevPsicodidact.12641
- II. Suárez, N., Regueiro, B., Epstein, J. L., Piñeiro, I., Díaz, S. M., & Valle, A. (2016). Homework involvement and academic achievement of native and immigrant students. *Frontiers in Psychology*, 7:1517. doi: 10.3389/fpsyg.2016.01517
- III. Valle, A., Regueiro, B., Núñez, J. C., Suárez, N., Freire, C., & Ferradás, M. (2016). Percepción de la implicación parental en los deberes escolares y rendimiento académico en estudiantes de Secundaria. *Revista Española de Pedagogía*, 295, 481-498.
- IV. Regueiro, B., Valle, A., Núñez, J. C., Rosário, P., Rodríguez, S., & Suárez, N. (2017): Changes in involvement in homework throughout compulsory secondary education. *Cultura y Educación*, 29(2). 254-278. doi: 10.1080/11356405.2017.1306988
- V. Regueiro, B., Núñez, J. C., Valle, A., Piñeiro, I., Rodríguez, S., & Rosário, P. (2016). Motivational profiles in high school students: Differences in behavioural and emotional homework engagement and academic achievement. *International Journal of Psychology*, doi:10.1002/ijop.12399
- VI. Valle, A., Regueiro, B., Núñez, J. C., Rodríguez, S., Piñeiro, I., & Rosário, P. (2016). Academic goals, student homework engagement, and academic achievement in Primary Education. *Frontiers in Psychology*, 7:463. doi: 10.3389/fpsyg.2016.00463

### 5.1.1. Publicación I

Regueiro, B., Suárez, N., Valle, A., Núñez, J. C., & Rosário, P. (2015): Homework motivation and engagement throughout Compulsory Education. *Revista de Psicodidáctica*, 20(1), 47-63. doi:10.1387/RevPsicodidact.12641

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2017	390	2.075	1.700	2.258	0.700	20	5.3	8.4	0.00...	0.377	100.00	0.05...	73.729
2016	283	2.237	1.578	1.907	0.350	20	4.4	7.1	0.00...	0.231	100.00	0.03...	75.000
2015	254	2.054	1.297	1.946	0.350	20	4.1	7.6	0.00...	0.432	100.00	0.06...	74.561
2014	101	1.308	0.717	0.921	0	18	3.0	9.2	0.00...	0.137	100.00	0.02...	50.000
2013	123	1.675	0.825	1.293	0.263	19	2.6	8.8	0.00...	0.194	100.00	0.02...	74.528
2012	98	1.514	0.828	1.013	0.450	20	Not ...	9.8	0.00...	0.152	100.00	Not ...	69.608
2011	105	2.667	1.366	Not ...	0.250	20	2.3	7.8	0.00...	Not ...	100.00	Not ...	89.216
2010	39	0.815	0.333	Not ...	0.200	15	Not ...	8.9	0.00...	Not ...	100.00	Not ...	33.000
2009	27	0.414	0.103	Not ...	0.200	15	Not ...	9.3	0.00...	Not ...	93.33	Not ...	7.955

**Source Data**

Rank

Cited Journal Data

Citing Journal Data

Box Plot

Journal Relationships

JCR Impact Factor

JCR Year	PSYCHOLOGY, EDUCATIONAL		
	Rank	Quartile	JIF Percentile
2017	16/59	Q2	73.729
2016	15/58	Q2	75.000
2015	15/57	Q2	74.561
2014	28/55	Q3	50.000
2013	14/53	Q2	74.528
2012	16/51	Q2	69.608
2011	6/51	Q1	89.216
2010	34/50	Q3	33.000
2009	41/44	Q4	7.955

## Homework Motivation and Engagement throughout Compulsory Education

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### Abstract

The present investigation examines changes in students' homework engagement and motivation as they advance to higher grade levels in Spanish compulsory education. The study takes into account the possible effect of prior academic achievement on students' homework engagement and motivation. Participants included 1,257 students (ranging in age from 9 to 16 years) from four regions in northern Spain. Results show that: (a) There are statistically significant differences in students' homework engagement and motivation as they advance to higher grade levels; and, (b) Students' prior academic achievement is related to their homework engagement and motivation.

*Keywords:* Homework, homework engagement, homework motivation, academic achievement, compulsory education.

### Resumen

El presente estudio analiza los cambios en la implicación de los estudiantes en los deberes escolares y en la motivación hacia los mismos a lo largo de la escolaridad obligatoria, teniendo en cuenta el efecto que el rendimiento académico previo puede ejercer sobre la implicación y la motivación. Para ello, se ha contado con 1.257 participantes de cuatro provincias del norte de España de edades comprendidas entre los 9 y los 16 años. Los resultados obtenidos indican que: (a) existen diferencias estadísticamente significativas en función del curso en la motivación y la implicación en los deberes; y, (b) el rendimiento académico previo está relacionado con las variables motivacionales y de implicación en los deberes.

*Palabras clave:* Deberes escolares, implicación en los deberes escolares, motivación hacia los deberes, rendimiento académico, educación obligatoria.

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## Introduction

Homework has been defined as “tasks assigned to the students by the teachers to be performed out of school” (Cooper, 2001a, p. 3) and they are one of the daily activities in students’ lives.

Diverse studies show the enormous educational importance of homework (e.g., Cooper, Robinson, & Patall, 2006; Patall, Cooper, & Robinson, 2008; Walker, Hoover-Dempsey, Whetsel, & Green, 2004), stating that they are a tool to improve students’ study habits and attitudes towards work (Corno, 2000; Trautwein, Lüdtke, Kastens, & Köller, 2006). Even the students themselves acknowledge the transcendence of homework to help them to learn (Cooper 1989a; Sharp, Keys, & Benefield, 2001). However, there are still some discordant opinions about student engagement and motivation towards homework, the changes this engagement undergoes as they advance to higher grades (Cooper, 2001b) and its relation with achievement (Cooper et al., 2006; Trautwein, Schnyder, Niggli, Neumann, & Lüdtke, 2009).

### Grade, academic achievement and homework engagement

Whether or not students do all their homework can have a positive or negative impact on their academic achievement (Cooper, Jackson, Nye, & Lindsay, 2001; Núñez, Suárez et al., 2013; Trautwein, Köller,

Schmitz, & Baumert, 2002; Trautwein & Lüdtke, 2009).

Not only the amount of homework has awakened interest, but also the time that students devote to homework has aroused curiosity and controversy. Thus, whereas some investigations have found a positive relationship between homework time and academic achievement (Cooper et al., 2006; Cooper & Valentine, 2001; Walberg, 1991), others have observed a weak relation, a negative one (De Jong, Westerhof, & Creemers, 2000; Trautwein & Lüdtke, 2009; Trautwein, Lüdtke, Schnyder, & Niggli, 2006), or even no relationship (Murillo & Martínez-Garrido, 2013). Although a priori, more homework time may seem an indicator of academic success, however as suggested by Xu (2007), devoting more time to homework does not necessarily mean that one is carrying out more efficient strategies. Perhaps the way that one engages in homework is more positively related to academic achievement. In this sense, dedicating more time and making the best of that time lead to a greater amount of homework carried out and to better achievement (Núñez, Suárez et al., 2013).

The fact that students engage more or less in homework should be related, at least in part, to the grade in which the student is enrolled. In fact, in Primary Education (PE), homework is usually assigned, among other reasons, so that students will learn to better ma-

nage their study time reviewing the material taught in class, whereas in Compulsory Secondary Education (CSE), homework is assigned in order to enrich and perfect the classwork (Muhlenbruck, Cooper, Nye, & Lindsay, 2000). Moreover, as students advance to higher grades, the amount of homework assigned increases (Gill & Schlossman, 2004; Zimmerman & Kitasantas, 2005) because the younger students have less effective study habits and are less capable of avoiding distractions (Cooper & Valentine, 2001).

However, the literature reflects positions that differ from this direction. Hong, Peng and Rowell (2009), for example, indicated that younger students engage more and are more persistent in their homework than older students. Other authors (Bryan & Nelson, 1994; Cooper, Lindsay, & Nye., 2000; Núñez, Suárez et al., 2013) have reported that the amount of homework done not only decreases as students advance to higher grades but homework time management also decreases (Núñez, Suárez et al., 2013; Regueiro et al., 2014). However, Gill and Schlossman (2004) note that, although the amount of homework students carry out increases considerably with age, the amount of homework time increases only slightly. Xu (2007, 2010) suggests that homework engagement is not related to students' grade, which seems to support the study of Wagner, Schobel and Spiel (2008), who

found no effects of grade on homework time.

Although grade may be associated with homework engagement, students' prior academic achievement is considered a variable of great relevance in this type of relationship (Regueiro et al., 2014) because changes in homework engagement probably follow different paths depending, among other variables, on students' prior academic results.

According to Hong (2001), high-performing students state that they like to feel responsible for their homework, and they are more organized than their low-performing classmates. This is related to the study carried out by Wagner et al. (2008), indicating that low-performing students spend more time on homework because, due to their difficulties, they need more time to do their homework. Núñez, Suárez et al. (2013) have verified, in students between 10 16 years, that the correlation between homework time and achievement is negative, albeit non-significant. Pan et al. (2013) have corroborated that in PE, high, average, or low achievement does not lead to significant differences in the amount of homework time; however, the amount of homework carried out and homework time management increase when achievement is high.

These results differ from those found in a sample of CSE, in which the highest levels of academic achievement were positively rela-

ted to homework engagement (e.g., more homework carried out, better management of homework time, and even more homework time) (Regueiro et al., 2014).

### **Grade, academic achievement, and homework motivation**

Motivation is considered an essential part of the process of doing homework (Corno, 2000; Xu & Corno, 1998) and, in turn, homework plays a critical role in the development of students' achievement motivation (Bempechat, 2004).

A large number of works relate the impact of motivational variables to achievement (Cleary & Chen, 2009; Miñano & Castejón, 2011; Rosário et al., 2012; Rosário, Núñez, Valle, González-Pienda, & Lourenço, 2013) but in spite of this, there is scarce research as a function of age. Some investigations suggest that motivation decreases as students advance to higher grades (Hong et al., 2009; Trautwein, Lüdtke, Kastens et al., 2006; Wigfield et al., 1997). When children begin school, they feel excited about the idea of homework, but after an extraordinarily short period of time, this interest and excitement decrease alarmingly (Coutts, 2004). In a study carried out by Bryan, Nelson and Mathur (1995), a significant proportion of students in their first years of CSE state that homework is boring. These results are in accordance with those obtained by

Xu (2004) in a study carried out in higher grades. Likewise, in the investigation of Chen and Stevenson (1989), more than 60% of the students from the last courses of CSE considered homework as negative.

Although there is not much research on this topic, there are some indications that a large part of the students engage in homework not because of the interest and enthusiasm it awakens but for other reasons, such as a sense of duty, the desire to please, or even to avoid punishments (Walker et al., 2004). Likewise, when they are asked about homework, references to responsibility do not begin to emerge before the end of PE (Warton, 1997); thus, most of the smaller children do homework to avoid problems and to please their parents (Corno, 2000; Warton, 2001).

Like learning, doing homework also requires the students to be willing to participate and persist. This partially stems from their personal goals and their beliefs about the value, interest, and importance that the achievement of those goals has for them (Linnenbrink & Pintrich, 2002; Núñez, Rosário, Vallejo, & González-Pienda, 2013; Pintrich & De Groot, 1990; Valle et al., 2013; Zimmerman, 2001).

Likewise, various studies have identified other factors related to the link between doing homework and academic achievement (Cooper, 1989b; Keith & Benson, 1992; Muhlenbruck et al., 2000); one of the most important factors is prior

academic achievement (Regueiro et al., 2014). As indicated by Ormrod, “Students feel more sure of their success in a task when they have already been successful in that same task or in similar tasks in the past” (Ormrod, 2003, p. 347). Thus, students’ beliefs in their capacities to achieve the established goals influence their motivation and efforts to learn and, therefore, their academic achievement (Schunk & Ertmer, 2000). Hong (2001) also showed that high-performing students are more self-motivated to do homework than low-performing students.

Summing up, the data provided by the prior studies reviewed, in general, suggest that the variables—both homework engagement and motivational variables—decrease as students progressively advance to higher grades. Nevertheless, this statement does not seem certain because the data proceed from multiple studies that investigated students of one or two grades, with different measurement instruments, and in very disparate educational contexts. Therefore, with the present investigation, we intend to contribute knowledge to this field by analyzing the changes produced throughout compulsory education in students’ homework motivation and engagement, taking into account the possible effect that prior academic achievement may have on these variables. The greatest contribution of this study will be the obtainment of data of a broad sample of stu-

dents from seven grades of PE and CSE. In accordance with some of the above-mentioned studies, we expect that grade will be significantly related to the motivational variables and to homework engagement variables. Specifically, we expect that student motivation and engagement will decrease as they advance to progressively higher grades.

## Method

### Participants

In this study, participants were 1257 students (45.6% males) belonging to 18 schools, of which 15 are public centers and 3 are subsidized centers. Most of the schools are in urban areas, except for 6, which are either in rural or semi-urban areas. The schools and institutes have a student and family profile of medium socioeconomic level. Regarding age, the students were between 9 and 16 years old, 17.3% ( $n = 216$ ) is studying 4<sup>th</sup> grade of PE, 14.9% ( $n = 188$ ) is in 5<sup>th</sup> grade of PE, 10.4% ( $n = 131$ ) is enrolled in 6<sup>th</sup> grade of PE, 15.4% is studying 1<sup>st</sup> grade of ESO ( $n = 194$ ), 12.1% is in 2<sup>nd</sup> grade of CSE ( $n = 152$ ), 14.5% is studying 3<sup>rd</sup> grade of CSE ( $n = 182$ ), and 15.4% is in 4<sup>th</sup> grade of CSE ( $n = 194$ ).

### Instruments

To measure the variables related to homework motivation and enga-

gement, we used the “*Encuesta sobre los Deberes Escolares*” (EDE, in English, the Homework Survey) (e.g., Núñez, Suárez et al., 2013; Núñez et al., 2014; Pan et al., 2013; Rosário et al., 2009; Valle et al., in press). The students’ motives, interests, attitudes and perceptions of homework included the following variables: (a) *intrinsic motivation towards homework*, (b) *interest in homework*, (c) *attitude towards homework*, and, (d) *perception of the utility of homework*. Intrinsic motivation towards homework ( $\alpha = .85$ ) was assessed by means of eight items (e.g., “Doing homework helps me to understand what is being taught in class”). Interest in homework ( $\alpha = .75$ ) was assessed by means of three items (e.g., “I think that doing homework increases my interest in the subjects”). Attitude towards homework ( $\alpha = .77$ ) was assessed by means of three items (e.g., “I feel good when I am doing homework”). The participants rated the items of these motivational variables on a Likert-type scale ranging from 1 (*completely false*) to 5 (*completely true*). Lastly, the perception of the utility of homework was assessed by means of an item asking the student’s opinion of homework, using for this purpose a 5-point Likert-type scale ranging from 1 (*it’s good for nothing*) to 5 (*it’s very useful*). To determine the degree of homework engagement, we collected information of the following varia-

bles: (a) amount of homework the students habitually did, (b) homework time, and (c) homework time management. An item asking how much homework was performed habitually, rated on a 5-point Likert-type scale ranging from 1 (*none*) to 5 (*all of it*) was used to estimate the *amount of homework carried out* by the students. As for the *daily homework time* ( $\alpha = .73$ ), the students responded to three items (in general, during a typical week, on a typical weekend) with the general formulation “How much time do you usually spend doing homework?”, with the following response options: 1 (*less than 30 minutes*), 2 (*30 minutes to 1 hour*), 3 (*1 hour to 1½ hours*), 4 (*1½ hours to 2 hours*), and 5 (*more than 2 hours*). Lastly, *homework time management* ( $\alpha = .79$ ) was appraised through students’ responses to three items (in general, during a typical week, on a typical weekend) on which they were requested to indicate their regular level of homework time management on a 5-point Likert-type scale with the following options: 1 (*I don’t manage it at all*), 2 (*I don’t manage it as much as I should*), 3 (*regular*), 4 (*I manage pretty much*), 5 (*I manage it completely*).

*Prior academic achievement* was obtained by means of the students’ academic grades in Spanish Language, English Language, and Mathematics. The final measure of this variable is the mean of the grades in these three subjects.



## Procedure

The data were collected during the regular class hours by external personnel, after obtaining informed consent of the school board of directors and the teachers. The homework variables were obtained during the 2013-2014 school course, and prior academic achievement from the final assessment of the 2012-2013 course.

## Data analysis

We conducted multivariate analysis of covariance (MANCOVA) with grade as factor (with seven levels) and introducing prior academic achievement as covariate (to statistically control for its effect). As dependent variables, we included intrinsic motivation towards homework, interest in homework, attitude towards homework, perception of the utility of homework, amount of homework carried out, homework time, and homework time management.

As a measure of the effect size, we used the partial eta-squared coefficient ( $\eta_p^2$ ), as it is one of the procedures used most frequently in educational research (Sun, Pan, & Wang, 2010). To interpret the effect sizes, we used the criterion established in the classic work of Cohen (1988), according to which, an effect is small when  $\eta_p^2 = .01$  ( $d = .20$ ), medium when  $\eta_p^2 = .059$  ( $d = .50$ ), and large if  $\eta_p^2 = .138$  ( $d = .80$ ).

## Results

Table 1 presents the correlation coefficients and the means, standard deviations, skewness, and kurtosis of the variables analyzed in this work. According to the normality distribution criterion proposed by Finney and DiStefano (2006), with maximum values of 2 for skewness and of 7 for kurtosis, it can be concluded that the variables included in this work present normal distributions.

After controlling for the effect of prior academic achievement, Wilks'  $\lambda = .850$ ,  $F(7, 1243) = 31.33$ ,  $p < .001$ ,  $\eta_p^2 = .150$  (large effect size), the results revealed statistically significant differences as a function of grade in the motivational and homework engagement variables, Wilks'  $\lambda = .551$ ,  $F(42, 5834) = 18.81$ ,  $p < .001$ ,  $\eta_p^2 = .095$ . According to the above-mentioned criteria, the effect size is medium.

Regarding the relevance of prior academic achievement in this design, we note that it is significantly related to the amount of homework carried out,  $F(1, 1249) = 178.31$ ,  $p < .001$ ,  $\eta_p^2 = .125$ , homework time,  $F(1, 1249) = 16.76$ ,  $p < .001$ ,  $\eta_p^2 = .013$ , homework time management,  $F(1, 1249) = 53.36$ ,  $p < .001$ ,  $\eta_p^2 = .041$ , intrinsic motivation towards homework,  $F(1, 1249) = 49.04$ ,  $p < .001$ ,  $\eta_p^2 = .038$ , interest in homework,  $F(1, 1249) = 16.51$ ,  $p < .001$ ,  $\eta_p^2 = .013$ , and the perception of the utility of homework,  $F(1, 1249) = 22.54$ ,

Table 1

*Means, Standard Deviations, Skewness, Kurtosis, and Correlation Matrix*

	1	2	3	4	5	6	7	8	9
1. INTR_MOT	—								
2. INT-HW	.73**	—							
3. ATT_HW	.63**	.71**	—						
4. PER_UTIL_HW	.63**	.62**	.52**	—					
5. AM_HW	.45**	.40**	.34**	.39**	—				
6. HW_T	.05	.05	-.04	.06*	.21**	—			
7. HW_T_M	.47**	.47**	.42**	.41**	.45**	.02	—		
8. AA	.30**	.23**	.16**	.23**	.40**	.03	.29**	—	
9. GR	-.51**	-.50**	-.54**	-.43**	-.34**	.22**	-.39**	-.26**	—
<i>M</i>	3.85	3.17	2.59	3.88	4.31	2.83	3.61	3.12	6.97
<i>SD</i>	0.82	1.15	1.07	1.09	.96	1.20	1.07	1.27	2.09
Skewness	-0.66	-0.20	0.38	-0.80	-1.41	0.24	-0.55	-0.11	0.00
Kurtosis	-0.02	-0.88	-0.68	-0.07	1.15	-0.85	-0.26	-1.26	-1.34

Note. INTR\_MOT = Intrinsic Motivation towards Homework; Int\_HW = Interest in Homework; ATT\_HW = Attitude towards Homework; PER\_UTIL\_HW = Perception of Utility of Homework; AM\_HW = Amount of Homework carried out; HW\_T = Homework Time; HW\_T\_M = Homework Time Management; AA = Academic Achievement; GR = Grade.

\* $p < .05$ . \*\* $p < .01$ .

Table 2

*Descriptive Statistics (Mean, Standard Deviation) corresponding to the Variables Related to Homework Motivation and Engagement as a Function of Grade*

	4th PE		5th PE		6th PE		1st CSE		2nd CSE		3rd CSE		4th CSE	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Motivational variables														
Intrinsic motivation														
towards homework	4.49	0.56	4.22	0.67	4.06	0.62	3.78	0.79	3.65	0.73	3.42	0.77	3.26	0.77
Interest in homework	4.07	0.89	3.67	0.99	3.42	0.96	3.05	1.09	2.85	1.04	2.65	1.02	2.39	1.01
Attitude towards														
homework	3.61	0.96	3.09	1.01	2.73	0.88	2.38	0.96	2.17	0.84	2.13	0.86	1.89	0.69
Perception of utility														
of homework	4.60	0.78	4.34	0.93	4.08	0.94	3.78	1.05	3.52	1.08	3.47	1.09	3.30	1.00
Homework engagement														
Amount of home-														
work done	4.69	0.69	4.63	0.77	4.52	0.75	4.38	0.90	4.37	0.83	3.83	1.09	3.81	1.10
Homework Time	2.18	1.07	2.71	1.18	2.75	1.12	3.05	1.16	3.17	1.08	3.07	1.16	3.02	1.29
Homework Time														
Management	4.26	0.88	4.00	0.95	3.85	0.93	3.50	1.09	3.39	1.04	3.10	0.97	3.14	1.02

$p < .001$ ,  $\eta_p^2 = .018$ . Of all these variables, the one with the strongest relation to prior academic achievement is the amount of homework done (12.5% of explained variance).

However, even when controlling for the effect of prior academic achievement, an important amount of variance of each dependent variable remains associated with grade. Thus, there are significant differences as a function of grade in the amount of homework carried out,  $F(6, 249) = 21.13$ ,  $p < .001$ ,  $\eta_p^2 = .092$ , homework time,  $F(6, 1249) = 20.11$ ,  $p < .001$ ,  $\eta_p^2 = .088$ , and homework time management,  $F(6, 1249) = 27.99$ ,  $p < .001$ ,  $\eta_p^2 = .119$ . There are also significant differences as a function of grade in intrinsic motivation,  $F(6, 1249) = 60.55$ ,  $p < .001$ ,  $\eta_p^2 = .225$ , interest towards homework,  $F(6, 1249) = 58.78$ ,  $p < .001$ ,  $\eta_p^2 = .220$ , attitude towards homework,  $F(6, 1249) = 84.41$ ,  $p < .001$ ,  $\eta_p^2 = .288$ , and the perception of the utility of homework,  $F(6, 1249) = 38.18$ ,  $p < .001$ ,  $\eta_p^2 = .155$ . The effect sizes are large for all the variables related to motivation towards homework, and medium for the variables related to homework engagement.

Taking into account the means of all the variables (see Table 2), the results show a progressive decrease in all the variables related to motivation towards homework as the students advance to higher grades. This same pattern is also observed in the amount of homework done and in homework time mana-

gement, although the latter is relatively constant in the last two grades of CSE. However, homework time increases progressively as students enter higher grades, although this pattern decreases in 3<sup>rd</sup> and 4<sup>th</sup> grades of CSE (see Table 2).

## Discussion

This study makes various important contributions to research of homework. Firstly, we confirm statistically significant differences as a function of grade in students' homework motivation and engagement. In accordance with a large part of prior research, we find that students in the higher grades are less interested in homework, and their attitude towards homework becomes more negative as the years go by. A possible explanation of this may be the contextual factors that intervene in doing homework (i.e., Rogers & Hallam, 2006; Xu, 2006; Xu & Corno, 2006). Specifically, as younger students do their homework accompanied by an adult, they probably feel more motivated than older children who do their homework alone; this is consistent with the findings of Leone and Richards (1989), who indicate that adolescents' motivation towards homework differs depending on who their homework mates are. In a prior work with similar results, Shumow, Schmidt and Kackar (2008) found that adolescents show more positive affect when they do

their homework accompanied than when alone. Therefore, the results of this study should be considered with some caution as they did not include the variable of parental accompaniment in the analysis.

On the other hand, it can be observed that, as students advance to higher levels, they have less intrinsic motivation towards homework and they perceive it as less useful. The expectation-value theory (Eccles, Adler, & Meece, 1984; Eccles & Wigfield, 2002) is particularly appropriate to explain motivation towards homework (Trautwein & Köller, 2003), suggesting that students are more apt to engage in tasks they perceive as emotionally rewarding, valuable, and where effort is “worth the trouble” (Warton, 2001). The problem of CSE students may stem not so much from their lack of comprehending the benefits that homework can provide as in their perception that the immediate associated costs may be greater than the potential benefits (Coutts, 2004). This situation is worsened by the tendency of policies and practices that promote extrinsic motivation instead of intrinsic motivation through the types of activities that homework requires (Coutts, 2004). Therefore, homework should not simply be assigned as a rule or routinely or because we assume it is a good practice (Sallee & Rigler, 2008), but instead it should be designed to cultivate learning and development (Kohn, 2006). As in any other aspect of

education, students must understand why they are learning something and how this will benefit them in the real world. Thus, if students understand how homework can affect their achievement, their attitude towards it will improve, as will their interest, perception of its utility, and their motivation.

The results of this study also suggest that homework engagement covaries with the student’s grade. Specifically, the amount of homework done and time management decrease as students advance to higher grades, as shown by the results of other investigations (Cooper et al., 2000; Hong et al., 2009; Núñez, Suárez et al., 2013; Regueiro et al., 2014).

However, the tendency for homework time is different, as it increases as students go on to higher grades, although it is constant in the last two grades of CSE. This increase in time follows an inverse and apparently paradoxical course in comparison with the amount of homework carried out, which decreases in the higher grades. This may be due to the fact that homework time management also decreases when students advance to higher grades. Worse time management implies dedicating more time to homework (Núñez, Suárez et al., 2013) despite the fact that the amount of homework carried out decreases compared to lower grades, probably due to the lack of engagement and persistence in homework shown by older students (Hong et al., 2009).

Likewise, we used the variable prior academic achievement as a covariate to study its relation with the variables of interest, showing that, in accordance with our working hypothesis, prior academic achievement is significantly related to the variables of engagement and to three of the variables linked to motivation (intrinsic motivation, interest, and perception of utility). Especially, the variable amount of homework carried out receives more influence from prior academic achievement. As stated in other studies (Cooper et al., 2001; Núñez, Suárez et al., 2013; Trautwein et al., 2002; Trautwein & Lüdtke, 2009), a greater amount of homework carried out is a predictor of better academic achievement.

No doubt, the conclusions reached should be contemplated taking into account some of the limitations of this work. On the one hand, the results should be interpreted with caution due to the use of self-report data; in spite of being a useful procedure to understand participants' thoughts and the perceived behaviors, they have limitations (Blazer, 2009). On the other hand, we note the cross-sectional nature of the study, which is less efficient and less statistically powerful than longitudinal studies.

The results found are a symptom of the critical situation of our educational system, which, in this case, manifests in a progressive deterioration of the two important pillars of learning: students' homework mo-

tivation and engagement. Thus, this decrease in students' motivational variables as they advance to higher grades should help us to analyze what we are doing wrong in our educational practices. How to get students to approach homework with more motivation and, especially, how to keep that motivation alive throughout schooling may be one the main challenges of future works of research. Nevertheless, for this purpose, it would be necessary to first examine the determinants of this negative tendency: why are students increasingly less motivated towards homework? As students advance to higher grades, why do they perceive homework as less useful? Why is their attitude towards homework more negative? and so on. We think that these variables or factors can be found mainly in two contexts: the school context (e.g., the type of homework assigned, the type of feedback that teachers give about the homework they assign, and the contingencies-what instrumental value does homework have, what happens if students do all their homework well, what happens if they do not do all their homework or they do it poorly?); and family setting (e.g., the type of family involvement, the conditions in which the students do their homework, the amount of daily extracurricular activities, the availability of a space of their own in which to do homework, etc.).

Lastly, having confirmed that prior academic achievement is sig-

nificantly related to homework motivational and engagement variables, it would be interesting to attempt to clarify this relationship in future studies. Consistent with this, perhaps a question should be answered: does the decrease observed occur independently of the student's level of achievement or is there an interaction between prior achievement and the level of homework motivation and engagement? That is, we want to know whether the progressive decrease with advancing grades occurs independently of the students' level of achievement or whether, in con-

trast, the tendency varies as a function of their level of achievement.

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### References

- Bempechat, J. (2004). The motivational benefits of homework: A social-cognitive perspective. *Theory into Practice, 43*(3), 189-196. doi: 10.1207/s15430421tip4303\_4
- Blazer, C. (2009). *Literature review: Homework*. Miami: Miami Dade County Public Schools. Retrieved from <http://drs.dadeschools.net/LiteratureReviews/Homework.pdf>
- Bryan, T., & Nelson, C. (1994). Doing homework: Perspectives of elementary and junior high school students. *Journal of Learning Disabilities, 27*, 488-499. doi: 10.1177/002221949402700804
- Bryan, T., Nelson, C., & Mathur, S. (1995). Homework: A survey of primary students in regular, resource, and self-contained special education classrooms. *Journal of Learning Disabilities, 27*, 85-90. doi: 10.1177/002221949402700804
- Chen, C., & Stevenson, H. W. (1989). Homework: A cross-cultural examination. *Child Development, 60*, 551-561. doi: 10.1111/j.1467-8624.1989.tb02736.x
- Cleary, T., & Chen, P. (2009). Self-regulation, motivation, and math achievement in middle school: Variations across grade level and math context. *Journal of School Psychology, 47*, 291-314. doi: 10.1016/j.jsp.2009.04.002
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2<sup>nd</sup> ed.). Hillsdale, NJ: Erlbaum.
- Cooper, H. (1989a). *Homework*. White Plains, NY: Longman.
- Cooper, H. (1989b). Synthesis of research on homework. *Educational*

- Leadership*, 47(3), 85-91. doi: 10.3102/0034654308325185
- Cooper, H. (2001a). *The battle over homework: Common ground for administrators, teachers, and parents* (2<sup>nd</sup> ed.). Thousand Oaks, California: Corwin Press.
- Cooper, H. (2001b). Using research to answer practical questions about homework. *Educational Psychologist*, 36(3), 143-153. doi: 10.1207/S15326985EP3603\_1
- Cooper, H., Jackson, K., Nye, B., & Lindsay, J. J. (2001). A model of homework's influence on the achievement evaluations of elementary school students. *Journal of Experimental Education*, 69(2), 181-200. doi: 10.1080/00220970109600655
- Cooper, H., Lindsay, J., & Nye, B. (2000). Homework in the home: How student, family, and parenting-style differences relate to homework time management process. *Contemporary Educational Psychology*, 25(4), 464-487. doi: 10.1006/ceps.1999.1036
- Cooper, H., Robinson J. C., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research, 1987-2003. *Review of Educational Research*, 76(1), 1-62. doi: 10.3102/00346543076001001
- Cooper, H., & Valentine, J. C. (2001). Using research to answer practical questions about homework. *Educational Psychologist*, 36(3), 143-153. doi: 10.1207/S15326985EP3603\_1
- Corno, L. (2000). Looking at homework differently. *Elementary School Journal*, 100(5), 529-548. doi: 10.1086/499654
- Coutts, P. M. (2004). Meanings of homework and implications for practice. *Theory into Practice*, 43, 182-187. doi: 10.1207/s15430421tip4303\_3
- De Jong, R., Westerhof, K. J., & Creemers, B. P. M. (2000). Homework and student math achievement in junior high schools. *Educational Research and Evaluation*, 6, 130-157. doi: 10.1076/1380-3611(200006)6:2;1-E;F130
- Eccles, J. S., Adler, T., & Meece, J. L. (1984). Sex differences in achievement: A test of alternate theories. *Journal of Personality and Social Psychology*, 46(1), 26-43. doi: 10.1037/0022-3514.46.1.26
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53(1), 109-132. doi: 10.1146/annurev.psych.53.100901.135153
- Finney S. J., & DiStefano C. (2006). Non-normal and categorical data in structural equation modelling. In G. R. Hancock & R. O. Mueller (Eds.), *Structural equation modelling. A second course* (pp. 269-314). Greenwich, CT: Information Age Publishing.
- Gill, B. P., & Schlossman, S. L. (2004). Villain or savior? The American discourse on homework, 1850-2003. *Theory into Practice*, 43(3), 174-181. doi: 10.1207/s15430421tip4303\_2
- Hong, E. (2001). Homework style, homework environment, and academic achievement. *Learning Environments Research*, 4(1), 7-23.
- Hong, E., Peng, Y., & Rowell, L. L. (2009). Homework self-regulation: Grade, gender, and achievement-level differences. *Learning and Individual Differences*, 19(2), 269-276. doi: 10.1016/j.lindif.2008.11.009
- Keith, T. Z., & Benson, M. J. (1992). Effects of manipulable influences on high school grades across five ethnic groups. *The Journal of Educa-*

- tional Research*, 86(2), 85-93. doi: 10.1080/00220671.1992.9941144
- Kohn, A. (2006). *The homework myth: Why our kids get too much of a bad thing*. Philadelphia, PA: Da Capo Press.
- Leone, C. M., & Richards, H. (1989). Classwork and homework in early adolescence: The ecology of achievement. *Journal of Youth and Adolescence*, 18(6), 531-548. doi: 10.1007/BF02139072
- Linnenbrink, E. A., & Pintrich, P. (2002). Motivation as an enabler for academic success. *School Psychology Review*, 31(3), 313-327.
- Miñano, P., & Castejón, J. L. (2011). Variables cognitivas y motivacionales en el rendimiento académico en Lengua y Matemáticas: un modelo estructural. *Revista de Psicodidáctica*, 16(2), 203-230.
- Muhlenbruck, L., Cooper, H., Nye, B., & Lindsay, J. J. (2000). Homework and achievement: Explaining the different strengths of relation at the elementary and secondary school levels. *Social Psychology of Education*, 3(4), 295-317. doi: 10.1023/A:1009680513901
- Murillo, F. J., & Martínez-Garrido, C. (2013). Incidencia de las tareas para casa en el rendimiento académico. Un estudio con estudiantes iberoamericanos de Educación Primaria. *Revista de Psicodidáctica*, 18(1), 157-178. doi: 10.1387/RevPsicodidact.6156
- Núñez, J., Rosário, P., Vallejo, G., & González-Pienda, J. (2013). A longitudinal assessment of the effectiveness of a school-based mentoring program in middle school. *Contemporary Educational Psychology*, 38, 11-21. doi: 10.1016/j.cedpsych.2012.10.002
- Núñez, J. C., Suárez, N., Cerezo, R., González-Pienda, J. A., Rosário, P., Mourao, R., & Valle, A. (2013). Homework and academic achievement across Spanish Compulsory Education. *Educational Psychology*. doi: 10.1080/01443410.2013.817537
- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Cerezo, R., & Valle, A. (2014). Teachers' feedback on homework, homework-related behaviors and academic achievement. *The Journal of Educational Research*. doi: 10.1080/00220671.2013.878298
- Ormrod, J. E. (2003). *Educational psychology: Developing learners* (4<sup>th</sup> ed). Upper Saddle River, NJ: Prentice Hall.
- Pan, I., Regueiro, B., Ponte, B., Rodríguez, S., Piñeiro, I., & Valle, A. (2013). Motivación, implicación en los deberes escolares y rendimiento académico. *Aula Abierta*, 41(3), 13-22.
- Patall, E., Cooper, H., & Robinson, J. C. (2008). Parent involvement in homework. *Review of Educational Research*, 78(4), 1039-1101. doi: 10.3102/0034654308325185
- Pintrich, P., & De Groot, A. (1990). Motivational and self-regulated learning components of classroom academic achievement. *Journal of Educational Psychology*, 82(1), 33-40. doi: 10.1037/0022-0663.82.1.33
- Regueiro, B., Valle, A., Núñez, J. C., Rosário, P., Rodríguez, S., & Piñeiro, I. (2014). Niveles de rendimiento académico e implicación en los deberes escolares en estudiantes de Educación Secundaria Obligatoria. *Manuscript submitted for publication*.
- Regueiro, B., Valle, A., Núñez, J. C., Rosário, P., Rodríguez, S., & Suárez, N. (2014). Cambios en la implicación en los deberes escolares a lo largo de la Educación Secundaria Obligatoria. *Manuscript submitted for publication*.



- Rogers, L., & Hallam, S. (2006). Sex differences in approaches to studying for the GCSE among high achieving pupils. *Educational Studies*, 32(1), 59-71. doi: 10.1080/03055690500415985
- Rosário, P., Lourenço, A., Paiva, M. O., Núñez, J. C., González-Pienda, J. A., & Valle, A. (2012). Autoeficacia y utilidad percibida como condiciones necesarias para un aprendizaje académico autorregulado. *Anales de Psicología*, 28(1), 37-44.
- Rosário, P., Mourão, R., Baldaque, M., Nunes, T., Núñez, J. C., González-Pienda, J. A., ... Valle, A. (2009). Tareas para casa, autorregulación del aprendizaje y rendimiento en matemáticas. *Revista de Psicodidáctica*, 14(2), 179-192.
- Rosário, P., Núñez, J., Valle, A., González-Pienda, J., & Lourenço, A. (2013). Grade level, study time, and grade retention and their effects on motivation, self-regulated learning strategies, and mathematics achievement: A structural equation model. *European Journal of Psychology of Education*. doi: 10.1007/s10212-012-0167-9
- Sallee, B., & Rigler, N. (2008). Doing our homework on homework: How does homework help? *English Journal*, 98(2), 45-51.
- Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 631-649). San Diego: Academic Press.
- Sharp, C., Keys, W., & Benefield, P. (2001). *Homework: A review of recent research*. Windsor, UK: NFER.
- Shumow, L., Schmidt, J. A., & Kackar, H. (2008). Adolescents' experience doing homework: Associations among context, quality of experience and outcomes. *The School Community Journal*, 18(2), 9-27.
- Sun, Sh., Pan, W., & Wang, L. L. (2010). A comprehensive review of effect size reporting and interpreting practices in academic journals in education and psychology. *Journal of Educational Psychology*, 102(4), 989-1004. doi: 10.1037/a0019507
- Trautwein, U., & Köller, O. (2003). The relationship between homework and achievement-still much of a mystery. *Educational Psychology Review*, 15, 116-145.
- Trautwein, U., Köller, O., Schmitz, B., & Baumert, J. (2002). Do homework assignments enhance achievement? A multilevel analysis in 7<sup>th</sup> grade mathematics. *Contemporary Educational Psychology*, 27(1), 26-50. doi: 10.1006/ceps.2001.1084
- Trautwein, U., & Lüdtke, O. (2009). Predicting homework motivation and homework effort in six school subjects: The role of person and family characteristics, classroom factors and school track. *Learning and Instruction*, 19(3), 243-258. doi: 10.1016/j.learninstruc.2008.05.001
- Trautwein, U., Lüdtke, O., Kastens, C., & Köller, O. (2006). Effort on homework in grades 5-9: Development, motivational antecedents, and the association with effort on classwork. *Child Development*, 77(4), 1094-1111. doi: 10.1111/j.1467-8624.2006.00921.x
- Trautwein, U., Lüdtke, O., Schnyder, I., & Niggli, A. (2006). Predicting homework effort: Support for a domain-specific, multilevel homework model. *Journal of Educational Psychology*, 98(2), 438-456. doi: 10.1037/0022-0663.98.2.438

- Trautwein, U., Schnyder, I., Niggli, A., Neumann, M., & Lüdtke, O. (2009). Chameleon effects in homework research: The homework-achievement association depends on the measures used and the level of analysis chosen. *Contemporary Educational Psychology, 34*(1), 77-88. doi: 10.1016/j.cedpsych.2008.09.001
- Valle, A., Núñez, J. C., Cabanach, R., Rodríguez, S., Rosário, P., & Inglés, C. (2013). Motivational profiles as a combination of academic goals in higher education. *Educational Psychology*. doi: 10.1080/01443410.2013.819072
- Valle, A., Pan, I., Núñez, J. C., Rosário, P., Rodríguez, S., & Regueiro, B. (in press). Deberes escolares y rendimiento académico en Educación Primaria. *Anales de Psicología*.
- Wagner, P., Schober, B., & Spiel, C. (2008). Time students spend working at home for school. *Learning and Instruction, 18*(4), 309-320. doi: 10.1016/j.learninstruc.2007.03.002
- Walberg, H. J. (1991). Does homework help? *The School Community Journal, 1*(1), 13-15.
- Walker, J. M. T., Hoover-Dempsey, K.V., Whetsel, D. R., & Green, C. L. (2004). *Parental involvement in homework: A review of current research and its implications for teacher, afterschool program staff, and parent leaders*. Cambridge, MA: Harvard Family Research Project.
- Warton, P. M. (1997). Learning about responsibility: Lessons from homework. *British Journal of Educational Psychology, 67*, 213-221. doi: 10.1111/j.2044-8279.1997.tb01238.x
- Warton, P. M. (2001). The forgotten voices in homework: Views of students. *Educational Psychology, 36*(3), 155-165. doi: 10.1207/S15326985EP3603\_2
- Wigfield, A., Eccles, J. S., Yoon, K. S., Harold, R. D., Arbretton, A. J. A., Freedman-Doan, C., & Blumenfeld, P. C. (1997). Change in children's competence beliefs and subjective task values across the elementary school years: A 3-year study. *Journal of Educational Psychology, 89*(3), 451-469. doi: 10.1037/0022-0663.89.3.451
- Xu, J. (2004). Family help and homework management in urban and rural secondary schools. *Teachers College Record, 106*(9), 1786-1803. doi: 10.1111/j.1467-9620.2004.00405.x
- Xu, J. (2006). Gender and homework management reported by high school students. *Educational Psychology, 26*(1), 73-91.
- Xu, J. (2007). Middle-School homework management: More than just gender and family involvement. *Educational Psychology, 27*(2), 173-189. doi: 10.1080/01443410601066669
- Xu, J. (2010). Predicting homework time management at the secondary school level: A multilevel analysis. *Learning and Individual Differences, 20*(1), 34-39. doi: 10.1016/j.lindif.2009.11.001
- Xu, J., & Corno, L. (1998). Case studies of families doing third-grade homework. *The Teachers College Record, 100*(2), 402-436. doi: 10.1111/j.1467-9620.2004.00405.x
- Xu, J., & Corno, L. (2006). Sex, family help, and homework management reported by rural middle school students. *Journal of Research in Rural Education, 21*(2), 1-13.
- Zimmerman, B. J. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. In B. J. Zimmerman &

- D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 1-37). Mahwah, NJ: Erlbaum.
- Zimmerman, B. J., & Kitsantas, A. (2005). Students' perceived responsibility and completion of homework: The role of self-regulatory beliefs and processes. *Contemporary Educational Psychology, 30*(4), 397-417. doi: 10.1016/j.cedpsych.2005.05.003

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2017	19,707	2.089	1.776	2.749	0.295	2,092	3.4	9.7	0.07...	0.895	92.26	8.85...	71.481
2016	14,320	2.321	1.966	2.820	0.326	1,812	2.9	9.4	0.06...	0.995	92.66	7.72...	74.806
2015	9,540	2.463	1.969	2.885	0.423	1,729	2.6	9.3	0.04...	1.031	90.51	5.39...	77.907
2014	6,105	2.560	2.058	3.039	0.518	1,244	2.4	9.1	0.02...	1.047	88.02	3.31...	82.558
2013	3,230	2.843	2.225	2.869	0.524	815	2.1	8.6	0.01...	0.948	87.12	1.66...	84.884

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2014	23/129	Q1	82.558
2013	20/129	Q1	84.884



# Homework Involvement and Academic Achievement of Native and Immigrant Students

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Homework is a debated issue in society and its relationship with academic achievement has been deeply studied in the last years. Nowadays, schools are multicultural stages in which students from different cultures and ethnicities work together. In this sense, the present study aims to compare homework involvement and academic achievement in a sample of native and immigrant students, as well as to study immigrant students' relationship between homework involvement and Math achievement. The sample included 1328 students, 10–16 years old from Spanish families (85.6%) or immigrant students or students of immigrant origin (14.4%) from South America, Europe, Africa, and Asia. The study was developed considering three informants: elementary and secondary students, their parents and their teachers. Results showed higher involvement in homework in native students than in immigrant. Between immigrants students, those who are more involved in homework have better academic achievement in Math at secondary grades. There weren't found gender differences on homework involvement, but age differences were reported. Immigrant students are less involved in homework at secondary grades than students in elementary grades. The study highlights the relevance of homework involvement in academic achievement in immigrant students.

**Keywords:** immigrants, homework, homework involvement, quality of homework, academic achievement

## INTRODUCTION

Schools are complex places in which students of many races, ethnicities, cultures, religions, and economic conditions work together. They and their families bring many characteristics to school that provide opportunities to enrich student learning every day. The diversity of students is increasing in schools in many countries. In the last decade, immigration has been an important and socially debated issue. Particularly, in the US, more than 40% of all public school students are from diverse cultures, doubling the percentage of 1980s (Hutchins et al., 2012). One in five children in the US has at least one foreign-born parent (Hernandez et al., 2007). In Spain, in the last 20 years, the number of immigrants has increased considerably. In 1998, there were 500,000 people, 1.6% of the total Spanish population. That number has increased to 4.5 million people in 2007, 10% of the total Spanish population (Encuesta Nacional de Inmigrantes, 2007).

At school, as in society, immigrant students live and work side by side with native-born students. Immigration can be a stressful event which brings changes to the family system (Suárez-Orozco and Suárez-Orozco, 2001). Some immigrant families are well educated and their children achieve high levels in school, whereas other families are unfamiliar with schools and educational requirements, and often have children in under-resourced schools. These students tend to experience greater stress in school, and are less likely to graduate from high school or attend and complete college (Cooper et al., 2006).

Some studies have reported that, on average, students from immigrant families lag behind other students in reading, writing, math, science, and other subjects (Bang et al., 2009). However, other researchers have report that there is more diversity in achievement within groups than between groups of immigrant students (De Jong et al., 2000; Cooper and Valentine, 2001). Variations in student achievement may depend on pre-immigration factors, such as family income and parents' education levels (Núñez et al., 2014).

Despite racial or ethnic background, families differ in their beliefs, values, needs, and resources (Trautwein, 2007; Tam, 2009). It is well known that socio-economic status is one of the most important demographic factors related to children's development and learning. Parents who are employed and in higher-paying jobs are more capable of providing the educational resources and support children needs (Bang et al., 2009).

Other variables also affect student success in school. Students' attitude toward schoolwork and homework are associated with achievement. Homework patterns have been extensively studied in students in general, but few studies have examined immigrant students' investments in homework. Their home environments should be taken into account to understand immigrant students' homework behaviors and their parents' involvement in students' homework. This study addresses this gap in knowledge about the homework process with analyses of selected variables regarding homework in native and immigrant boys and girls.

## Homework and Academic Achievement

Homework assignments have multiple purposes. Some are instructional but others have behavioral goals. Teachers may assign some homework to enable students to practice specific skills, but they also may aim to help students develop their responsibility, perseverance, and time management (Epstein and Van Voorhis, 2001). Teachers also assign homework to assess the extent to which students have mastered specific skills in order to plan new lessons that will meet students learning levels (Bang et al., 2009; Rodríguez et al., 2014).

Over past few decades, many studies of homework processes have been conducted, mainly to clarify the importance of homework for students' academic achievement (Valle et al., 2015b).

Prior studies have raised several issues that need more attention in new research. We need to better understand such questions as: *What is the relationship between homework and students' academic achievement? Is the quantity of homework completed a good predictor of academic achievement? Are time spent on homework and homework time management important*

*indicators of student learning?* Different studies have reported a variety of results to these questions.

About homework completion, the amount of homework that students complete seems to be positively related to academic achievement (Cooper et al., 1998; Cooper et al., 2001; Cooper et al., 2006; Núñez et al., 2013, 2015). However, there are significant discrepancies about the relationship between time spent on homework and academic achievement. Some studies report positive connections, suggesting the more time spent on homework, the higher students' academic achievement (Cooper, 1989; Walberg, 1991; Cooper and Valentine, 2001; Cooper et al., 2006). Others report that relationship is weak or negative (De Jong et al., 2000; Trautwein et al., 2002, 2006, 2009; Trautwein, 2007; Tam, 2009; Fernández-Alonso et al., 2014). Xu (2007) explained a null relationship by noting that when students spend more time on homework they may not be managing homework efficiently. In fact, students' homework time management also determines the quantity of homework students do from those assigned by their teachers even better that time spent on homework (Regueiro et al., 2014). Recent studies reinforce that finding. Núñez et al. (2013) reported that homework time management was a crucial variable for determining students' academic achievement—more important than the quantity of homework completed or the quantity of time spent doing homework—. Another study showed that the quantity of homework done was associated with better academic results (Núñez et al., 2015).

Students' gender and grade level also have been related to homework involvement as important variables. Most studies confirm that girls are more committed to doing homework than boys (Younger and Warrington, 1996; Xu, 2006, 2007; Núñez et al., 2013). Many studies also confirm that homework is more strongly related to academic achievement in high school than in middle and elementary school (Cooper and Valentine, 2001), but other authors maintain that there are interesting reasons for this relationship. For example, some older students are less engaged (Núñez et al., 2013), persisted less and enjoyed less doing homework than their younger colleagues (Hong et al., 2009). Epstein (2011) contends that the connection of homework and achievement at the high school level is exaggerated because some high school students stop doing homework and because teachers give advanced students more homework to complete.

Most studies of homework have been conducted with samples of native students, who complete their work without having to face the difficulties of attending school in a new country in a new educational system, and without having to learn a new language. Presently, in many countries, native and new immigrant students attend school together. The changing populations of students in schools raise important questions about native and immigrant students' homework behaviors and results of homework for learning outcomes.

## Homework and Immigrant Students

It is common, due to challenges related to relocation in a new country that immigrant students lag behind native students in academic achievement. Homework, which can be completed slowly, thoughtfully, and with assistance, can be one way to

close the achievement gap between these groups of students. Homework may provide opportunities for immigrant students to practice and review lessons. Or, homework may disadvantage immigrant students and widen the achievement gap if, due to language difficulties, they are unable to comprehend and complete their assignments (Bang et al., 2009).

Studies of immigrant students' homework experiences are scarce. One of the few studies on the topic reported that individual characteristics such as student interest, engagement, and learning style were the most important factors associated with immigrant students' homework completion (Bang, 2011b). This study also found that some measures of family and school environments also contributed to immigrant students' homework behaviors. For example, students who paid attention in class and followed school rules, recognized that homework would help them perform better in school (Bang et al., 2009), just as native students do (Trautwein, 2007). A study of 9th–12th grade newcomer immigrant students in the US showed that students who had stronger interest in class and more structured homework environments were more likely to complete their homework than were their less engaged peers (Bang, 2011a). The same study found that students who had received instruction to fully understand their course materials and who attended homework coaching sessions were more likely to do their homework.

These findings echo that of previous research indicating that students who carried out behaviors conducive to academic success were more likely to complete homework than their peers who were less engaged in school (Goslin, 2003; National Research Council, 2004).

Given the links between homework, report card grades, and achievement, it is important to understand the factors that facilitate and impede students' homework completion in order to support immigrant students' academic endeavors (Bang et al., 2011).

A study of a sample of recently arrived immigrants to the US, aged 9–14, highlighted the important role of completing homework on grades and achievement (Bang et al., 2009). The authors reported that completing homework was even more important for predicting grades than students' English language proficiency or teachers' ratings of their understanding and behavior.

Students' gender also may be a significant predictor of homework completion by immigrant students (Xu, 2006; Bang et al., 2009). Bang (2011b) showed that in general girls were more likely than boys to complete homework, in line with findings in native students' samples (Xu, 2006; Núñez et al., 2013; Suárez-Orozco and Qin-Hilliard, 2015).

## The Current Study

The few extant studies on homework patterns of immigrant students (Mau and Lynn, 1999; Bang et al., 2009; Bang, 2011a) identify an important agenda but only roughly explored connections of students' homework engagement and academic achievement. These studies did not analyze details of the homework process such as the amount of homework completed, the time spent on homework, and the quality of the homework and its relationship with academic achievement.

The present research has three main objectives: (i) to explore, compare, and contrast homework behaviors of immigrant and native-born students in Spain; (ii) to examine relationships of homework engagement (i.e., amount of homework completed, time spent, time management, and quality of homework completed) and benefit from doing homework with immigrant students' math achievement; (iii) to analyze whether the homework engagement variables and academic achievement are associated with the gender and grade level of immigrant students, as was reported in studies of native student populations.

## MATERIALS AND METHODS

### Participants

The study involved 1328 students, 10–16 years old ( $M = 13.11$ ,  $SD = 1.75$ ) attending 29 public schools in Spain. The students are from Spanish families ( $n = 1137$ , 85.6%) or are immigrant students or students of immigrant origin ( $n = 192$ , 14.4%). The immigrant students came from South America ( $n = 127$ ), Europe ( $n = 54$ ), Africa ( $n = 9$ ), and Asia ( $n = 2$ ).

The sample includes 617 students in the Elementary Grades (i.e., 5th and 6th grade, 487 native, and 130 immigrant students), and 712 students in the Secondary Grades (Compulsory Secondary Education, i.e., grades 1–4, 650 native, 62 immigrant students). The parents of these students also participated as informants as well as one teacher of each class of students.

This study was carried out in accordance with the recommendations of The Declaration of Helsinki. All the subjects gave written informed consent.

### Measures

*Time spent on homework, homework time management, amount of homework completed, quality of homework done, and benefit of doing homework.*

To measure these five variables, we used the Homework Survey (e.g., Rosário et al., 2009; Núñez et al., 2013, 2015; Valle et al., 2015a), which is composed of three parts, using three sources of information for some of its variables.

One survey part is answered by students, other survey part by parents and the third one by teachers.

The studied variables had different respondents: students, teachers, and parents were asked about *students' amount of homework done*; students and parents were asked about *students' time spent doing homework* and *students' homework time management*; and teachers were asked about *students' quality of homework done* and *students' benefit of doing homework*.

*Amount of homework completed* by students (from the total homework assigned by teachers) was collected considering the three agents and was obtained through responses to an item about the amount of homework usually done, using a 5-point Likert-type scale (1 = none, 2 = some, 3 = one half, 4 = almost all, and 5 = all).

*Time spent on homework* was measured through information provided by parents and students, responding to the item with the general formulation, "How much time do you/the student usually spend on homework?" Response options were: 1 = less



than 30 min, 2 = 30 min to 1 h, 3 = 1 h to an hour and a half, 4 = 1 h and a half to 2 h, and 5 = more than 2 h.

*Homework time management* was measured through information provided by parents and students, responding to the item with the general formulation, “How do you/the student manage the time normally spent doing homework?” Response options were: 1 = I waste it completely (I am constantly distracted), 2 = I waste it more than I should, 3 = regular, 4 = I manage it pretty well, and 5 = I optimize it completely (I concentrate and until I finish, I don’t think about anything else). In case of parents’ item, the formulation was the opposite; the item refers to waste of time instead of good time management, “My child wastes time when doing homework”.

In addition to these variables, two variables informed by the teacher were considered: *Quality of homework done* and *Benefit of doing homework for the students*. Both variables were responded by teachers. *Quality of homework done* was measured by the item “How does the student do his homework?” Response options were: 1 = Very good, 2 = Good, 3 = Fair, 4 = Poor, and 5 = Very poor.

*Benefit of doing homework* was measured by the item “Does the student take benefit from doing homework?” Response options were: 1 = Strongly disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5 = Strongly agree.

*Academic Achievement*. Assessment of academic achievement was obtained through students’ report card grades in Mathematics.

## Procedure

The data on the students’ survey were collected in one class period during regular school hours by external staff, after obtaining the consent of the school directors and the students’ teachers. Data on teachers’ survey were collected while students were answering their survey in class. Parents’ survey was sent to home and brought it back to school when done.

Prior to the administration of the surveys, the participants were informed of the importance of responding sincerely to the items. They were told that their reports were confidential and would be used only for research purposes.

## Data Analysis

Taking into account the goals of this study, the data were analyzed with Student’s *t*-test for independent samples to determine differences between native-born students and immigrant students, and to analyze gender differences and differences related to the educational stage. The existence or nonexistence of variance homogeneity was taken into account when interpreting the results. For this was taken as reference value “*p*” in the Levene test, which involves taking the existence of equal variances when  $p > 0.05$ , whereas when  $p < 0.05$  is considered that the variances are not equal. Based on this criterion, the value of “*t*” is also selected. We used Pearson correlational analysis to study the relation between homework-related variables and academic achievement in the sample of immigrant students.

## RESULTS

### Analysis of the Differences between Native and Immigrant Students in the Dependent Variables

**Table 1** shows the descriptive statistics on the homework measures for native-born and immigrant students in the full sample of students, parents, and teachers, and on the achievement measures at the elementary and secondary levels.

*Amount of homework done* (of the assigned homework). The data indicate that, although there were no significant differences between native and immigrant students in their own reports about homework completed,  $t(1316) = 0.864$ ,  $p > 0.05$ , both the parents and the teachers for the two groups of students reported statistically significant differences on homework completed by the children [parents:  $t(144) = 4.150$ ,  $p < 0.001$ ,  $d = 0.58$ , medium effect size; teachers:  $t(243) = 3.738$ ,  $p < 0.001$ ,  $d = 0.32$ , small effect size]. Parents and teachers reported that native-born students completed more homework than did immigrant students. The students’ reports were in the same direction, but the differences of native and immigrant students’ reports were not significant.

### Weekly Homework Time

Native and immigrant students report similar amounts of time spent on homework, but their parents’ reports show a different pattern. Parents of native students report that their children spend more time on homework [ $t(162) = 3.113$ ,  $p < 0.001$ , and  $d = 0.35$ , small effect size].

### Time Management (Use of Time Dedicated to Homework)

As seen in the data provided in **Table 1**, whereas the native students state that they concentrate more on their homework than the immigrants,  $t(1313) = 2.340$ ,  $p < 0.05$ , and  $d = 0.18$ , with a small effect size, the parents of the native students indicate that their children waste more time than that indicated by the parents of immigrant children,  $t(709) = 1.941$ ,  $p < 0.05$ , and  $d = 0.18$ , with a small effect size.

### Quality of Homework Done

The teachers indicate that the quality of the native students’ homework is better than that of the immigrant students,  $t(1282) = 3.369$ ,  $p < 0.001$ , and  $d = 0.26$ , with a small effect size.

### Benefit of Doing Homework

The teachers also think that homework benefits the native students more than the immigrants,  $t(250) = 2.992$ ,  $p < 0.01$ , and  $d = 0.25$ , with a small effect size.

### Academic Achievement (Students’ Grades in Mathematics)

Whereas at the elementary school level, there were no statistically significant differences in mathematical academic achievement between the two groups of students,  $t(178) = -1.174$ ,  $p > 0.05$ , the groups differed at the Secondary level. Native-born students



**TABLE 1 | Descriptive statistics on homework measures for native and immigrant students.**

	Group	N	M	SD
Student: <i>How much homework do you do?</i>	Native	1127	4.31	0.996
	Immigrant	191	4.25	0.887
Student: <i>Daily homework time Monday to Friday</i>	Native	1125	3.06	1.122
	Immigrant	191	2.97	1.147
Student: <i>When doing homework, I concentrate until I finish</i>	Native	1125	2.80	1.182
	Immigrant	190	2.59	1.103
Parents: <i>My child wastes time when doing homework</i>	Native	662	2.51	1.497
	Immigrant	130	2.23	1.626
Parents: <i>Daily homework time from Monday to Friday</i>	Native	661	3.04	1.247
	Immigrant	130	2.58	1.589
Parents: <i>How much homework do you do?</i>	Native	664	4.59	0.992
	Immigrant	130	3.91	1.815
Primary Mathematics grade	Native	471	4.09	1.691
	Immigrant	129	4.32	2.050
Secondary Mathematics grade	Native	650	5.71	2.345
	Immigrant	61	4.67	2.014
Teachers: <i>Does he/she do his/her homework?</i>	Native	1094	3.94	1.156
	Immigrant	191	3.56	1.328
Teachers: <i>Does homework benefit him/her?</i>	Native	1092	3.95	1.171
	Immigrant	191	3.65	1.263
Teachers: <i>How is his/her homework?</i>	Native	1093	3.80	1.168
	Immigrant	191	3.49	1.252

had significantly higher math scores than immigrant students,  $t(709) = 3.345$ ,  $p < 0.001$ , and  $d = 0.26$ , with a small effect size.

## Relation between Homework Engagement and Mathematical Achievement in Immigrant Students

Table 2 shows the correlations among the variables involved in the study for immigrant students.

The results obtained indicated that the amount of homework done positively correlated with academic achievement in mathematics, according to the students, at secondary level ( $r = 0.355$ ,  $p < 0.01$ , and  $d = 0.34$ , small effect size) and the teachers, at elementary and secondary levels ( $r = 0.267$ ,  $p < 0.05$ , and  $d = 0.73$ , medium effect size). The relation between homework quality and mathematical achievement was also statistically significant, albeit at a lower level ( $r = 0.248$ ,  $p = 0.054$ , and  $d = 0.81$ , large effect size). Neither time dedicated to doing homework nor time management had a significant association with immigrant students' mathematical achievement.

In general, there were no significant connections of gender and any homework-related variables or math achievement.

In terms of parents' reports, they are more consistent with teachers' reports than with their own students' reports. Parents' and students' reports are only consistent regarding time spent on homework ( $r = 0.300$  and  $p < 0.01$ ). But, parents' *homework time* report and *amount of homework done* report are strongly associated with all teachers' reports (*amount of homework done*, *quality of homework*, and *benefit from homework*).

## Gender and Educational Stage Differences in Immigrant Students' Homework Engagement

Results obtained after performing the corresponding analysis of differences (through Student's  $t$ ) showed that the gender of the immigrant students was not significantly associated with any of the dependent variables.

Table 3 presents data on immigrant students' homework behaviors by educational level: elementary grades (5th and 6th) and secondary grades (1st to 4th grade of Compulsory Secondary Education).

Students and teachers informed of a greater amount of homework done in Primary compared to Secondary Education [students:  $t(189) = 4.429$ ,  $p < 0.001$ , and  $d = 1$ , large effect size; teachers:  $t(189) = 2.202$ ,  $p < 0.05$ , and  $d = 0.34$ , small effect size], although the parents indicated that the differences favor Secondary Education,  $t(31) = -2.031$ ,  $p = 0.051$ , and  $d = 0.33$ , with a small effect size. Likewise, students and parents informed of statistically significant differences in homework time optimization [students:  $t(188) = -5.148$ ,  $p < 0.001$ , and  $d = 0.81$ , large effect size; parents:  $t(128) = -2.441$ ,  $p < 0.05$ , and  $d = 0.69$ , medium effect size] but in the opposite direction: whereas secondary students believed they make better use of their time, their parents thought they waste time the most. Lastly, the teachers thought that, although there were no statistically significant differences with regard to quality by educational stage, doing homework benefits Primary students more,  $t(189) = 2.425$ ,  $p < 0.05$ , and  $d = 0.38$ , with a small effect size.

**TABLE 2 | Matrix Zero-order correlations of the variables of the study from immigrant students.**

	Gender	Stage/ Level	Student V1	Student V2	Student V3	Parents V1	Parents V2	Parents V3	Teacher V1	Teacher V2	Teacher V3	AMP	AMS
Gender	1												
Stage	0.025	1											
Student_V1	-0.013	-0.417**	1										
Student_V2	0.121	-0.093	0.158*	1									
Student_V3	0.019	0.292**	-0.244**	-0.016	1								
Parents_V1	-0.072	0.139	0.025	0.024	0.06	1							
Parents_V2	0.003	0.082	0.102	0.300**	-0.054	0.524**	1						
Parents_V3	-0.029	0.109	0.145	0.031	-0.087	0.533**	0.704**	1					
Teachers_V1	0.031	-0.190**	0.323**	0.112	-0.115	0.021	0.357**	0.457**	1				
Teachers_V2	0.062	-0.176*	0.299**	0.094	-0.101	0.097	0.343**	0.437**	0.743**	1			
Teachers_V3	0.014	-0.070	0.258**	0.136	-0.127	0.083	0.320**	0.413**	0.831**	0.787**	1		
AMP	0.009	-0.017	0.167	0.054	-0.162	-0.258**	-0.133	-0.139	0.323**	0.195*	0.371**	1	
AMS	-0.024	-0.180	0.355**	0.100	0.041	0.224	0.243	0.442	0.267*	0.21	0.248	a	1

The sizes of the correlations are not directly comparable because the sample sizes are different in many cases. Gender (1 = Male, 2 = Female); Stage (1 = Elementary, 2 = Secondary); Student\_V1 (amount of homework done, informed by students); Student\_V2 (homework time, informed by students); Student\_V3 (time management, informed by students); Parents\_V1 (waste of time, informed by parents); Parents\_V2 (homework time, informed by parents); Parents\_V3 (amount of homework done, informed by parents); Teachers\_V1 (amount of homework done, informed by teachers); Teachers\_V2 (benefit from homework, informed by teachers); Teachers\_V3 (quality of homework done, informed by teachers); AMP (academic achievement in mathematics in Elementary Education); AMS (academic achievement in mathematics in Secondary Education).  $N = 192$ . \*\* $p < 0.01$  and \* $p < 0.05$ .

<sup>a</sup>Correlation between AMP and AMS is not studied because there are two different samples (secondary and elementary students).

**TABLE 3 | Descriptive statistics by school level (elementary/secondary) for immigrant students.**

	School Level	N	M	SD
Student: Amount of homework done	Elementary	129	4.43	0.748
	Secondary	62	3.85	1.022
Student: Weekly homework time	Elementary	129	3.01	1.169
	Secondary	62	2.89	1.103
Student: Time management	Primary	128	2.32	1.057
	Secondary	62	3.15	0.989
Parents: Waste of time	Primary	116	2.11	1.592
	Secondary	14	3.21	1.626
Parents: Weekly homework time	Primary	116	2.53	1.618
	Secondary	14	3.00	1.301
Parents: Amount of homework done	Primary	116	3.84	1.891
	Secondary	14	4.43	0.852
Teachers: Amount of homework done	Primary	129	3.71	1.325
	Secondary	62	3.26	1.292
Teachers: Benefit obtained	Primary	129	3.81	1.269
	Secondary	62	3.34	1.200
Teachers: Quality of homework	Primary	129	3.53	1.293
	Secondary	62	3.42	1.167

## DISCUSSION

The main goal of this research was to shed some light on the influence of doing homework on the academic achievement of immigrant students in Spain.

The study aimed to extend general patterns of the value of homework reported in prior investigations (Mau and Lynn, 1999; Bang et al., 2009; Bang, 2011a). The study also benefited from

unique data on homework behaviors from native and immigrant students in Spanish elementary and secondary grades.

General findings highlight that:

1. When comparing native and immigrant student, the full sample in this study indicated that on all measure of homework (time, time management, and homework done) and on Math achievement, student, parent, and teacher mean scores were slightly higher for native students than for immigrant students.
2. When focusing only on immigrant students, all homework measures from all reporters (immigrant students, parents, and their teachers) were positive correlated with student achievement at the secondary level. In particular, there were significant correlations of math achievement with student and teacher reports about the immigrant students' homework completion.
3. These results suggest that among immigrant students, those who take the role of student seriously and do their homework have higher math achievement than immigrant students who do not complete their assignments. Independent reports from students and from teachers indicate that doing homework benefits immigrant students, much as prior studies report doing homework benefits other students (mainly native students in prior studies).
4. There were no significant patterns of gender differences among immigrant students on these measures.
5. Statistically significant differences were found as a function of grade in immigrant students (Table 3). As they progress through the grades, older immigrant students report lower mean scores for the amount of homework done, time on homework, and time management while doing homework. Teachers report similar patterns that immigrant students

at the secondary level do less homework, do lower quality work, and benefit less from homework than do students at the elementary level.

This study contributed new ideas for studies of the homework patterns of immigrant students of Spain or other countries. It was possible, then to contrast patterns of homework behavior for native-born and immigrant students, and then, within the immigrant student sample, the implications of doing homework on student achievement.

Summing up, this study strongly suggests that doing homework is beneficial for immigrant students, although, presently, they involve less in homework and lag on achievement compared to native-born students.

The data were particularly interesting because they included reports from students, parents, and teachers about immigrant students' homework behaviors, and included other useful data on students' Math achievement. Parents' reports differed from student and teacher reports about students at the elementary and secondary levels. Parents reported that they observed that their secondary students spent more time, and completed more homework than students in the elementary grades, but secondary students waste more the time spent on homework than elementary students. Students and teachers disagree and they consider elementary students do more homework and spend more time than secondary students but their time management is worse than in higher levels. Other studies considered that secondary students were less engaged and enjoyed less doing homework (Hong et al., 2009; Núñez et al., 2013) where the informants were the students.

Results indicated that there were no significant differences of immigrant male and female students on the detailed homework variables. These results contrast with prior studies of both native (Núñez et al., 2015) and immigrant populations (Trautwein, 2007; Bang, 2011a), that typically indicate that female students do more and better on homework. Future studies with larger populations of immigrant groups may reveal clearer patterns of homework behavior of male and female students. There may be some clues about this, as noted by Bang et al. (2011). For example, immigrant families may have fewer financial resources, and may demand more help from their children with housework, such as caring for younger siblings. This may leave students with less time for doing homework, or reduce girls' advantages in doing more school work and make their patterns of homework similar to boys.

## REFERENCES

- Bang, H. J. (2011a). Newcomer immigrant students' perspectives on what affects their homework experiences. *J. Educ. Res.* 104, 408–419. doi: 10.1037/a0018201
- Bang, H. J. (2011b). What makes it easy or hard for you to do your homework? An account of newcomer immigrant youths' afterschool academic lives. *Curr. Issues Educ.* 14, 1–26.
- Bang, H. J., Suárez-Orozco, C., and O'Connor, E. (2011). Immigrant students' homework: ecological perspective on facilitators and impediments to task completion. *Am. J. Educ.* 118, 25–55. doi: 10.1086/662008

## Limitations and Future Research

There still were some inconsistent results of this study that will need attention in future research. In particular, larger samples of immigrant students at specific grade levels are needed. Information also is needed on how long the students have been in a country so that researchers can account for those who are becoming assimilated compared to those whose families have been settled for several generations.

Several variables have been pointed out that can affect student engagement in school and on homework. These include: mastery of the language (Bang et al., 2011); the culture of origin (Keith et al., 1998; Mau and Lynn, 1999); the help offered by the parents (Sibley and Dearing, 2014; Núñez et al., 2015; Madjar et al., 2016); the feedback given by the teacher (Núñez et al., 2014; Rosário et al., 2015).

Also, the type of homework assigned to the students should also be examined, because not every kind of homework is equally effective for improving subject specific academic achievement.

In this study, the data were exploratory due to the size and composition of the immigrant student sample. Future studies with larger and more coherent samples of students from the same continent or country of origin will be able to establish a predictive model to isolate the independent effects and mediating effects of particular background, grade level, and homework variables on student achievement.

## AUTHOR CONTRIBUTIONS

All authors have contributed to this study, collecting the sample, doing the data analysis and writing and discussing the results.

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- Bang, H. J., Suárez-Orozco, C., Pakes, J., and O'Connor, E. (2009). The importance of homework in determining immigrant students' grades in schools in the USA context. *J. Educ. Res.* 51, 1–25. doi: 10.1080/00131880802704624
- Cooper, H. (1989). *Homework*. New York, NY: Longman.
- Cooper, H., Jackson, K., Nye, B., and Lindsay, J. J. (2001). A model of homework on the performance evaluations of elementary school students. *J. Exp. Educ.* 69:181–199. doi: 10.1080/00220970109600655
- Cooper, H., Lindsay, J. J., Nye, B., and Greathouse, S. (1998). Relationships between attitudes about homework, amount of homework assigned and completed, and student achievement. *J. Educ. Psychol.* 90, 70–83. doi: 10.1037/0022-0663.90.1.70

- Cooper, H., Robinson, J., and Patall, E. (2006). Does homework improve academic achievement? A synthesis of research, 1987–2003. *Rev. Educ. Res.* 76, 1–62. doi: 10.3102/00346543076001001
- Cooper, H., and Valentine, J. C. (2001). Using research to answer practical questions about homework. *Educ. Psychol.* 36, 143–153. doi: 10.1207/S15326985EP3603\_1
- De Jong, R., Westerhof, K. J., and Creemers, B. P. M. (2000). Homework and student math achievement in junior high schools. *Educ. Res. Eval.* 6, 130–157. doi: 10.1076/1380-3611(200006)6:2;1-E;F130
- Encuesta Nacional de Inmigrantes (2007). *Encuesta Nacional de Inmigrantes 2007*. España: Instituto Nacional de Estadística (INE).
- Epstein, J. L. (2011). “Homework practices, achievements, and behaviors of elementary school students,” in *School, Family, and Community Partnerships: Preparing Educators and Improving Schools*, ed. J. L. Epstein (Boulder, CO: Westview Press).
- Epstein, J. L., and Van Voorhis, F. L. (2001). More than minutes: teachers’ roles in designing homework. *Educ. Psychol.* 36, 181–193. doi: 10.1207/S15326985EP3603\_4
- Fernández-Alonso, R., Suárez-Álvarez, J., and Muñiz, J. (2014). Homework and academic performance in mathematics: a multilevel approach with primary school student. *Revista Psicol. Educ.* 9, 15–29.
- Goslin, D. A. (2003). *Engaging Minds: Motivation and Learning in America’s Schools*. Lanham, MD: Scarecrow Press.
- Hernandez, D. J., Denton, N. A., and Macartney, S. E. (2007). *Children in Immigrant Families—the U.S. and 50 States: National Origins, Language, and Early Education*. Albany, NY: Child Trends Center for Social and Demographic Analysis at SUNY.
- Hong, E., Peng, Y., and Rowell, L. L. (2009). Homework self-regulation: grade, gender, and achievement-level differences. *Learn. Individ. Differ.* 19, 269–276. doi: 10.1016/j.lindif.2008.11.009
- Hutchins, D. J., Greenfield, M. D., Epstein, J. L., Sanders, M. G., and Galindo, C. L. (2012). *Multicultural Partnerships: Involve All Families*. New York, NY: Library of Congress.
- Keith, T. Z., Keith, P. B., Quirk, K. J., Sperduto, J., Santillo, S., and Killings, S. (1998). Longitudinal effects on parent involvement on high school grades: similarities and differences across gender and ethnic groups. *J. School Psychol.* 36, 335–363. doi: 10.1016/S0022-4405(98)00008-9
- Madjar, N., Shklar, N., and Moshe, L. (2016). The role of parental attitudes in children’s motivation toward homework assignments. *Psychol. Sch.* 53, 173–188. doi: 10.1002/pits.21890
- Mau, W., and Lynn, R. (1999). Racial and ethnic differences in motivation for educational achievement in the United States. *Pers. Individ. Dif.* 27, 1091–1096. doi: 10.1016/S0191-8869(99)00051-3
- National Research Council (2004). *Engaging Schools: Fostering High School Students’ Motivation to Learn*. Washington, DC: National Academies Press.
- Núñez, J. C., Suárez, N., Cerezo, R., González-Piñeda, J. A., Rosário, P., Mourao, R., et al. (2013). Homework and academic achievement across Spanish Compulsory Education. *Educ. Psychol.* 35, 726–746. doi: 10.1080/01443410.2013.817537
- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Cerezo, R., and Valle, A. (2014). Teachers’ feedback on homework, homework-related behaviors and academic achievement. *J. Educ. Res.* doi: 10.1080/00220671.2013.878298
- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Valle, A., and Epstein, J. L. (2015). Relationships between parental involvement in homework, student homework behaviors, and academic achievement: differences among elementary, junior high, and high school students. *Metacogn. Learn.* 10, 375–406. doi: 10.1007/s11409-015-9135-5
- Regueiro, B., Suárez, N., Rodríguez, S., and Piñeiro, I. (2014). Predictor variables of homework involvement on compulsory secondary education students. *Revista Psicol. Educ.* 9, 45–55.
- Rodríguez, S., Regueiro, B., Blas, R., Valle, A., Piñeiro, I., and Cerezo, R. (2014). Teacher self-efficacy and its relationship with students’ affective and motivational variables in higher education. *Eur. J. Educ. Psychol.* 7, 107–120.
- Rosário, P., Mourão, R., Baldaque, M., Nunes, T., Núñez, J. C., González-Piñeda, J. A., et al. (2009). Homework, self-regulation of learning and math performance. *Revista Psicodidáctica* 14, 179–192.
- Rosário, P., Núñez, J. C., Vallejo, G., Cunha, J., Nunes, T., Suárez, N., et al. (2015). The effects of teachers’ homework follow-up practices on students’ EFL performance: a randomized-group design. *Front. Psychol.* 6:1528. doi: 10.3389/fpsyg.2015.01528
- Sibley, E., and Dearing, E. (2014). Family educational involvement and child achievement in early elementary school for American born and immigrant families. *Psychol. Sch.* 51, 814–831. doi: 10.1002/pits.21784
- Suárez-Orozco, C., and Suárez-Orozco, M. M. (2001). *Children of Immigration*. Cambridge, MA: Harvard University Press.
- Suárez-Orozco, M. M., and Qin-Hilliard, D. B. (2015). Globalization: culture and education in the New Millennium. *J. Sociol. Soc. Welf.* 32, 159–162.
- Tam, V. C. (2009). Homework involvement among Hong Kong primary school students. *Asian Pac. J. Educ.* 29, 213–227. doi: 10.1080/02188790902859004
- Trautwein, U. (2007). The homework-achievement relation reconsidered: differentiating homework time, homework frequency, and homework effort. *Learn. Instr.* 17, 372–388. doi: 10.1016/j.learninstruc.2007.02.009
- Trautwein, U., Köller, O., Schmitz, B., and Baumert, J. (2002). Do homework assignments enhance achievement? A multilevel analysis in 7th grade mathematics. *Contemp. Educ. Psychol.* 27, 26–50. doi: 10.1006/ceps.2001.1084
- Trautwein, U., Lüdtke, O., Schnyder, I., and Niggli, A. (2006). Predicting homework effort: support for a domain-specific, multilevel homework model. *J. Educ. Psychol.* 98, 438–456. doi: 10.1037/0022-0663.98.2.438
- Trautwein, U., Schnyder, I., Niggli, A., Neumann, M., and Lüdtke, O. (2009). Chameleon effects in homework research: the homework-achievement association depends on the measures used and the level of analysis chosen. *Contemp. Educ. Psychol.* 34, 77–88. doi: 10.1016/j.cedpsych.2008.09.001
- Valle, A., Pan, I., Núñez, J. C., Rosário, P., Rodríguez, S., and Regueiro, B. (2015a). Deberes escolares y rendimiento académico en Educación. *Anales Psicol.* 31, 562–569. doi: 10.6018/analesps.31.2.171131
- Valle, A., Regueiro, B., Estévez, I., Piñeiro, I., Rodríguez, S., and Freire, C. (2015b). Implicación y motivación hacia los deberes escolares en los estudiantes de Primaria según el rendimiento académico y el curso. *Eur. J. Investig. Health Psychol. Educ.* 5, 345–355.
- Walberg, H. J. (1991). Does homework help? *Sch. Community J.* 1, 13–15.
- Xu, J. (2006). Gender and homework management reported by high school students. *Educ. Psychol.* 26, 73–91. doi: 10.1080/01443410500341023
- Xu, J. (2007). Middle-school homework management: more than just gender and family involvement. *Educ. Psychol.* 27, 173–189. doi: 10.1080/01443410601066669
- Younger, M., and Warrington, M. (1996). Differential achievement of girls and boys at GCSE: some observations from the perspective of one school. *Br. J. Sociol. Educ.* 17, 299–313. doi: 10.1080/0142569960170304

**Conflict of Interest Statement:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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2017	244	0.547	0.396	0.561	0.462	26	8.1	6.1	0.00...	0.044	96.15	0.00...	10.294
2016	203	0.429	0.429	0.507	0.040	25	8.5	>10.0	0.00...	0.064	100.00	0.01...	11.277
2015	125	0.379	0.275	0.372	0.036	28	7.3	>10.0	0.00...	0.035	100.00	0.00...	11.905
2014	65	0.190	0.068	0.207	0.036	28	Not ...	>10.0	0.00...	0.029	100.00	0.00...	5.134
2013	71	0.093	0.055	0.231	0	30	Not ...	>10.0	0.00...	0.056	100.00	0.01...	2.968
2012	95	0.353	0.176	0.349	0.071	28	Not ...	>10.0	0.00...	0.054	100.00	Not ...	21.233
2011	93	0.333	0.156	0.320	0	26	Not ...	9.2	0.00...	0.037	100.00	Not ...	19.175
2010	79	0.255	0.137	0.355	0.040	25	Not ...	9.0	0.00...	0.027	100.00	Not ...	18.750
2009	71	0.245	0.102	Not ...	0	26	Not ...	>10.0	0.00...	Not ...	100.00	Not ...	16.906
2008	78	0.370	0.065	Not ...	0.120	25	Not ...	9.9	0.00...	Not ...	100.00	Not ...	20.796
2007	18	0.109	0	Not ...	0	16	Not ...	>10.0	0.00...	Not ...	100.00	Not ...	4.286

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2017	214/238	Q4	10.294
2016	209/235	Q4	11.277
2015	204/231	Q4	11.905
2014	213/224	Q4	5.134
2013	213/219	Q4	2.968
2012	173/219	Q4	21.233
2011	167/206	Q4	19.175
2010	150/184	Q4	18.750
2009	116/139	Q4	16.906
2008	90/113	Q4	20.796
2007	101/105	Q4	4.286



# Percepción de la implicación parental en los deberes escolares y rendimiento académico en estudiantes de Secundaria

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## 1. Introducción

La relación entre el entorno familiar y el desarrollo académico de los estudiantes es un tema de gran interés en la investigación educativa, debido al potencial de la participación de los padres en los dos principales contextos en los cuales el aprendizaje se lleva a cabo (Álvarez *et al.*, 2015; Felix, Dornbrack y Scheckle, 2008). Todo parece indicar que los estudiantes obtienen numerosos beneficios académicos en un ambiente familiar que cuenta con la ayuda adecuada por parte de los padres (Xu y Corno, 1998). El entorno familiar y, más en concreto el apoyo y *feedback* proporcionado por los padres, constituye un factor de gran importancia para los estudiantes, y, por ello, la dosis adecuada de ayuda y tipo de implicación parental ideal constitu-

yen una de las preocupaciones actuales en el ámbito educativo (Regueiro *et al.*, 2015; Rosário *et al.*, 2005) ¿Cuál es, entonces, la «mejor» forma de implicación parental? [1].

## 2. Implicación familiar y rendimiento académico

A pesar de la abundante literatura que indica que la implicación familiar en la educación favorece el éxito escolar (ver p.e., Cooper, Jackson, Nye y Lidsay, 2001; Pomerantz y Eaton, 2001; Patall, Cooper y Robinson, 2008), no existe un consenso de que ésta sea la dimensión más asociada al rendimiento académico (Fantuzzo, McWayne, Perry y Childs, 2004). En un estudio realizado por Balli, Wedman y Demo (1997) se reveló que altos niveles de

participación de la familia no estaban asociados significativamente con un alto nivel de rendimiento académico, aunque el estudio sugirió que la participación familiar sí podría tener otros beneficios respecto del comportamiento general de los estudiantes. Asimismo, los resultados de una investigación llevada a cabo por Cooper, Valentine, Nye y Lindsay (1999) revelaron que la participación directa de los padres evidenció relaciones negativas con el rendimiento académico, mientras que, sin embargo, el apoyo de los padres a la autonomía de sus hijos mostró una relación positiva con el mismo. Asimismo, en varios estudios (ver p. e., Bailey, 2006; Xu y Corno, 2003) se llegó a conclusiones diferentes en función del tipo de intervención de los padres.

Numerosas investigaciones indican que son varias las dimensiones del ambiente familiar las que se encuentran implicadas en el rendimiento académico (Castejón y Pérez, 1998; Manz, Fantuzzo y Power, 2004; Sheldon, 2002; Suárez, Regueiro, Tuero, Cerezo y Rodríguez, 2014; Xu y Corno, 2003), destacando que dicha relación es fundamentalmente indirecta: las condiciones familiares inciden significativamente sobre las variables cognitivas y motivacionales que el alumno pone en juego en el proceso concreto de aprendizaje y a través de ellas sobre el rendimiento académico. Según Núñez (2009) la variable familiar que mayor peso tiene en relación con el rendimiento escolar es el clima familiar, en el cual se incluyen la actitud de los padres hacia los estudios de sus hijos, el clima afectivo familiar en el que se desarrolla el hijo y las expectativas que han depositado en él. Desde esta perspectiva, González-Pienda *et al.* (2002)

han obtenido evidencia de que ciertas dimensiones de la implicación de los padres respecto de la educación de sus hijos (tales como expectativas sobre el rendimiento, expectativas sobre la capacidad para alcanzar logros importantes, interés respecto de los trabajos escolares de los hijos, grado de satisfacción con el nivel alcanzado por los hijos...) inciden significativamente, y de forma indirecta, sobre el rendimiento académico de los estudiantes. Otra dimensión con incidencia sobre ello es, tal y como se verá a continuación, el nivel y tipo de ayuda que prestan los padres a sus hijos a la hora de realizar los deberes en el hogar.

En definitiva, el aprendizaje y rendimiento académico están condicionados por el ajuste de una serie de variables personales y contextuales cuyos efectos son difíciles de precisar. Parece no existir, por tanto, un consenso sobre cuáles son los efectos de la implicación parental en el trabajo de los hijos, dado que en unos estudios se obtiene que el efecto en el rendimiento es positivo y en otros se observa un efecto neutro, o incluso negativo. La razón podría estar en que, por un lado, más que la cantidad lo importante es la calidad (Knollmann y Wild, 2007; Regueiro *et al.*, 2015; Trautwein, Lüdtke, Schnyder y Niggli, 2006) y, por otro, que la relación entre la implicación de los padres en el aprendizaje y el rendimiento académico de sus hijos es indirecta (Shumow, Vandell y Kang, 1996). Probablemente, la implicación parental sí estará relacionada directamente con variables motivacionales de los hijos, tales como la autoeficacia, el valor de la tarea y las metas académicas (Valle *et al.*, 2015).

### 3. Implicación familiar en los deberes escolares: calidad versus cantidad

Una de las actividades en las que la implicación parental se hace más evidente son los deberes escolares, al tratarse de tareas que se realizan en casa. A pesar de que existe una aceptación creciente del influyente papel de los deberes en el resultado escolar de los estudiantes, actualmente aún se cuestionan las relaciones causales entre estas dos variables. Algunas investigaciones destacan que el 95% de los estudiantes rinden mejor en clase cuando reciben ayuda de sus padres con los mismos (Balli, Demo y Wedman, 1998), mientras que en otras se encontró que los estudiantes cuyos padres están más involucrados en los deberes tienen un menor rendimiento académico (Cooper, Lindsay y Nye, 2000).

Según Dumont *et al.* (2012), debido a que las diferentes formas de implicación parental pueden producir resultados incluso antagónicos, resulta importante diferenciar distintos tipos de implicación parental y no centrarse solo en la cantidad de implicación. Así, Pomerantz, Grolnick y Price (2005) y Pomerantz, Moorman y Litwack (2007) propusieron cuatro dimensiones diferentes, pero cualitativamente relacionadas, de implicación parental en los deberes: apoyo a la autonomía *vs* control, interés en el proceso *vs* interés en el resultado, afecto positivo *vs* afecto negativo y sentimientos positivos *vs* sentimientos negativos (respecto del potencial del alumno). En la investigación de Dumont *et al.* se hallaron tanto relaciones positivas como negativas entre diferentes percepciones de los estudiantes de implica-

ción parental y el rendimiento académico. Concretamente, la percepción de conflicto padres-hijos a causa de los deberes estaba negativamente asociada con el rendimiento, mientras que la percepción de apoyo y competencia parental estaba positivamente relacionada con el logro académico. Karbach, Gottschling, Spengler, Hegewald y Spinath (2013) encontraron, por un lado, que el rendimiento académico estaba negativamente relacionado con el control y la presión parental ante los deberes y, por otro lado, que el rendimiento académico no estaba explicado por la autonomía o el apoyo parental, tal como los perciben los estudiantes. En relación con este hallazgo, un trabajo realizado por Núñez *et al.* (2015), con muestra de Educación Primaria y Secundaria, ha estudiado estos dos tipos de implicación parental obteniendo una relación positiva del apoyo parental con el rendimiento académico en todos los niveles educativos estudiados. Por el contrario, la relación del control parental con el rendimiento académico ha sido negativa tanto en Primaria como en Secundaria.

Bajo esta controversia en torno a los deberes escolares, en otro trabajo realizado por Núñez *et al.* (en revisión) con estudiantes de Educación Secundaria se ha encontrado una relación negativa del rendimiento académico previo de los estudiantes con la implicación parental en forma de control. Parece, por tanto, que cuanto peor es el rendimiento de los hijos más se incrementa el control por parte de los padres en los deberes escolares, tal y como comprobaron varias investigaciones, en las cuales se ha visto que los padres aumentan su implicación cuando los resultados académicos de su hijos no son



buenos (Silinskas, Leppänen, Aunola, Parrila y Nurmi, 2010) y que la ayuda de los padres en estas circunstancias suele ser intrusiva y de control (Niggli, Trautwein, Schnyder, Lüdtke y Neumann, 2007).

En definitiva, la investigación tiene pendiente precisar con claridad el tipo de implicación que tiene un impacto más positivo en el rendimiento de los estudiantes, incluso en la implicación concreta en los deberes escolares, pues, a pesar de que muchos estudios ofrecen evidencias de sus beneficios, esta efectividad solo se produce cuando la aplicación de los mismos es correcta (Epstein y Van Voorhis, 2001; Regueiro, Suárez, Rodríguez y Piñero, 2014). De esta forma, afirmar que cualquier tipo de participación e implicación de los padres es siempre mejor que ninguna, no parece justificado, independientemente de la edad.

#### 4. Cambios en la implicación familiar en función de la edad

La implicación parental en los deberes suele ser diferente en función de la edad de los alumnos y, por tanto, también puede diferir el efecto que esa implicación ejerce sobre la actitud de los alumnos ante los deberes. Parecen existir cambios en la implicación parental desde el comienzo de Primaria hasta Secundaria, así como en la motivación parental hacia esa implicación. Núñez *et al.* (2015) han obtenido evidencia de la disminución de percepción de implicación parental de los estudiantes en los cursos superiores de Educación Secundaria en comparación con Educación Primaria. Algún trabajo ha puesto de manifiesto que, en los

cursos más bajos, la implicación parental es efectiva de cara al rendimiento porque los padres tienen más control de las asignaturas que cursan sus hijos (Cooper, 2001) y los estudiantes tienen menos desarrollados los hábitos de estudio, por lo que necesitan en mayor medida esa implicación parental. En la adolescencia, sin embargo, los jóvenes buscan la mayor independencia posible de sus padres (Patall *et al.*, 2008), lo cual hace necesario que la implicación parental esté más orientada hacia el apoyo y el fomento de la autonomía.

También va variando con el paso de los cursos la repercusión que la implicación parental tiene sobre el desempeño de los deberes. Por ejemplo, en un estudio actual (Núñez *et al.*, 2015) se observó que mientras que a finales de Educación Primaria todavía no existe una relación significativa entre la conducta de los estudiantes a la hora de hacer los deberes (p. e., el tiempo que utilizan, cómo lo gestionan o si hacen todos los deberes que les marcan los profesores) y la propia percepción de cualquiera de las dos formas de implicación parental más frecuentes (control y ayuda), cuando entran en Educación Secundaria ya se observa esta relación, ocurriendo que cuanto mayor es la implicación parental percibida, mayor es la implicación del estudiante en los deberes y mayor su rendimiento académico.

#### 5. Propósito de este estudio

El propósito del presente estudio ha sido estudiar la relación entre el rendimiento académico de los alumnos de Educación Secundaria Obligatoria y la

percepción de implicación parental. A diferencia de otros trabajos que se han centrado principalmente en el estudio de la implicación parental a nivel general o exclusivamente en los deberes, en este trabajo hemos pretendido analizar dos tipos de implicación parental percibida en su relación con el rendimiento académico. Por un lado, se han estudiado variables de implicación parental directamente relacionadas con los deberes: percepción de acompañamiento parental durante la realización de los deberes, percepción de implicación parental en forma de apoyo, percepción de implicación parental en forma de control. Por otro lado, también se han estudiado variables de implicación parental indirectamente relacionadas con los deberes, teniendo en cuenta que si bien esa implicación no se pone en práctica directamente sobre la realización de los deberes, repercute igualmente en la misma. Se trata de la percepción de interés parental por el progreso académico de los hijos, la percepción de expectativas parentales respecto de las capacidades de sus hijos y la percepción del nivel de satisfacción de los padres con los resultados académicos de los hijos. Asimismo, se pretende conocer si estas relaciones varían en función del curso académico.

Como posibles hipótesis, se espera encontrar que aquellos estudiantes con los niveles más altos de rendimiento académico perciban una menor implicación parental en forma de control al hacer los deberes que aquellos otros con los niveles más bajos de rendimiento. También se espera encontrar que los estudiantes con los niveles más altos de rendimiento académico sean los que perciban por parte

de sus padres unas más altas expectativas respecto de sus capacidades, muestren un mayor interés por sus progresos académicos y tengan mayores niveles de satisfacción ante sus resultados académicos. Por último, se espera que haya una disminución, según se avanza de curso, en la percepción de los estudiantes del control y apoyo parental en los deberes y en el acompañamiento parental a la hora de realizarlos. No se esperan cambios en el resto de las variables en función del curso.

## 6. Método

### 6.1. Participantes

La muestra está integrada por 730 estudiantes (43,4% hombres; 56,6% mujeres) de Educación Secundaria Obligatoria, pertenecientes a 14 centros educativos de tres provincias del norte de España. De ellos, el 26,6% cursa 1º de ESO, el 20,8% cursa 2º de ESO, el 24,9% cursa 3º de ESO y el 27,7% cursa 4º de ESO.

### 6.2. Instrumentos

La percepción de los estudiantes de implicación de los padres en los deberes escolares se ha evaluado mediante siete ítems que se agrupan en dos dimensiones diferentes: *percepción de apoyo parental* ( $\alpha = .84$ ), que está formada por tres ítems en los que se evalúa el grado de apoyo afectivo y emocional por parte de los padres cuando sus hijos están haciendo los deberes; y *percepción de control parental* ( $\alpha = .81$ ), que está integrada por cuatro ítems en los que se evalúa el grado de control que ejercen los padres respecto a la realización de los deberes por parte de sus hijos.

Las otras variables referidas a la percepción de la implicación parental se han evaluado mediante la versión adaptada del Cuestionario de Implicación Familiar (CIF) de Song y Hattie (1984), realizada por González-Pianda y Núñez (1994). Concretamente, la *percepción del acompañamiento de los padres al realizar los deberes* ( $\alpha = .82$ ) se evalúa mediante siete ítems en los que se pregunta a los estudiantes en qué medida se sienten acompañados y perciben interés por parte de sus padres cuando realizan los deberes. La *percepción del interés por el progreso de los hijos* ( $\alpha = .88$ ) se evalúa a través de diez ítems en los que se pregunta a los estudiantes sobre el grado de interés que muestran sus padres respecto a sus deberes, sus estudios, sus aprendizajes, etc. La *percepción de las expectativas de los padres respecto a las capacidades de sus hijos* ( $\alpha = .85$ ) se evalúa mediante nueve ítems referidos a las creencias que tienen los padres sobre las capacidades de sus hijos. Finalmente, la *percepción del nivel de satisfacción* ( $\alpha = .86$ ) se evalúa a través de cinco ítems en los que se pregunta sobre el grado de satisfacción que tienen los padres sobre los resultados académicos obtenidos por sus hijos.

La evaluación del *rendimiento académico* se obtuvo calculando el promedio de las calificaciones académicas finales obtenidas por los alumnos participantes en las materias de Lengua Española, Lengua Inglesa, Matemáticas y Ciencias Sociales. Con el fin de establecer tres niveles distintos en esta variable, se utilizó el siguiente criterio: rendimiento bajo (hasta el percentil 33), rendimiento medio (del percentil 33 al percentil 66), rendimiento alto (a partir del percentil 66).

### 6.3. Procedimiento

Los datos referidos a las variables objeto de estudio fueron recogidos durante el horario escolar, bajo consentimiento previo del equipo directivo y de los profesores de los alumnos. Los cuestionarios fueron aplicados en un único momento por personal especializado que colaboró en la investigación. Los participantes contestaron de forma individual y sin límite de tiempo a cada uno de los cuestionarios.

### 6.4. Análisis de datos

Con la finalidad de dar respuesta a los objetivos del trabajo, se realizó un análisis multivariado de varianza (MANOVA:  $3 \times 4$ ) tomando como factores el rendimiento académico (con tres niveles) y el curso (con cuatro niveles), y como variables dependientes la percepción de los estudiantes del acompañamiento parental al hacer los deberes, del interés por el progreso de los hijos, de las expectativas de capacidad de los hijos, del nivel de satisfacción por los resultados de los hijos, de la implicación parental en forma de apoyo al hacer los deberes y de la implicación parental en forma de control al hacer los deberes. Para medir el tamaño del efecto, se utilizó el coeficiente eta-cuadrado parcial ( $\eta^2$ ), tomando el criterio establecido en el trabajo clásico de Cohen (1988), en base al cual, un efecto es pequeño cuando  $\eta^2 = .01$  ( $d = .20$ ), el efecto es medio cuando  $\eta^2 = .059$  ( $d = .50$ ) y el tamaño del efecto es grande si  $\eta^2 = .138$  ( $d = .80$ ).

### 6.5. Resultados

Los resultados indican que hay diferencias estadísticamente significativas en

el conjunto de variables vinculadas con la percepción de los estudiantes de la implicación parental en función de los distintos niveles de rendimiento académico ( $\lambda$ Wilks = .692,  $F(12,1424) = 23.95$ ,  $p < .001$ ,  $\eta^2 = .168$ ). El tamaño del efecto es grande.

Teniendo en cuenta los resultados referidos a cada variable dependiente considerada individualmente, hay diferencias estadísticamente significativas en función del rendimiento académico en la *percepción que tienen los estudiantes de las expectativas que tienen sus padres de sus capacidades* ( $F(2,717) = 20.23$ ,  $p < .001$ ;  $\eta^2 = .053$ ) y en la *percepción de los estudiantes del nivel de satisfacción de sus padres respecto a sus resultados académicos* ( $F(2,717) = 138.52$ ,  $p < .001$ ;  $\eta^2 = .279$ ). En el primer caso el tamaño del efecto es próximo a medio y en el último es grande. Tal y como puede verse en la Tabla 1, los nive-

les más altos de rendimiento académico se encuentran asociados con una percepción más alta de los estudiantes respecto de las expectativas que tienen sus padres de sus capacidades y también con una percepción más alta del nivel de satisfacción de sus padres en cuanto a sus resultados académicos (ver también Figura 1).

Sin embargo, no hay diferencias estadísticamente significativas, en función del nivel de rendimiento académico en la *percepción del acompañamiento parental en los deberes escolares* ( $F(2,717) = 0.93$ ,  $p = .396$ ;  $\eta^2 = .003$ ), en la *percepción del interés de los padres por los progresos académicos de los hijos* ( $F(2,717) = 2.66$ ,  $p = .071$ ;  $\eta^2 = .007$ ), en la *percepción del control parental en los deberes* ( $F(2,717) = 1.33$ ,  $p = .265$ ;  $\eta^2 = .004$ ) y en la *percepción del apoyo parental en los deberes* ( $F(2,717) = 0.06$ ,  $p = .995$ ;  $\eta^2 = .000$ ).

TABLA 1: Estadísticos descriptivos (media, desviación típica) para cada una de las variables de percepción de los estudiantes de la implicación parental en función del curso y de sus niveles de rendimiento académico.

	1º ESO		2º ESO		3º ESO		4º ESO		Total	
	M	DT	M	DT	M	DT	M	DT	M	DT
<i>Interés por el progreso de los hijos</i>										
Rend. bajo	3.60	0.94	3.78	0.90	3.59	0.87	3.40	0.96	3.58	0.92
Rend. medio	4.03	0.72	3.81	0.88	3.73	0.81	3.34	0.95	3.70	0.88
Rend. Alto	4.07	0.69	3.81	0.94	3.78	0.76	3.50	0.92	3.79	0.85
Total	3.92	0.80	3.80	0.90	3.70	0.81	3.40	0.94	3.70	0.89
<i>Expectativas capacidades hijos</i>										
Rend. bajo	3.88	0.80	3.91	0.76	3.84	0.79	3.94	0.79	3.89	0.78
Rend. medio	4.30	0.68	4.24	0.70	4.11	0.71	4.00	0.75	4.15	0.72
Rend. Alto	4.39	0.48	4.38	0.65	4.34	0.57	4.23	0.69	4.33	0.60
Total	4.21	0.69	4.20	0.72	4.08	0.72	4.05	0.75	4.13	0.72

	1º ESO		2º ESO		3º ESO		4º ESO		Total	
	M	DT	M	DT	M	DT	M	DT	M	DT
<i>Nivel satisfacción resultados hijos</i>										
Rend. bajo	2.73	0.80	2.95	0.94	2.44	0.83	2.57	1.00	2.65	0.90
Rend. medio	3.47	0.83	3.35	0.90	3.15	0.89	2.90	0.92	3.19	0.91
Rend. Alto	4.20	0.67	4.27	0.63	4.07	0.77	3.75	0.95	4.07	0.79
Total	3.50	0.96	3.54	0.98	3.17	1.03	3.06	1.05	3.30	1.03
<i>Acompañamiento parental deberes</i>										
Rend. bajo	3.47	0.93	3.46	0.87	3.06	0.87	2.92	0.88	3.22	0.92
Rend. medio	3.54	0.76	3.28	0.96	3.20	0.78	2.74	0.86	3.16	0.87
Rend. Alto	3.46	0.77	3.30	0.93	3.05	0.93	2.64	0.88	3.12	0.93
Total	3.49	0.81	3.33	0.93	3.12	0.84	2.76	0.87	3.16	0.90
<i>Control parental deberes</i>										
Rend. bajo	3.43	1.11	3.40	1.09	3.04	1.17	2.61	1.00	3.11	1.14
Rend. medio	3.71	0.93	3.01	1.09	3.06	0.95	2.33	1.02	2.99	1.11
Rend. Alto	3.36	1.09	3.16	1.09	2.90	1.08	2.36	1.29	2.95	1.20
Total	3.51	1.04	3.16	1.09	3.01	1.05	2.41	1.10	3.01	1.15
<i>Apoyo parental deberes</i>										
Rend. Bajo	3.53	1.30	3.35	1.24	3.11	1.39	2.87	1.07	3.21	1.28
Rend. medio	3.66	1.26	3.38	1.22	3.02	1.24	2.77	1.22	3.17	1.28
Rend. Alto	3.60	1.14	3.62	1.10	3.00	1.33	2.63	1.22	3.22	1.26
Total	3.61	1.23	3.45	1.19	3.04	1.30	2.76	1.18	3.20	1.28

Por lo que se refiere a las diferencias en función del curso, los resultados indican que hay diferencias estadísticamente significativas en el conjunto de estas variables ( $\lambda$ Wilks = .834,  $F(18,2014.32) = 7.40$ ,  $p < .001$ ,  $\eta^2 = .059$ ). El tamaño del efecto es medio.

Considerando cada variable de modo individual, los resultados indican que hay diferencias estadísticamente significativas en función del curso en la percepción del acompañamiento parental en los deberes

escolares ( $F(3,717) = 24.55$ ,  $p < .001$ ;  $\eta^2 = .093$ ), en la percepción del interés de los padres por los progresos académicos de los hijos ( $F(3,717) = 11.02$ ,  $p < .001$ ;  $\eta^2 = .044$ ), en la percepción de los estudiantes del nivel de satisfacción de sus padres respecto a sus resultados académicos ( $F(3,717) = 10.42$ ,  $p < .001$ ;  $\eta^2 = .042$ ), en la percepción del control parental en los deberes ( $F(3,717) = 32.68$ ,  $p < .001$ ;  $\eta^2 = .120$ ) y en la percepción del apoyo parental en los deberes ( $F(3,717) = 17.49$ ,  $p < .001$ ;  $\eta^2 = .068$ ). En la mayor parte de los casos, los tamaños de

los efectos están próximos a medios, salvo en la percepción del control parental donde se aproxima a grande. En cambio, no hay diferencias estadísticamente significativas

en función del curso en la *percepción que tienen los estudiantes de las expectativas que tienen sus padres de sus capacidades* ( $F(3,717) = 1.50, p=.214; \eta^2= .006$ ).

FIGURA 1: *Percepción de los estudiantes del interés de los padres por el progreso de sus hijos, de las expectativas de los padres de las capacidades de sus hijos y del nivel de satisfacción de los padres de los resultados de sus hijos, según los niveles de rendimiento académico y el curso.*

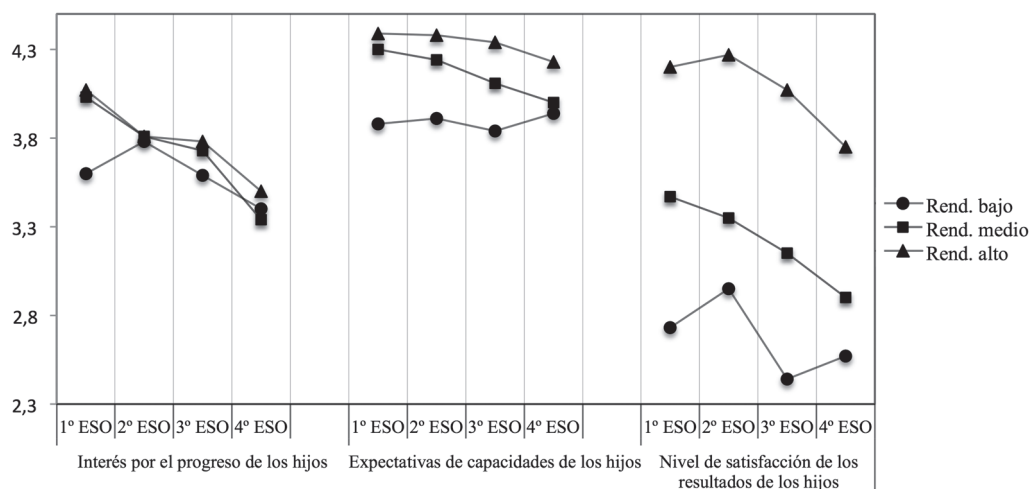
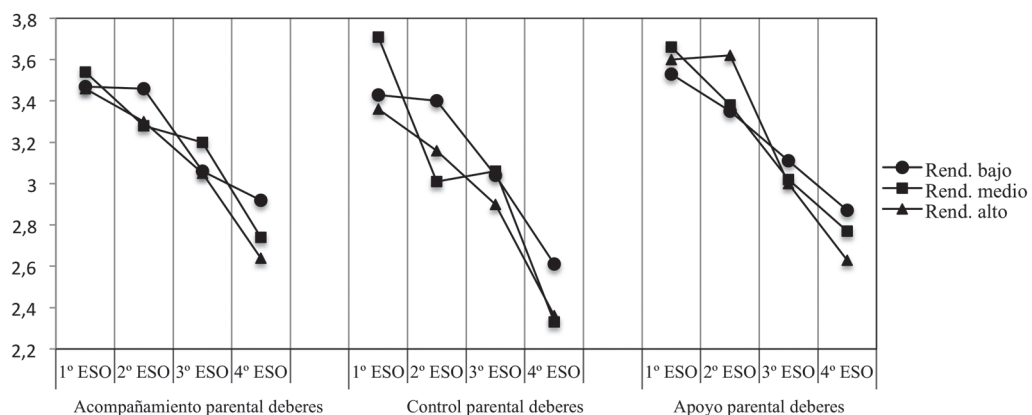


FIGURA 2: *Percepción de los estudiantes del acompañamiento parental al realizar los deberes, del control parental en los deberes escolares y del apoyo parental en los deberes escolares, según los niveles de rendimiento académico y el curso.*





En la Tabla 1 puede observarse que según van avanzando los estudiantes de curso, hay una disminución en sus percepciones del interés parental por sus progresos académicos, en sus percepciones sobre el nivel de satisfacción de sus padres por sus resultados académicos, en sus percepciones del acompañamiento parental en los deberes, en sus percepciones del control parental en los deberes escolares y en sus percepciones del apoyo parental en los deberes (ver Figuras 1 y 2).

No existe interacción entre las variables rendimiento académico y curso ( $\lambda$ Wilks = .956,  $F(36,3129.37) = 0.89$ ,  $p = .657$ ,  $\eta^2 = .007$ ). Por tanto, se puede afirmar que la tendencia observada a lo largo de los cursos en relación a las variables dependientes es la misma para los tres niveles de rendimiento.

## 7. Discusión

Con el presente estudio se ha tratado de profundizar en la temática de la implicación parental en los deberes, estudiando variables de percepción de implicación parental que influyen en los deberes, tanto directa como indirectamente, y en su relación con el rendimiento académico de los alumnos. Para ello, se estudió la relación existente entre diferentes formas de implicación parental según son percibidas por los hijos y el rendimiento académico, teniendo en cuenta el curso de los alumnos, todos ellos de diferentes cursos de Educación Secundaria Obligatoria. Con respecto a la implicación parental en los deberes, si bien varias investigaciones concluyen que las actitudes de los padres hacia los deberes escolares tienen un im-

pacto directo en sus hijos (Bempechat, 2004), también es cierto que ese impacto es diferente según el tipo de implicación parental y según la edad de los alumnos (Núñez *et al.*, 2015). Por ello, hemos querido abordar diferentes variables de implicación parental, algunas que inciden directamente sobre la realización de los deberes y otras que lo hacen de forma indirecta.

Hemos observado que los niveles más altos de rendimiento académico se encuentran asociados con una percepción más alta por parte de los estudiantes respecto de las expectativas que tienen sus padres de sus capacidades y también con una percepción más alta del nivel de satisfacción de sus padres en cuanto a sus logros académicos. Sin embargo, aunque no se han encontrado diferencias estadísticamente significativas, la tendencia que se observa es que la percepción de acompañamiento parental durante la realización de los deberes es inferior en el caso de los alumnos de mejor rendimiento en comparación con los que rinden peor. Quizá pueda deberse a que los padres no sienten la necesidad de acompañarles durante el proceso pues consideran a sus hijos eficaces por sí mismos.

Los resultados también han mostrado que no existen diferencias en las variables de implicación parental que hemos considerado como directamente relacionadas con los deberes en función del nivel de rendimiento de los alumnos. Este hallazgo puede resultar sorprendente a primera vista, pues mucha de la literatura al respecto señala que la implicación parental en los deberes es un buen indicador del

rendimiento académico (Cooper *et al.*, 2001; Pomerantz y Eaton, 2001; Patall *et al.*, 2008). Sin embargo, no son pocos los que apuntan que no todos los tipos de implicación parental pueden resultar beneficiosos de cara al rendimiento académico. Dumont *et al.* (2012) señalan que es crucial distinguir entre diferentes formas de implicación parental y no centrarse solo en la cantidad de la misma. De hecho, diferentes formas de implicación parental pueden producir resultados contradictorios. Parte de estos resultados contradictorios se ponen de manifiesto en el trabajo de Núñez *et al.* (2015), en el cual se ha obtenido evidencia de que la implicación parental en forma de apoyo mantiene una relación positiva con el rendimiento académico mientras que en el caso de la implicación parental en forma de control, la relación es negativa.

Sin embargo, en el presente trabajo no hemos encontrado diferencias en relación con el rendimiento académico entre la percepción de implicación parental basada en el control y la basada en el apoyo ni tampoco en la percepción de acompañamiento parental durante la realización de los deberes. Esta ausencia de diferencias puede deberse a que las relaciones han sido analizadas directamente. Es decir, hemos querido estudiar si el rendimiento académico de los alumnos determina la percepción de implicación parental en los deberes por parte de esos estudiantes. Un trabajo reciente que ha encontrado relación entre la percepción de implicación parental de los alumnos y el rendimiento académico (Núñez *et al.*, 2015), estudió esta relación de forma indirecta, a través de la implicación de los alumnos en los

deberes. En ese sentido, se pudo afirmar que la relación entre la percepción de implicación parental y el rendimiento académico presenta diferencias en alumnos de Educación Secundaria, pero cuando esa relación está mediada por la cantidad de deberes que hacen los alumnos, el tiempo que dedican a hacer los deberes y el aprovechamiento de ese tiempo.

Por otra parte, sí se han observado diferencias en las variables de implicación parental que hemos considerado como indirectamente relacionadas con los deberes (nivel de satisfacción de los padres con el rendimiento académico de sus hijos y expectativas parentales de capacidad de sus hijos). Quizá esto se deba a que este tipo de variables sí se ponen de manifiesto a partir de la observación del rendimiento de los hijos (cuando obtienen buenos resultados, los padres están más satisfechos y también los consideran más capaces y viceversa) (González-Pienda *et al.*, 2002; Núñez, 2009). Hong, Yoo, You y Wu (2010) obtuvieron conclusiones similares cuando comprobaron que el rendimiento académico en matemáticas predecía la importancia que los padres otorgaban a las matemáticas, lo cual a su vez predecía el rendimiento académico de los hijos.

Otro de los hallazgos de este trabajo pone de manifiesto la progresiva disminución de implicación parental en la educación con el paso de los cursos. Se puede observar que, según los estudiantes van avanzando de curso, hay una disminución en sus percepciones respecto del interés parental por sus progresos académicos, del acompañamiento parental al realizar



los deberes, del nivel de satisfacción de sus padres por los resultados académicos, así como también del control y apoyo parental en los deberes. En relación con otros trabajos que han mostrado resultados similares (Núñez *et al.*, 2015), esta disminución en los niveles de percepción de todas estas variables según se avanza de curso puede deberse, quizás, a un mayor uso de estrategias de autorregulación (mayor autonomía) de los alumnos a lo largo de la escolaridad. De cualquier modo, se trata de un dato preocupante y se debe fomentar que la implicación parental en los deberes se mantenga en los cursos más altos, siendo esto compatible con unos mayores niveles de autonomía y de autorregulación por parte de los estudiantes. Aunque estos estudiantes puedan regular activamente su cognición, motivación y comportamiento (Núñez, Amieiro, Álvarez, García y Dobarro, 2015), la implicación parental también puede contribuir de modo positivo a fomentar un mayor grado de autonomía y autorregulación.

## 8. Conclusiones

Este estudio aporta, por tanto, información útil para facilitar una mejor comprensión de las percepciones de los estudiantes y las prácticas de los padres en relación con las tareas de sus hijos. Así, y a modo de conclusión, los resultados demuestran que los niveles más altos de rendimiento académico se encuentran asociados con una percepción más alta por parte de los estudiantes respecto de las expectativas que tienen sus padres de sus capacidades y del nivel de satisfacción de sus padres en cuanto a sus resultados académicos. En cuanto al curso,

hay una disminución en sus percepciones del acompañamiento parental al realizar los deberes, del control y apoyo parental en los mismos, del interés parental por sus progresos académicos y del nivel de satisfacción de sus padres por sus resultados académicos.

Asimismo, y para hacer el mejor uso de los resultados de esta investigación, las limitaciones de este estudio deben tenerse en cuenta, tal como la posible debilidad de la metodología al emplearse cuestionarios de auto-informe. Si bien son fuentes valiosas de información, los datos no siempre son fiables, pues los estudiantes pueden exagerar en sus respuestas (Blazer, 2009).

Los hallazgos aquí presentados sugieren como novedad que si bien algunas variables de implicación parental en los deberes están relacionadas con el rendimiento académico de los alumnos, esta relación no es tan evidente como si se tratara de una relación mediada por la implicación de los alumnos en los deberes como ocurre en otros estudios (Núñez *et al.*, 2015). También se ha observado como novedad que la implicación parental en general decrece a medida que los alumnos asisten a cursos superiores.

Como implicaciones educativas y, por lo tanto, propósitos de mejora de la efectividad de la implicación parental de cara al rendimiento académico sería interesante aumentar la calidad de la ayuda de los padres con los deberes, tal y como demuestra un creciente cuerpo de literatura (Chang, Park, Singh y Sung, 2009; Froiland, 2011; Villiger, Niggli y Wandeler, 2010). Dado que las figuras parentales

son la primera y principal fuente de socialización de los hijos (De la Torre, Casanova, Villa y Cerezo, 2013), otra opción está en fortalecer las relaciones familia-escuela, con profesores que asesoren a los padres sobre su participación en el proceso de los deberes (Harris y Goodall, 2008), pero sin cometer el error de desempeñar un papel formal de *maestros* en los deberes. En su lugar, los padres deben facilitar y supervisar los deberes, ofrecer orientación pero no respuestas (Cunha *et al.*, 2015), estar disponibles para responder a preguntas sencillas, ofrecer retroalimentación positiva, proporcionar un tiempo y lugar tranquilo y bien iluminado para que sus hijos estudien, garantizar que los materiales necesarios estén disponibles, ayudar con el tiempo y la gestión de la carga de trabajo y ponerse en contacto con el profesor si hay algún problema que no pueden resolver (Bempechat, 2004; Northwest Regional Educational Laboratory, 2005; Walker, Hoover-Dempsey, Whetsel y Green, 2004). Por otro lado, mejorar las habilidades de los padres para que puedan ayudar eficazmente con los deberes puede ser también especialmente importante. Se anima, por tanto, con el presente estudio a trabajar con los padres para ayudarles a mejorar con respecto a la participación en los deberes y para que no disminuya con el paso de los cursos.

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### Bibliografía

- ÁLVAREZ, A., SUÁREZ, N., TUERO, E., NÚÑEZ, J. C., VALLE, A. y REGUEIRO, B. (2015) Implicación familiar, autoconcepto del adolescente y rendimiento académico, *European Journal of Investigation in Health, Psychology and Education*, 5:3, pp. 293-311.
- BAILEY, L. (2006) Interactive homework: A tool for fostering parent-child interactions and improving learning outcomes for at-risk young children, *Early Childhood Education Journal*, 3:2, pp. 155-167.
- BALLI, S. J., DEMO, D. H. y WEDMAN, J. F. (1998) Family involvement with children's homework: An intervention in the middle grades, *Family Relations*, 47, pp. 142-146.
- BALLI, S. J., WEDMAN, J. F. y DEMO, D. H. (1997) Family involvement with middle grades homework: Effects of differential prompting, *Journal of Experimental Education*, 66, pp. 31-48.
- BEMPECHAT, J. (2004) The motivational benefits of homework: a social-cognitive perspective, *Theory Into Practice*, 43:3, pp.189-196.
- BLAZER, C. (2009) *Literature Review: Homework. Miami: Miami Dade County Public Schools*. Ver <http://drs.dadeschools.net/LiteratureReviews/Homework.pdf> (Consultado el 15.XI.2014).

- CASTEJÓN, J. L. y PÉREZ, A. M. (1998) Un modelo causal-explicativo sobre la influencia de las variables psicosociales en el rendimiento académico, *Bordón*, 50, pp. 171-185.
- CHANG, M., PARK, B., SINGH, K. y SUNG, Y. (2009) Parental involvement, parenting behaviors, and children's cognitive development in low income and minority families, *Journal of Research in Childhood Education*, 23, pp. 309-324.
- COHEN, J. (1988) *Statistical power analysis for the behavioral sciences* (2ª ed.) (Hillsdale, Erlbaum).
- COOPER, H. (2001) *The battle over homework: Common ground for administrators, teachers, and parents* (2ª ed.) (Thousand Oaks, Sage Publications).
- COOPER, H., JACKSON, K., NYE, B. y LINDSAY, J. J. (2001) A model of homework's influence on the performance of elementary school students, *Journal of Experimental Education*, 69, pp. 181-199.
- COOPER, H., LINDSAY, J. y NYE, B. (2000) Homework in the home: How student, family, and parenting-style differences relate to the homework process, *Contemporary Educational Psychology*, 25:4, pp. 464-487.
- COOPER, H., VALENTINE, J. C., NYE, B. y LINDSAY, J. J. (1999) Relationships between five after-school activities and academic achievement, *Journal of Educational Psychology*, 91, pp. 369-378.
- CUNHA, J., ROSÁRIO, P., MACEDO, L., NUNES, A. R., FUENTES, S., PINTO, R. y SUÁREZ, N. (2015) Parents' conceptions about their homework involvement in elementary school, *Psicothema*, 27:2, pp. 159-165.
- DE LA TORRE, J. M., CRUZ, CASANOVA, P. F., VILLA, M. y CERESO, M. T. (2013) Consistencia e inconsistencia parental: relaciones con la conducta agresiva y satisfacción vital de los adolescentes, *European Journal of Education and Psychology*, 6:2, pp.135-149.
- DUMONT, H., TRAUTWEIN, U., LÜDTKE, O., NEUMANN, M., NIGGLI, A. y SCHNYDER, I. (2012) Does parental homework involvement mediate the relationship between family background and educational outcomes?, *Contemporary Educational Psychology*, 37, pp. 55-69.
- EPSTEIN, J. L. y VAN VOORHIS, F. L. (2001) More than minutes: Teachers' roles in designing homework, *Educational Psychologist*, 36:3, pp.181-193.
- FANTUZZO, J., MCWAYNE, C., PERRY, M. A. y CHILDS, S. (2004) Multiple dimensions of family involvement and their relations to behavioural and learning competencies for urban, low-income children, *School Psychology Review*, 33, pp. 467-480.
- FELIX, N., DORNBRACK, J. y SCHECKLE, E. (2008) Parents, homework and socio-economic class: Discourses of deficit and disadvantage in the «new» South Africa, *English Teaching: Practice and Critique*, 7, pp. 99-112.
- FROILAND, J. (2011) Parental autonomy support and student learning goals: A preliminary examination of an intrinsic motivation intervention, *Child & Youth Care Forum*, 40, pp. 135-149.
- GONZÁLEZ-PIENDA, J. A. y NÚÑEZ, J. C. (1994) *Cuestionario para la evaluación de la implicación de la familia en el proceso de escolarización de los hijos* (Oviedo, Departamento de Psicología de la Universidad de Oviedo).

- GONZÁLEZ-PIENDA, J. A., NÚÑEZ, J. C., GONZÁLEZ-PUMARIEGA, S., ALVAREZ, L., ROCES, C. y GARCÍA, M. (2002) A structural equation model of parental involvement, motivational and aptitudinal characteristics, and academic achievement, *The Journal of Experimental Education*, 70:3, pp. 257-287.
- HARRIS, A. y GOODALL, J. (2008) Do parents know they matter? Engaging all parents in learning, *Educational Research*, 50, pp. 277-289.
- HONG, S., YOO, S. K., YOU, S. y WU, C. C. (2010) The reciprocal relationship between parental involvement and mathematics achievement: Autoregressive cross-lagged modeling, *The Journal of Experimental Education*, 78, pp. 419-439.
- KARBACH, J., GOTTSCHLING, J., SPENGLER, M., HEGEWALD, K. y SPINATH, F. M. (2013) Parental involvement and general cognitive ability as predictors of domain specific academic achievement in early adolescence, *Learning and Instruction*, 23, pp. 43-51.
- KNOLLMANN, M. y WILD, E. (2007) Quality of parental support and students' emotions during homework: Moderating effects of students motivational orientations, *European Journal of Psychology of Education*, 22, pp. 63-76.
- MANZ, P. H., FANTUZZO, J. W. y POWER, T. J. (2004) Multidimensional assessment of family involvement among urban elementary students, *Journal of School Psychology*, 42:6, pp. 461-475.
- NIGGLI, A., TRAUTWEIN, U., SCHNYDER, I., LÜDTKE, O. y NEUMANN, M. (2007) Elterliche Unterstützung kann hilfreich sein, aber Einmischung schadet: Familiärer Hintergrund, elterliche Hausaufgabenengagement und Leistungsentwicklung [Parental homework support can be beneficial, but parental intrusion is detrimental: Family background, parental homework supervision, and performance gains], *Psychologie in Erziehung und Unterricht*, 54, pp. 1-14.
- NORTHWEST REGIONAL EDUCATIONAL LABORATORY (2005) *Research-Based Strategies: Homework and Practice*. Ver <http://www.netc.org/focus/strategies/home.php> (Consultado el 12.I.2015).
- NÚÑEZ, J. C., AMIEIRO, N., ÁLVAREZ, D., GARCÍA, T. y DOBARRO, A. (2015) Escala de Evaluación de la Autorregulación del Aprendizaje a partir de Textos (ARATEX-R), *European Journal of Education and Psychology*, 8:1, pp. 9-22.
- NÚÑEZ, J. C., EPSTEIN, J. L., SUÁREZ, N., ROSÁRIO, P., VALLEJO, G. y VALLE, A. (en revisión) Do children's academic functioning is associated with homework parental involvement?
- NÚÑEZ, J. C., SUÁREZ, N., ROSÁRIO, P., VALLEJO, G., VALLE, A. y EPSTEIN, J. L. (2015) Relationships between perceived parental involvement in homework, student homework behaviors, and academic achievement: Differences among elementary, junior high, and high school students, *Metacognition and Learning*, 10, pp. 375-406.
- NÚÑEZ, J. C. (2009) El clima escolar, clave para el aprendizaje, *Infocop Online*. Ver [http://www.infocop.es/view\\_article.asp?id=2540](http://www.infocop.es/view_article.asp?id=2540) (Consultado el 17.III.2015).
- PATALL, E. A., COOPER, H. y ROBINSON, J. C. (2008) Parent involvement in homework: a

- research synthesis, *Review of Educational Research*, 78, pp. 1039-1101.
- POMERANTZ, E. M. y EATON, M. M. (2001) Maternal intrusive support in the academic context: transactional socialization processes, *Developmental Psychology*, 37, pp. 174-186.
- POMERANTZ, E. M., GROLNICK, W. S. y PRICE, C. E. (2005) The role of parents in how children approach achievement, en ELLIOT, A. J. y DWECK, C. S. (eds.) *Handbook of Competence and Motivation* (New York, The Guilford Press) pp. 259-278.
- POMERANTZ, E. M., MOORMAN, E. A. y LI-TWACK, S. D. (2007) The how, whom and why of parents' involvement in children's academic lives: More is not always better, *Review of Educational Research*, 77, pp. 373-410.
- REGUEIRO, B., RODRÍGUEZ, S., PIÑEIRO, I., ESTÉVEZ, I., FERRADÁS, M. y SUÁREZ, N. (2015) Diferencias en la percepción de la implicación parental en los deberes escolares en función del nivel de motivación de los estudiantes, *European Journal of Investigation in Health, Psychology and Education*, 5:3, pp. 313-323.
- REGUEIRO, B., SUÁREZ, N., RODRÍGUEZ, S. y PIÑEIRO, I. (2014) Variables que predicen la implicación de los estudiantes en las tareas para Casa en Educación Secundaria, *Revista de Psicología y Educación*, 9:2, pp. 45-55.
- ROSÁRIO, P., MOURAO, R., SOARES, S., CHALETA, E., GRACIO, L., NÚÑEZ, J. y GONZÁLEZ-PIENDA, J. (2005) Trabalho de casa, tarefas escolares, auto-regulação e envolvimento parental, *Psicologia em Estudo*, 10:3, pp. 343-351.
- SHELDON, S. B. (2002) Parents' social networks and beliefs as predictors of parent involvement, *Elementary School Journal*, 102, pp. 301-316.
- SHUMOW, L., VANDELL, D. L. y KANG, K. (1996) School choice, family characteristics, and home-school relations: Contributions to school achievement?, *Journal of Educational Psychology*, 88, pp. 451-460.
- SILINSKAS, G., LEPPÄNEN, U., AUNOLA, K., PARRILA, R. y NURMI, J. (2010) Predictors of mothers' and fathers' teaching of reading and mathematics during kindergarten and grade 1, *Learning and Instruction*, 20, pp. 61-71.
- SONG, I. S. y HATTIE, J. A. (1984) Home environment, self-concept and academic achievement: A casual modelling approach, *Journal of Educational Psychology*, 76:6, pp. 1269-1281.
- SUÁREZ, N., REGUEIRO, B., TUERO, E., CERREZO, R. y RODRÍGUEZ, C. (2014) La implicación familiar en el ámbito educativo como herramienta para trabajar el éxito académico, *Revista de Psicología y Educación*, 83:2, pp. 83-93.
- TRAUTWEIN, U., LÜDTKE, O., SCHNYDER, I. y NIGGLI, A. (2006) Predicting homework effort: Support for a domain-specific, multilevel homework model, *Journal of Educational Psychology*, 98, pp. 438-456.
- VALLE, A., REGUEIRO, B., RODRÍGUEZ, S., PIÑEIRO, I., FREIRE, C., FERRADÁS, M. y SUÁREZ, N. (2015) Perfiles motivacionales como combinación de expectativas de autoeficacia y metas académicas en estudiantes universitarios, *European Journal of Education and Psychology*, 8:1, pp. 1-8.



VILLIGER, C., NIGGLI, A. y WANDELER, C. (2010) Fördern statt einmischen: Evaluation eines Kurzzeit-Elterntrainings zur Betreuung von Lesehausaufgaben [Support instead of interference: Evaluation of a short-time parental homework training for assisting with reading], *Psychologie in Erziehung und Unterricht*, 57, pp. 257-272.

WALKER, J. M. T., HOOVER-DEMPSEY, K. V., WHETSEL, D. R. y GREEN, C. L. (2004) *Parental Involvement in Homework: A Review of Current Research and Its Implications for Teachers, After School Program Staff, and Parent Leaders*. Ver <http://www.gse.harvard.edu/hfrp/projects/fine/resources/research/homework.html> (Consultado el 12.V.2014).

XU, J. y CORNO, L. (1998) Case studies of families doing third-grade homework, *The Teachers College Record*, 100:2, pp. 402-436.

XU, J. y CORNO, L. (2003) Family help and homework management reported by middle school students, *Elementary School Journal*, 103:5, pp. 503-517.

### Resumen:

### Percepción de la implicación parental en los deberes escolares y rendimiento académico en estudiantes de Secundaria

El fin principal de este trabajo es comprobar las relaciones existentes entre los distintos niveles de rendimiento académico del alumnado de Secundaria y sus percepciones de la implicación parental; así como conocer si estas relaciones varían en función del curso. La muestra está integrada por 730 estudiantes de Educación

Secundaria Obligatoria (de 12 a 16 años). Los resultados demuestran que los niveles más altos de rendimiento académico se encuentran asociados con una percepción más alta por parte de los estudiantes respecto de las expectativas que tienen sus padres de sus capacidades y del nivel de satisfacción de sus padres en cuanto a sus resultados académicos. En cuanto al curso, hay una disminución en sus percepciones del acompañamiento parental al realizar los deberes, del control y apoyo parental en los mismos, del interés parental por sus progresos académicos y del nivel de satisfacción de sus padres por sus resultados académicos.

**Descriptor:** Deberes escolares, percepción de implicación parental, rendimiento académico, Educación Secundaria.

### Summary:

### Perceived parental involvement in homework and Secondary School Students' Academic Achievement

The main purpose of the present paper is to check whether there are relationships between the different levels of academic achievement and perceived parental involvement in homework, as well as to know whether these relationships vary as they advance to upper grade levels. The sample consists of 730 Secondary School Students (ranging from 12 to 16 years of age). The results indicate that students with high performance are associated with higher perceptions students' regarding parental expectations of their capabilities and the level of satisfaction of their parents in their academic

results. In relation to grade level, there is a decrease in their perceptions of: (a) parental accompaniment to perform the homework, (b) control and parental support, (c) parental interest in their academic progress and (d) the level of satisfaction of their parents for their academic results.

**Key Words:** Homework, perceived parental involvement, academic achievement, Secondary School Students.

### 5.1.4. Publicación IV

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2017	393	0.719	0.671	0.811	0.345	29	7.3	9.3	0.00...	0.118	100.00	0.03...	18.697
2016	290	0.607	0.607	0.625	0.156	32	7.8	9.5	0.00...	0.087	93.75	0.02...	20.638
2015	226	0.306	0.222	0.529	0.375	32	6.4	9.6	0.00...	0.063	100.00	0.01...	9.307
2014	141	0.053	0.053	0.243	0.207	29	7.8	7.9	0.00...	0.075	96.55	0.02...	1.116
2013	182	0.375	0.236	0.401	0.023	43	8.0	>10.0	0.00...	0.094	100.00	0.02...	23.973
2012	147	0.224	0.194	Not ...	0.545	33	7.0	>10.0	0.00...	Not ...	100.00	Not ...	11.187
2011	127	0.274	0.193	Not ...	0.205	39	>10.0	9.4	0.00...	Not ...	100.00	Not ...	15.291
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2014	222/224	Q4	1.116
2013	167/219	Q4	23.973
2012	195/219	Q4	11.187
2011	175/206	Q4	15.291
2010	141/184	Q4	23.641





# Changes in involvement in homework throughout compulsory secondary education / *Cambios en la implicación en los deberes escolares a lo largo de la Educación Secundaria Obligatoria*

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## Changes in involvement in homework throughout compulsory secondary education / *Cambios en la implicación en los deberes escolares a lo largo de la Educación Secundaria Obligatoria*

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(Received 20 May 2014; accepted 18 October 2016)

**Abstract:** This paper analyses the changes found in students' involvement in homework throughout the four grade levels of compulsory secondary education in Spain (ages 12–15). It also analyses the relationship between the changes in students' involvement in homework throughout schooling and motivational and emotional variables related to homework. Findings indicated that: (a) the amount of homework completed and homework time management diminished slightly throughout the grade levels researched; however, this result is clearer in terms of the amount of homework completed; (b) prior academic achievement is significantly related to the variables associated with students' involvement in homework; (c) the motivational and affective variables researched explained statistically significant variance related to two of the three dependent variables associated with involvement in homework; and (d) the association between the motivational and affective variables and involvement in homework is lower.

**Keywords:** homework; prior academic achievement; motivation; Spanish compulsory education

**Resumen:** En este trabajo se analizaron los cambios en la implicación de los estudiantes en la realización de los deberes escolares a lo largo de los cuatro cursos de la Educación Secundaria Obligatoria (ESO). Asimismo, se investigó la relación de dichos cambios con variables motivacionales y afectivas relativas a los deberes escolares. Los resultados obtenidos indicaron que: (a) hay una cierta tendencia a la disminución de la cantidad de deberes realizados, del aprovechamiento del tiempo y del tiempo dedicado a los deberes, aunque esta tendencia es más clara en el caso de la cantidad de deberes realizados (de los prescritos por los profesores); (b) el rendimiento académico previo se encuentra relacionado significativamente con el conjunto de variables vinculadas con la

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implicación en los deberes escolares; (c) las variables motivacionales y afectivas examinadas explican una cantidad de varianza estadísticamente significativa de al menos dos de las tres variables dependientes relativas a la implicación en los deberes escolares, (d) aunque la asociación entre las variables motivacionales y afectivas con la implicación en los deberes es más bien pequeña.

**Palabras clave:** deberes escolares; rendimiento académico; motivación; Educación Secundaria Obligatoria (ESO)

The amount and difficulty of homework that students face increases as they rise in grade level. This leads us to believe that their involvement in homework must also increase (Cooper & Valentine, 2001). However, previous research on this issue is not very consistent. While Xu (2007) suggests that involvement in homework is not related to grade level, other authors (e.g., Hong & Milgram, 2000; Hong, Peng, & Rowell, 2009) found that older students were less involved, persisted less and had less fun doing homework than younger students. A study conducted with the Spanish population (from fifth-grade level of primary school to fourth-grade level of compulsory secondary education) found that as students rose to higher grade levels they did less homework than what their teachers assigned and showed poorer time management (Núñez, Suárez, Cerezo et al., 2015).

Students' school engagement is a multidimensional concept. Fredricks, Blumenfeld, and Paris (2004) refer to at least three spheres comprising this involvement: behavioural engagement, emotional engagement and cognitive engagement. In turn, Trautwein, Lüdtke, Schnyder, and Niggli (2006) propose a model of involvement in homework which includes three agents in the educational system (students, parents and teachers), and in which the motivational and behavioural dimensions comprise student involvement in homework. In accordance with the objectives of this study, and based on that model, we suggest that the motivational dimension is directly related to the behavioural dimension. Therefore, we have considered three variables of the behavioural dimension of this model as actual student involvement in homework, namely the amount of homework assigned by teachers that the students actually do, the amount of time they spend doing this homework and how well they manage this time.

On the one hand, behavioural involvement alludes to effort, persistence, concentration and attention (Finn, Pannoza, & Voelkl, 1995), variables which are closely related to those of involvement in homework which we are examining in this study. On the other hand, emotional involvement refers to the interest, boredom, happiness or anxiety that students feel with regard to academics (Connell & Wellborn, 1991). We refer to some of these issues when studying the motivational variables and anxiety, variables which may be related to the change in involvement in homework throughout the grade levels.

***Variables related to involvement in homework: prior academic achievement, motivation and gender***

Generally speaking, most of the previous literature seems to support a positive relationship between doing homework and prior academic achievement (Cooper, 1989, 2007; Cooper & Valentine, 2001; Núñez, Suárez, Cerezo et al., 2015; Valle, Pan, Núñez et al., 2015). However, this relationship may be reciprocal.

Even though it seems clear that greater involvement in homework means greater academic achievement, the relationship between prior achievement and involvement in homework has not been studied to such an extent in secondary students. The experiences of academic success stemming from good performance and high involvement in homework must have major consequences motivationally, behaviourally and affectively. Thus, Goetz, Frenzel, Hall, and Pekrun (2008) showed that achievement in mathematics, evaluated in the previous academic year, positively predicted enjoyment of mathematics classes; they concluded that the better the prior achievement the higher the positive feelings towards the class. In the same sense, Pan et al. (2013) observed that the students with the highest levels of academic achievement in mathematics and English were the most intrinsically motivated to do homework.

Motivational variables can also largely determine students' involvement in homework (Valle, Pan, Regueiro, et al., 2015). Precisely during adolescence, the period which is studied in this research, motivational variables become particularly important. It has been proven that during this period of young lives, motivation is a powerful factor in the development of students' involvement in their academic life (Mahatmya, Lohman, Matjasko, & Farb, 2012) beyond their family, classmates, teachers and extracurricular activities.

Thus, when students do homework they can act in different ways according to their motivation, interest and attitude towards it, but also according to how useful they perceive this homework to be. Initially, they have to decide whether they do the homework, and later they are free to choose how much time and effort they invest in it. Subsequently, they still have to take decisions on when, how and with whom they will do it. All of these questions have major repercussions on the quality of the process of doing homework, which reveals that motivation and persistence when doing homework are likely to vary among students (Hong & Milgram, 2000), similar to the way their degree of involvement in doing this homework and its consequences on their prior academic achievement can also vary. Thus, students must adapt to the demands posed by doing homework, which requires them to not only plan goals and set priorities but also manage time, deal with distractions and exert control over their motivation and emotion (Núñez, Amieiro, Álvarez, García, & Dobarro, 2015; Valle, Regueiro, Rodríguez et al., 2015).

Finally, in addition to prior achievement and motivational variables, one of the variables that seems to be related to the variability in students' involvement in homework is gender. The results of previous studies show that girls tend to work on homework more, in a more planned fashion and

with greater effort (Younger & Warrington, 1996). Furthermore, they seem to do more homework than the assigned and spend more time doing it than their male classmates (Núñez, Suárez, Cerezo et al., 2015; Trautwein, 2007). They also use more strategies to do their homework (Xu, 2007) and better control their negative emotions towards the assignments than their male counterparts.

### ***Purpose of the study***

With this study, we aim to provide reliable information on changes in students' involvement in homework (amount of homework completed, amount of time spent on homework and homework time management) throughout the four grade levels in compulsory secondary education, a school grade level in which this change has never been studied in depth. We also seek to ascertain the motives associated with these changes. The data provided by this study may be useful in estimating the changes in involvement in homework according to the students' differences in terms of motivational and affective variables (intrinsic motivation, interest, perceived usefulness and anxiety) and gender. We shall also control for the possible effect of students' prior achievement.

## **Method**

### ***Participants***

A total of 899 students from 14 schools (12 public and two charter schools) from three provinces in northern Spain participated in the study. Of these schools, eight were located in urban areas and the others in semi-urban and rural areas. Of all the participants (whose ages range from 12 to 17), 51.7% are boys ( $n = 465$ ) and 48.3% are girls ( $n = 434$ ). Of them, 24.1% were in their first year of compulsory secondary school ( $n = 217$ ), 22.6% were in their second year ( $n = 203$ ), 22.5% were in their third year ( $n = 202$ ) and 30.8% were in their fourth year ( $n = 277$ ).

### ***Instruments***

To measure the variables associated with motivation and involvement in homework, we used the Survey on Homework (SH), a self-reporting survey that uses 61 items to evaluate different dimensions related to the effectiveness of homework in students' learning and academic achievement (Núñez, Suárez, Cerezo et al., 2015, Núñez, et al., 2015; Valle, Pan, Núñez et al., 2015, Valle, Regueiro, Estévez et al., 2015).

In order to get information on the motivational and affective variables related to homework, we chose the information contained in the SH on: (a) intrinsic motivation towards homework ( $\alpha = .85$ ) evaluated via eight items (e.g., 'I enjoy doing homework since it allows me to learn more'; 'doing homework helps me understand what is being taught in class'); (b) interest in homework ( $\alpha = .72$ ), which is evaluated via four items: 'I generally think that

homework is very interesting'; 'generally speaking, I hate homework'; 'I usually copy my homework from a classmate'; and 'I think that doing homework increases my interest in the classes'; and (c) anxiety regarding homework ( $\alpha = .80$ ), which is evaluated via four items: 'I get so nervous when I do homework that I don't remember what I've learned'; 'just thinking about homework makes me nervous'; 'when I do homework, I think about how badly I must be doing it'; and 'I find myself worried and unhappy when I do homework'. Each of these dimensions is comprised of the items mentioned, with responses on a five-point Likert scale ranging from 1 = 'totally false' to 5 = 'totally true'. Furthermore, we measured the dimension (d) perception of usefulness of homework ( $\alpha = .79$ ) via the item: 'my opinion on homework is that ...', in which the response options were on a five-point Likert scale from 'it's useless' to 'it's very useful'.

To ascertain the students' degree of involvement in homework, we also gathered information via the SH on the following variables: (a) *amount of homework students usually do*; (b) *amount of time spent on homework*; and (c) *homework time management*. The estimate of the amount of homework students do was gotten via the responses to an item on the amount of homework they usually do, using a five-point Likert scale (from 1 = 'none' to 5 = 'all').

Regarding the amount of time spent on homework ( $\alpha = .70$ ), the students responded to two items with the following statements: (a) 'How much time do you usually spend on homework every day from Monday to Friday?' and (b) 'How much time do you usually spend on homework on the weekends?' The response options in both items were the following: 1 = 'less than 30 minutes', 2 = 'from 30 minutes to one hour', 3 = 'from one hour to an hour and a half', 4 = 'from an hour and a half to two hours', 5 = 'more than two hours'.

Finally, the usefulness of the time they spent on homework ( $\alpha = .77$ ) was evaluated via the responses to three items: (a) 'when it's time to do homework, I find an excuse to leave it for later'; (b) 'when I'm doing my homework, I get distracted by anything around me'; and (c) 'when I begin to do homework, I concentrate and only think about finishing it'. The responses to these items were given on the following scale: 1 = 'always', 2 = 'almost always', 3 = 'sometimes', 4 = 'rarely' and 5 = 'never'.

The evaluation of *prior academic achievement* was assessed from the final marks of the participating students in Spanish, English and mathematics. These classes were chosen because they are three core classes found in all secondary school tracks and therefore students are always assigned homework. The mean achievement was calculated via the mean grades in all three classes.

### **Procedure**

The data were gathered during school time after obtaining consent from the school administration and the students' parents. The classrooms in each school were

chosen according to the availability of both the teachers and students. The variables on homework were gathered in the academic year 2013–14 and the variables related to prior academic achievement were from the final evaluation of the previous academic year (i.e., 2012–13).

### Data analysis

The data were analysed in two stages. The first stage was a multivariate analysis (MANCOVA) examining the relationship between the grade level (independent variable) and the three variables associated with involvement in homework (dependent variables). Prior achievement and gender were introduced as covariables (for the purposes of statistical control). In the second stage, new covariables were added to the previous design, namely intrinsic motivation, interest, perceived usefulness and anxiety regarding homework. As an effect size measure, we used the partial eta-squared coefficient ( $\eta_p^2$ ). To interpret the effect sizes, we used the criterion established in the classic study by Cohen (1988), based on which the effect is small when  $\eta_p^2 = .01$  ( $d = 0.20$ ), the effect is medium when  $\eta_p^2 = .059$  ( $d = 0.50$ ) and the effect is large if  $\eta_p^2 = .138$  ( $d = 0.80$ ).

## Results

### Differences in involvement in homework by grade level

Table 1 and Figure 1 show the descriptive data on these analyses. At a multivariate level, controlling for the effect of academic achievement, the results show statistically significant differences in the variables associated with involvement in homework by grade level ( $\lambda_{\text{Wilks}} = .895$ ,  $F(9, 2161) = 11.19$ ;  $p < .001$ ,  $\eta_p^2 = .036$ ) as well as by gender ( $\lambda_{\text{Wilks}} = .958$ ,  $F(3, 888) = 12.83$ ;  $p < .001$ ,  $\eta_p^2 = .042$ ). The gender and grade level interaction is not statistically significant. The effect sizes are small. As expected, prior academic achievement is significantly related to the

Table 1. Descriptive statistics (mean, standard deviation) from each of the grade levels in compulsory secondary school in the variables associated with *involvement in homework* and the covariables (*affective-motivational variables and prior academic achievement*).

	1st level		2nd level		3rd level		4th level		Total	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Amount of homework	4.45	0.83	4.31	0.91	3.92	1.00	3.76	1.03	4.10	0.99
Time spent	3.34	1.10	3.20	1.15	3.23	1.18	3.05	1.23	3.19	1.17
Homework time management	3.40	1.13	3.24	1.07	3.02	1.03	3.03	1.00	3.17	1.07
Intrinsic motivation	3.66	0.82	3.45	0.76	3.19	0.77	3.23	0.74	3.38	0.79
Interest	2.79	1.02	2.49	1.00	2.45	0.96	2.34	0.85	2.51	0.97
Perception of usefulness	3.52	1.10	3.31	1.04	3.28	1.07	3.22	0.92	3.32	1.03
Anxiety re: homework	1.67	0.13	1.64	0.83	1.62	0.76	1.52	0.68	1.61	0.77
Prior achievement	5.58	2.01	5.64	2.00	5.12	2.02	5.62	1.90	5.50	1.99

Note: The scale measuring prior achievement is from 1 to 10. In the other variables, it is from 1 to 5.

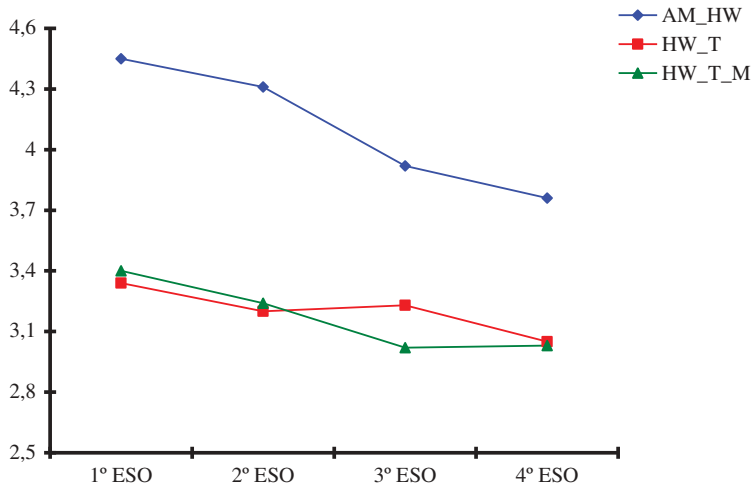


Figure 1. Graphic representation of the levels of the variables associated with involvement in homework (amount of homework completed [AM\_HW], time spent on homework [HW\_T] and homework time management [HW\_T\_M]) by grade level. [The scale measuring these variables is from 1 to 5].

set of variables associated with involvement in homework ( $\lambda_{\text{Wilks}} = .813$ ,  $F(3, 888) = 68.14$ ;  $p < .001$ ,  $\eta_p^2 = .187$ ), with a large effect size, which explains much of the variance in the dependent variables: *amount of homework completed* ( $F(1, 890) = 193.57$ ,  $p < .001$ ,  $\eta_p^2 = .179$ ), *time spent on homework* ( $F(1, 890) = 18.60$ ,  $p < .001$ ,  $\eta_p^2 = .020$ ) and *homework time management* ( $F(1, 890) = 41.83$ ,  $p < .001$ ,  $\eta_p^2 = .045$ ).

Statistically controlling for the effect of prior academic achievement, the results of the analysis indicated that there is still a significant amount of variance associated with grade level. Specifically, we observed the existence of statistically significant differences by grade level with regard to *amount of homework completed* ( $F(3, 890) = 31.60$ ,  $p < .001$ ,  $\eta_p^2 = .096$ ), *homework time management* ( $F(3, 890) = 6.07$ ,  $p < .001$ ,  $\eta_p^2 = .020$ ) and *time spent on homework* ( $F(3, 890) = 3.43$ ,  $p < .05$ ,  $\eta_p^2 = .011$ ). The effect size is medium in the amount of homework completed and small in the other two variables. Likewise, we could also see statistically significant differences by gender with regard to *homework time management* ( $F(1, 890) = 3.87$ ,  $p < .05$ ,  $\eta_p^2 = .004$ ) and *time spent on homework* ( $F(1, 890) = 30.54$ ,  $p < .001$ ,  $\eta_p^2 = .033$ ), but not in *amount of homework done*. In this sense, despite the less amount of time spent on homework, boys make better use of this time. The effect size is small.

### ***Relationship between involvement in homework, motivation and anxiety***

Controlling for the effect of academic achievement and the motivational and affective variables included in the model, the results of the MANCOVA



showed statistically significant differences by grade level in the three variables associated with involvement in homework taken as a whole ( $\lambda_{\text{Wilks}} = .924$ ,  $F(9, 2151) = 7.92$ ,  $p < .001$ ,  $\eta_p^2 = .026$ ) and by gender with regard to the three variables associated with involvement in homework taken as a whole ( $\lambda_{\text{Wilks}} = .965$ ,  $F(3, 884) = 10.74$ ,  $p < .001$ ,  $\eta_p^2 = .026$ ). However, the effect size is small in both cases.

Just as in the previous model, prior academic achievement is significantly related to all three variables associated with involvement in homework ( $\lambda_{\text{Wilks}} = .846$ ,  $F(3, 884) = 53.78$ ,  $p < .001$ ,  $\eta_p^2 = .154$ ), with a large effect size. Likewise, this relationship is also significant with each of the three variables taken individually: *time spent on homework* ( $F(1, 886) = 15.26$ ,  $p < .001$ ,  $\eta_p^2 = .017$ ), *homework time management* ( $F(1, 886) = 20.80$ ,  $p < .001$ ,  $\eta_p^2 = .023$ ) and *amount of homework completed* ( $F(1, 886) = 155.00$ ,  $p < .001$ ,  $\eta_p^2 = .149$ ).

With regard to the motivational and affective variables, the results indicate that they all predict a statistically significant amount of variance in the students' involvement in homework: *intrinsic motivation* ( $\lambda_{\text{Wilks}} = .967$ ,  $F(3, 884) = 9.93$ ,  $p < .001$ ,  $\eta_p^2 = .033$ ), *interest* ( $\lambda_{\text{Wilks}} = .982$ ,  $F(3, 884) = 5.35$ ,  $p < .001$ ,  $\eta_p^2 = .018$ ), *perceived usefulness* ( $\lambda_{\text{Wilks}} = .988$ ,  $F(3, 884) = 3.48$ ,  $p < .05$ ,  $\eta_p^2 = .012$ ) and *anxiety regarding homework* ( $\lambda_{\text{Wilks}} = .984$ ,  $F(3, 884) = 4.88$ ,  $p < .05$ ,  $\eta_p^2 = .016$ ). In all cases, the effect size is small.

From a univariate standpoint, the four motivational and affective variables explain a statistically significant amount of variance in at least two of the three dependent variables related to the students' involvement in homework. Thus, we found that *intrinsic motivation towards homework* significantly explains the variability in the amount of homework completed ( $F(1, 886) = 17.04$ ,  $p < .001$ ,  $\eta_p^2 = .019$ ) and in homework time management ( $F(1, 886) = 17.71$ ,  $p < .001$ ,  $\eta_p^2 = .020$ ); *interest in homework* is associated with all three dependent variables: amount of homework completed ( $F(1, 886) = 3.98$ ,  $p < .05$ ,  $\eta_p^2 = .004$ ), time spent on homework ( $F(1, 886) = 7.83$ ,  $p < .01$ ,  $\eta_p^2 = .009$ ) and homework time management ( $F(1, 886) = 8.76$ ,  $p < .01$ ,  $\eta_p^2 = .010$ ); the *perceived usefulness of homework* significantly explains the amount of homework completed ( $F(1, 886) = 7.40$ ,  $p < .01$ ,  $\eta_p^2 = .008$ ) and the time spent on homework ( $F(1, 886) = 6.66$ ,  $p < .01$ ,  $\eta_p^2 = .007$ ); and *anxiety towards homework* significantly explains both the time spent on homework ( $F(1, 886) = 5.76$ ,  $p < .05$ ,  $\eta_p^2 = .006$ ) and the use of this time ( $F(1, 886) = 6.37$ ,  $p < .05$ ,  $\eta_p^2 = .007$ ).

After having statistically controlled for the effect of prior achievement and the motivational and affective variables (considered in this study), we must still explain a significant amount of variance associated with the grade level with regard to the *amount of homework done* ( $F(3, 886) = 22.02$ ,  $p < .001$ ,  $\eta_p^2 = .069$ ), as well as the variance associated with gender in terms of time spent on homework ( $F(1, 886) = 26.19$ ,  $p < .001$ ,  $\eta_p^2 = .069$ ) and of the use of this time ( $F(1, 886) = 3.95$ ,  $p < .05$ ,  $\eta_p^2 = .004$ ), all of which have a medium effect size except the last one, which is small. [Figure 2](#) shows the mean values for each of these covariables.

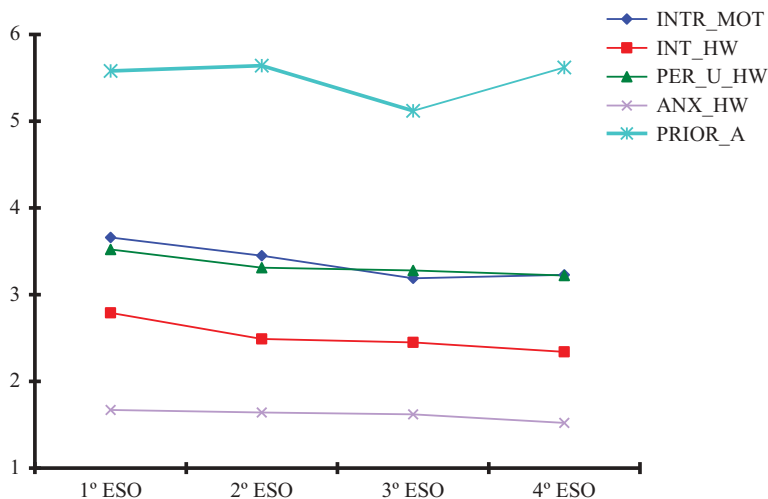


Figure 2. Graphic representation of the levels of the covariables (intrinsic motivation [INTR\_MOT], interest [INT\_HW], perception of usefulness [PER\_U\_HW], anxiety regarding homework [ANX\_HW] and prior academic achievement [PRIOR\_A]) by grade level. [The scale measuring prior achievement is from 1 to 10. In the other variables, it is from 1 to 5].

## Discussion

The results of the study reveal the existence of changes in students' levels of involvement in homework throughout the four grade levels in compulsory secondary school, as well as the modulating role played by the affective-motivational factors associated with those changes. In line with other studies (e.g., Bryan & Nelson, 1994; Hong et al., 2009; Núñez, Suárez, Cerezo et al., 2015), the data gathered seem to indicate that there is a downward tendency in the amount of homework completed, the use of the time and the amount of time spent on homework, even though this tendency is the clearest in terms of the amount of homework completed (of the amount assigned by the teacher).

On the other hand, the results also show that 18.7% of changes in students' involvement in homework over the grade levels in secondary school can be explained by the different levels of the students' prior academic achievement. More specifically, 17.9% of the changes over the grade levels in the amount of homework completed can be explained by the students' different levels of achievement; 4.5% of the changes in the use of the time can be explained by the different levels of achievement; and 2% of the changes in the time spent on homework can be explained by the different levels of achievement. However, once we have statistically controlled for this effect of previous achievement, we can still see variability associated with the grade level: 9.6% in the amount of homework completed, 2% in the homework time management and 1.1% in the amount of time spent on homework.

Likewise, we also found statistically significant differences by gender regarding the use of the time and the amount of time spent on homework. As expected based on previous research, girls seem to spend more time doing homework (Trautwein, 2007) even though, according to the results of this study, homework time management in girls is worse than boys.

If we momentarily invert the direction of the relationship and consider that (i) students that complete their homework tend to show better academic achievement than those who do not (Cooper, 1989, 2007; Cooper & Valentine, 2001), and (ii) that the effect of homework on academic achievement seems stronger in higher grade levels (Cooper, Jackson, Nye, & Lindsay, 2001), but (iii) that as students rise in secondary school the amount of homework completed drops as well as their academic achievement, then it seems clear that the changes in the three variables associated with involvement in homework throughout the four grade levels of secondary school have very negative consequences, especially for students with lower levels of prior academic achievement, since all indicators show that the lower their achievement, the less their involvement (Regueiro, Suárez, Valle, Núñez, & Rosário, 2015).

In this study, unlike others, we also analysed the importance of certain motivational and affective variables associated with the involvement in homework. The results indicate that intrinsic motivation towards homework explains 3.5% of the variance in the changes in involvement in homework throughout secondary school, anxiety explained 2.1%, interest 1.8% and perceived usefulness 1.3%. After controlling for the effects of academic achievement and the motivational and affective variables mentioned above, the grade level variable still explains 6.9% of the variance in the amount of homework done.

The scant effect of the motivational and affective variables in explaining changes in involvement in homework highlights the fact that it does not depend so much on how intrinsically interested in and motivated to do homework the students are, nor how useful they perceive this homework to be or the degree of anxiety doing homework makes them feel. Instead, it is primarily related to the levels of prior achievement. One possible explanation may be that much of the homework that students have to do is often boring, and therefore they do not view it as one of their favourite activities outside of school hours (Xu, 2008). Thus, the results in this study point in a similar direction as those by Eccles, Lord, Roeser, Barber, and Jozefowicz (1997), which found that there is a mismatch in secondary school between the new needs that emerge in adolescence and what the schools offer. Thus, adolescents, who require increasing levels of autonomy and more stimulating activities, find themselves in schools that offer an increasingly structured, closed curriculum which leads to activities that are not very stimulating and motivating. For this reason, homework is often viewed by students as a rote activity, and their attitudes towards it tend to become more negative as they rise in grade level (Bryan & Nelson, 1994; Cooper, Lindsay, Nye, & Greathouse, 1998) until they actually perceive it more as an imposition by their teachers

which they have to do to get good marks instead of a motivating, useful activity that helps them learn in a deep, meaningful way.

### ***Implications for education***

Despite the controversies and questions around the research into homework, the results of this study nonetheless allow us to draw certain implications for education. It is expected that as students rise in grade level, they become more aware of the process of doing homework, and this is why it is essential that before assigning homework the teachers reflect on its purpose so that the students are aware of it. Otherwise, the findings of this study will be confirmed, namely as the students rise in grade level their involvement will trail off, they will do less homework, they will spend less time on it and they will make less use of it, since they do not see what its purpose is.

On the other hand, regarding the findings of this study, if students' involvement drops as they rise in grade level and consequently so does their academic achievement, particularly for students whose prior academic achievement is lower, then homework assignments should be adapted to the knowledge, competencies, needs and interests of each student. Assigning the same amount, type and level of difficulty of homework for all students particularly harms those with lower achievement levels, less knowledge, less motivation and more difficulties. Given the importance of intrinsic motivation, interest and the perception of the usefulness in involvement in homework, it is essential that the activities assigned are a challenge for students. In order to stimulate and motivate them, homework must have a clear purpose and be useful for students. If they perceive homework as rote work that is useless and has no clear objective, their intrinsic motivation and interest will most likely diminish, as the results of this study show, and therefore so will their involvement. In addition to intrinsic motivation, interest and the perception of usefulness, anxiety also plays an important role, so homework should not be perceived as an imposition subjected to evaluation without clear criteria; rather these criteria should be clear and students should be aware of them. Thus, if we want to avoid a decline in involvement as the grade levels rise, teachers must communicate to students how the homework will be assessed and why they should or should not do the homework, as well as how they will assess whether or not the homework is done properly.

### ***Limitations and future research***

The results of this study should be interpreted bearing certain limitations in mind. First, this study is latitudinal, which is less efficient than longitudinal studies in capturing changes across time; secondly, the information gathered was not triangulated (only self-reporting was used). In future studies, it would be worthwhile to use an intra-method or even inter-method triangulation of data (to increase the quality and validity of the data), in the latter case

combining quantitative and/or qualitative methods. This would allow future studies to harness the strong points and palliate the limitations of weakness of each method, cross data and observe whether the same conclusions are reached.

We should also stress the use of self-reporting regarding the desirability of the responses that students provide; students respond based on what they say they do, although these responses were not compared to what they really do.

Even though the debates on the positive and negative effects of homework have been ongoing over the years, there still remain many questions to which research today is still struggling to providing clear, precise answers. For this reason, it is worthwhile to continue with future studies, since in most of them it is difficult to isolate the effects of homework as we cannot be certain which part of academic achievement is due to homework and which part is due to classroom teaching practices, the students' prior knowledge (Trautwein & Köller, 2003) and even other personal and family variables.

## Cambios en la implicación en los deberes escolares a lo largo de la Educación Secundaria Obligatoria

La cantidad de deberes a la que los alumnos se enfrentan aumenta a medida que avanzan de curso, al igual que su dificultad. Esto nos hace pensar que también la implicación en los deberes debería ser cada vez mayor (Cooper & Valentine, 2001). Sin embargo, la investigación previa al respecto no es muy consistente. Mientras que Xu (2007) sugiere que la implicación en los deberes no está relacionada con el curso, otros autores (e.g., Hong & Milgram, 2000; Hong, Pen, & Rowell, 2009) encontraron que los alumnos mayores estaban menos involucrados, persistían y se divertían menos haciendo los deberes que los alumnos más jóvenes. En un estudio realizado con población española (desde 5º de primaria hasta 4º de ESO) se obtuvo que al avanzar a cursos superiores los alumnos realizaban menos deberes de los prescritos por sus profesores y mostraban un peor aprovechamiento del tiempo (Núñez, Suárez, Cerezo et al., 2015).

La implicación académica (*school engagement*) de los estudiantes es un concepto multidimensional. Fredricks, Blumenfeld, y Paris (2004) hacen referencia al menos a tres ámbitos que componen esta implicación: conductual (*behavioural engagement*), emocional (*emotional engagement*) y cognitivo (*cognitive engagement*). Por su parte, Trautwein, Lüdtke, Schnyder, y Niggli (2006) proponen un modelo de implicación en los deberes en el cual tienen cabida los tres agentes del sistema educativo (estudiantes, padres y profesores) y en el que las dimensiones motivacional y conductual constituyen la implicación del alumno en estas tareas. De acuerdo con los objetivos de este trabajo, y basándonos en dicho modelo planteamos que la dimensión motivacional está relacionada directamente con la dimensión conductual. Por ello, hemos considerado como implicación del alumno en los deberes propiamente dicha, tres variables que forman parte de la dimensión conductual de este modelo. Éstas son, la cantidad de deberes que los alumnos realizan de los que los profesores les ponen, el tiempo que dedican a realizar esos deberes y el aprovechamiento de ese tiempo.

De un lado, la implicación conductual alude al esfuerzo, la persistencia, la concentración y la atención (Finn, Panno, & Voelkl, 1995), variables en estrecha relación con las de implicación en los deberes que abordamos en el presente estudio. De otra parte, la implicación emocional hace referencia al interés, aburrimiento, felicidad o ansiedad que se despierta en los estudiantes ante lo académico (Connell & Wellborn, 1991). A algunas de estas cuestiones nos referiremos al estudiar las variables motivacionales y la ansiedad, variables

que pueden estar relacionadas con el cambio en la implicación en los deberes a lo largo de los cursos.

### **Variables relacionadas con la implicación en los deberes escolares: rendimiento académico, motivación y género**

En términos generales, la mayor parte de la literatura previa parece apoyar una relación positiva entre hacer deberes y el rendimiento académico (Cooper, 1989, 2007; Cooper & Valentine, 2001; Núñez, Suárez, Cerezo et al., 2015; Valle, Pan, Núñez et al., 2015). Sin embargo, esta relación puede ser recíproca.

Si bien parece claro que a mayor implicación en los deberes mayor rendimiento académico, no se ha estudiado en igual medida la relación en estudiantes de Educación Secundaria entre rendimiento previo e implicación en los deberes. Las experiencias de éxito académico derivadas de un buen rendimiento y de una alta implicación en los deberes escolares debería tener consecuencias importantes a nivel motivacional, actitudinal y afectivo. Así, Goetz, Frenzel, Hall, y Pekrun (2008) demostraron que el rendimiento en Matemáticas, evaluado en el curso académico anterior, predecía positivamente el disfrute en las clases de Matemáticas, concluyendo que cuanto mejor era el rendimiento previo también aumentaban los sentimientos positivos hacia esta asignatura. En este mismo sentido, Pan et al. (2013) observaron que los estudiantes con los niveles más altos de rendimiento académico en Matemáticas y en Lengua Inglesa eran los más motivados intrínsecamente para hacer los deberes escolares.

Las variables de tipo motivacional pueden también determinar en gran medida la implicación de los alumnos en los deberes (Valle, Pan, Regueiro, et al., 2015). Precisamente durante la adolescencia, período que se estudia en este trabajo, las variables motivacionales adquieren especial relevancia. Se ha comprobado que en este periodo de la vida de los jóvenes, más allá de la familia, los compañeros, los profesores y las actividades extraescolares, la motivación es un factor poderoso en el desarrollo de la implicación de los alumnos en su vida académica (Mahatmya, Lohman, Matjasko, & Farb, 2012).

Así, cuando los estudiantes realizan los deberes escolares pueden actuar de diversas formas según su motivación, interés y actitud hacia ellos, pero también en función de cómo perciben de útiles esos deberes. Inicialmente, deben decidir si los hacen y luego queda a su libre elección el tiempo y el esfuerzo que dedicarán a ellos. Posteriormente, todavía deben tomar decisiones relativas a cuándo los harán, cómo y con quién, todas ellas cuestiones que tienen repercusiones importantes en la calidad del proceso de realización de los deberes, lo cual pone de manifiesto que la motivación y persistencia a la hora de hacer los deberes escolares variará de unos alumnos a otros (Hong & Milgram, 2000), de modo similar a cómo puede variar su grado de implicación en la realización de esos deberes y sus consecuencias sobre el rendimiento académico. De esta forma, los estudiantes deben ir adaptándose a las exigencias que marca la realización de los deberes, lo cual requiere no sólo planificar los objetivos y establecer prioridades, sino también gestionar el tiempo, hacer frente a las distracciones así como ejercer

un control de la motivación y de la emoción (Núñez, Amieiro, Álvarez, García, & Dobarro, 2015; Valle, Regueiro, Rodríguez et al., 2015).

Finalmente, además del rendimiento previo y las variables motivacionales, una de las variables que parece estar relacionada con la variabilidad en la implicación en los deberes es el género. Los resultados de investigaciones previas señalan que las chicas suelen trabajar más, de una forma más planificada y mostrando mayor esfuerzo ante los deberes (Younger & Warrington, 1996). Además, parece que realizan más cantidad de los deberes de los prescritos y emplean más tiempo en la realización de los mismos que sus compañeros (Núñez, Suárez, Cerezo et al., 2015; Trautwein, 2007), utilizan más estrategias para realizar los deberes (Xu, 2007) y controlan mejor que ellos sus emociones negativas ante tales tareas.

### ***Objetivo del estudio***

Con la presente investigación se trata de aportar información fiable sobre los cambios en la implicación de los estudiantes en la realización de los deberes escolares (cantidad de deberes realizados, tiempo dedicado a los deberes y aprovechamiento del tiempo) a lo largo de los cuatro cursos de la Educación Secundaria Obligatoria (ESO), etapa en la que no ha sido estudiado en profundidad este cambio, además de conocer los motivos asociados a esos cambios. Los datos proporcionados por este estudio pueden resultar de utilidad en la medida en que se estiman los cambios en la implicación en los deberes según las diferencias de los alumnos en cuanto a variables de tipo motivacional y afectivo (motivación intrínseca, interés, utilidad percibida y ansiedad) y al género. Todo ello controlando el posible efecto del rendimiento previo de los estudiantes.

### **Método**

#### ***Participantes***

En el estudio participaron 899 estudiantes pertenecientes a 14 centros educativos (12 públicos y dos concertados) de tres provincias del norte de España. De estos centros, ocho están ubicados en zonas urbanas y el resto lo están en zonas semi-urbanas y rurales. Del total de participantes (con edades que van de los 12 a los 17 años), el 51.7% son chicos ( $n = 465$ ) y el 48.3% son chicas ( $n = 434$ ). De ellos, el 24.1% cursaban 1º de ESO ( $n = 217$ ), el 22.6% cursaban 2º de ESO ( $n = 203$ ), el 22.5% cursaban 3º de ESO ( $n = 202$ ) y el 30.8% cursaban 4º de ESO ( $n = 277$ ).

#### ***Instrumentos***

Para medir las variables vinculadas con la motivación e implicación en los deberes escolares se utilizó la Encuesta sobre los Deberes Escolares (EDE), que es una encuesta auto-informe que evalúa diferentes dimensiones relativas a la eficacia de los deberes para el aprendizaje y el rendimiento académico de los alumnos (Núñez, Suárez, Cerezo et al., 2015, Núñez, et al., 2015; Valle, Pan, Núñez et al., 2015, Valle, Regueiro, Estévez et al., 2015) mediante 61 ítems.



Con la finalidad de disponer de información sobre las variables motivacionales y afectivas vinculadas con los deberes escolares se ha seleccionado la información recogida en la encuesta EDE relativa a: (a) motivación intrínseca hacia los deberes ( $\alpha = .85$ ), evaluada a través de ocho ítems (e.g., ‘disfruto haciendo los deberes pues me permiten aprender más’; ‘hacer los deberes me ayuda a comprender lo que se está dando en clase’); (b) interés por los deberes ( $\alpha = .72$ ), evaluado a través de cuatro ítems: ‘generalmente, pienso que los deberes son muy interesantes’; ‘en general, odio los deberes’; ‘normalmente copio los deberes de algún compañero’; y ‘creo que hacer los deberes aumenta mi interés por las asignaturas’; (c) ansiedad ante los deberes ( $\alpha = .80$ ), evaluada a través de cuatro ítems: ‘me pongo tan nervioso al hacer los deberes que no recuerdo las cosas que he aprendido’; ‘solo pensar en hacer los deberes me pone nervioso’; ‘cuando hago los deberes, pienso lo mal que debo estar haciéndolos’; y ‘al hacer los deberes me noto preocupado y disgustado’. Cada una de estas dimensiones está integrada por los ítems mencionados, con una escala tipo Likert de cinco alternativas que van desde 1 = ‘totalmente falso’ hasta 5 = ‘totalmente cierto’. Además, se midió la dimensión (d) percepción de utilidad de los deberes ( $\alpha = .79$ ), evaluada a través del ítem: ‘mi opinión sobre los deberes es que ...’ cuyas opciones de respuesta tipo Likert son cinco, desde ‘no sirven para nada’ hasta ‘son muy útiles’.

Para conocer el grado de implicación del alumnado en los deberes escolares, se recogió información también mediante la encuesta EDE de las siguientes variables: (a) *cantidad de deberes que realizan habitualmente los alumnos*; (b) *tiempo dedicado a los deberes*; y (c) *aprovechamiento del tiempo dedicado a los deberes*. La estimación de la cantidad de deberes realizados por los alumnos se obtuvo mediante las respuestas a un ítem relativo a la cantidad de deberes realizados habitualmente, utilizando una escala tipo likert con cinco alternativas (de 1 = ‘ninguno’ a 5 = ‘todos’).

En cuanto al tiempo diario dedicado a la realización de los deberes ( $\alpha = .70$ ), los estudiantes respondieron a dos ítems con los siguientes enunciados: (a) ‘¿cuánto tiempo sueles dedicar diariamente de lunes a viernes a la realización de los deberes?’; y (b) ‘¿cuánto tiempo sueles dedicar diariamente los fines de semana a la realización de los deberes?’ Las opciones de respuesta en ambos ítems fueron las siguientes; 1 = ‘menos de 30 minutos’, 2 = ‘de 30 minutos a una hora’, 3 = ‘de una hora a hora y media’, 4 = ‘de hora y media a dos horas’, 5 = ‘más de dos horas’.

Finalmente, el aprovechamiento del tiempo dedicado a los deberes ( $\alpha = .77$ ); se evaluó a través de las respuestas a tres ítems: (a) ‘cuando llega el momento de hacer los deberes, encuentro una excusa para dejarlos para más tarde’; (b) ‘cuando estoy haciendo los deberes me distraigo con cualquier cosa que hay a mi alrededor’; y (c) ‘cuando empiezo a hacer los deberes me concentro y no pienso en otra cosa hasta que termino’. La respuesta a estos ítems se ha obtenido de acuerdo con la siguiente escala: 1 = ‘siempre’, 2 = ‘casi siempre’, 3 = ‘a veces’, 4 = ‘casi nunca’, 5 = ‘nunca’.

La evaluación del *rendimiento académico previo* se obtuvo mediante las calificaciones académicas finales obtenidas por los alumnos participantes en Lengua Española, Lengua Inglesa y Matemáticas. Se seleccionaron estas asignaturas puesto que son las tres materias comunes en todas las modalidades en ESO y

al ser materias troncales los alumnos siempre suelen tener deberes de estas asignaturas. El rendimiento medio se calculó a través del promedio de las calificaciones en las tres materias mencionadas.

### ***Procedimiento***

Los datos referidos a las variables objeto de estudio fueron recogidos durante el horario escolar por colaboradores de la investigación, previo consentimiento del equipo directivo y de los padres de los alumnos. La elección de las aulas en cada centro se realizó en función de la disponibilidad que tenían en el momento de llevar a cabo la recogida de los datos tanto el profesorado como el alumnado. Las variables relativas a los deberes se obtuvieron en el curso 2013–14 y el rendimiento académico previo en la evaluación final del curso 2012–13.

### ***Análisis de datos***

Los datos fueron analizados en dos etapas. En primer lugar, a través de análisis multivariados (MANCOVAs) se examinó la relación entre el curso (variable independiente) y las tres variables vinculadas con la implicación en los deberes escolares (variables dependientes). El rendimiento previo y el género se introdujeron como covariables (a efectos de control estadístico). En la segunda etapa, al diseño anterior se incorporaron como nuevas covariables la motivación intrínseca, el interés, la utilidad percibida y la ansiedad ante los deberes. Como medida del tamaño del efecto se ha utilizado el coeficiente eta-cuadrado parcial ( $\eta_p^2$ ). Para la interpretación de los tamaños del efecto se utiliza el criterio establecido en el trabajo clásico de Cohen (1988), en base al cual, un efecto es pequeño cuando  $\eta_p^2 = .01$  ( $d = 0.20$ ), el efecto es medio cuando  $\eta_p^2 = .059$  ( $d = 0.50$ ) y el tamaño del efecto es grande si  $\eta_p^2 = .138$  ( $d = 0.80$ ).

## **Resultados**

### ***Diferencias en la implicación en los deberes escolares en función del curso***

En la [Tabla 1](#) y [Figura 1](#) se encuentran los datos descriptivos correspondientes a estos análisis. A nivel multivariado, controlando el efecto del rendimiento académico, los resultados mostraron diferencias estadísticamente significativas en función del curso en las variables vinculadas con la implicación en los deberes escolares ( $\lambda_{\text{Wilks}} = .895$ ,  $F(9, 2161) = 11.19$ ;  $p < .001$ ,  $\eta_p^2 = .036$ ) así como también en función del género ( $\lambda_{\text{Wilks}} = .958$ ,  $F(3, 888) = 12.83$ ;  $p < .001$ ,  $\eta_p^2 = .042$ ). La interacción género y curso no fue estadísticamente significativa. Los tamaños del efecto son pequeños. Tal como se preveía, el rendimiento académico previo se encuentra relacionado significativamente con el conjunto de variables vinculadas con la implicación en los deberes escolares ( $\lambda_{\text{Wilks}} = .813$ ,  $F(3, 888) = 68.14$ ;  $p < .001$ ,  $\eta_p^2 = .187$ ), con un tamaño del efecto grande, explicando una importante cantidad de varianza de las variables dependientes: *cantidad de deberes realizados* ( $F(1, 890) = 193.57$ ,  $p < .001$ ,  $\eta_p^2 = .179$ ), *tiempo dedicado a los deberes* ( $F(1, 890) = 18.60$ ,  $p < .001$ ,  $\eta_p^2 = .020$ ) y *aprovechamiento del tiempo dedicado a los deberes* ( $F(1, 890) = 41.83$ ,  $p < .001$ ,  $\eta_p^2 = .045$ ).

Tabla 1. Estadísticos descriptivos (media, desviación típica) correspondientes a cada uno de los cursos de ESO en las variables vinculadas con *la implicación en los deberes* y las covariables (*variables afectivo-motivacionales y rendimiento académico previo*).

	1º ESO		2º ESO		3º ESO		4º ESO		Total	
	M	DT	M	DT	M	DT	M	DT	M	DT
Cantidad deberes	4.45	0.83	4.31	0.91	3.92	1.00	3.76	1.03	4.10	0.99
Tiempo dedicado	3.34	1.10	3.20	1.15	3.23	1.18	3.05	1.23	3.19	1.17
Aprov. tiempo	3.40	1.13	3.24	1.07	3.02	1.03	3.03	1.00	3.17	1.07
Motivac. Intrínseca	3.66	0.82	3.45	0.76	3.19	0.77	3.23	0.74	3.38	0.79
Interés	2.79	1.02	2.49	1.00	2.45	0.96	2.34	0.85	2.51	0.97
Percep. Utilidad	3.52	1.10	3.31	1.04	3.28	1.07	3.22	0.92	3.32	1.03
Ansiedad deberes	1.67	0.13	1.64	0.83	1.62	0.76	1.52	0.68	1.61	0.77
Rendi. Previo	5.58	2.01	5.64	2.00	5.12	2.02	5.62	1.90	5.50	1.99

Nota: La escala de medida del rendimiento previo es de 1 a 10. En las otras variables es de 1 a 5.

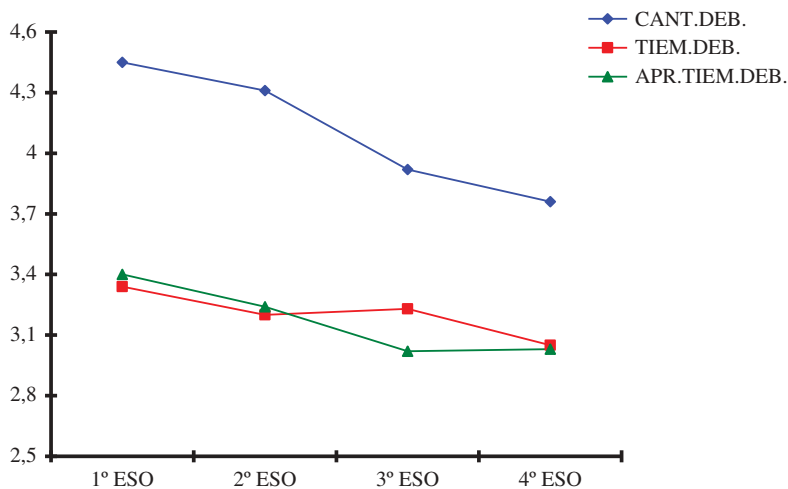


Figura 1. Representación gráfica de los niveles de las variables vinculadas con la implicación en los deberes escolares (cantidad de deberes realizados –CANT.DEB.–, tiempo dedicado a los deberes –TIEM.DEB.– y aprovechamiento del tiempo –APR.TIEM.DEB.–) según el curso. [La escala de medida de estas variables es de 1 a 5].

Controlado estadísticamente el efecto del rendimiento académico previo, los resultados de los análisis indicaron que todavía existe una cantidad significativa de varianza asociada al curso. En concreto, se observó la existencia de diferencias estadísticamente significativas en función del curso respecto de la *cantidad de deberes realizados* ( $F(3, 890) = 31.60, p < .001, \eta_p^2 = .096$ ), del *aprovechamiento del tiempo dedicado a los deberes* ( $F(3, 890) = 6.07, p < .001, \eta_p^2 = .020$ ) y del *tiempo dedicado a los deberes* ( $F(3, 890) = 3.43, p < .05, \eta_p^2 = .011$ ). El tamaño del efecto es medio en el caso de la cantidad de deberes realizados y pequeño en el caso de las otras dos variables. Asimismo, también se observó la existencia de

diferencias estadísticamente significativas en función del género respecto del *aprovechamiento del tiempo dedicado a los deberes* ( $F(1, 890) = 3.87, p < .05, \eta_p^2 = .004$ ) y del *tiempo dedicado a los deberes* ( $F(1, 890) = 30.54, p < .001, \eta_p^2 = .033$ ), pero no en función de la *cantidad de deberes realizados*. En este sentido, los chicos aprovechan mejor el tiempo dedicado a los deberes pero sin embargo dedican menos tiempo a la realización de los mismos. El tamaño del efecto es pequeño.

### ***Relación entre la implicación en los deberes escolares, la motivación y la ansiedad***

Controlando el efecto del rendimiento académico y de las variables motivacionales y afectivas incluidas en el modelo, los resultados del MANCOVA realizado evidenciaron diferencias estadísticamente significativas, en función del curso, respecto de las tres variables vinculadas con la implicación en los deberes escolares tomadas conjuntamente ( $\lambda_{\text{Wilks}} = .924, F(9, 2151) = 7.92, p < .001, \eta_p^2 = .026$ ) y en función del género, respecto de las tres variables vinculadas con la implicación en los deberes escolares tomadas conjuntamente ( $\lambda_{\text{Wilks}} = .965, F(3, 884) = 10.74, p < .001, \eta_p^2 = .026$ ). Sin embargo, el tamaño del efecto es pequeño en ambos casos.

Al igual que en el modelo anterior, el rendimiento académico previo se encuentra relacionado significativamente con el conjunto de las tres variables vinculadas con la implicación en los deberes ( $\lambda_{\text{Wilks}} = .846, F(3, 884) = 53.78, p < .001, \eta_p^2 = .154$ ), siendo el tamaño del efecto grande. Asimismo, esta relación también es significativa con cada una de las tres variables tomadas individualmente: *tiempo dedicado a los deberes* ( $F(1, 886) = 15.26, p < .001, \eta_p^2 = .017$ ), *aprovechamiento del tiempo dedicado a los deberes* ( $F(1, 886) = 20.80, p < .001, \eta_p^2 = .023$ ) y *cantidad de deberes realizados* ( $F(1, 886) = 155.00, p < .001, \eta_p^2 = .149$ ).

En relación al conjunto de las variables motivacionales y afectivas, los resultados obtenidos indicaron que todas ellas predicen una cantidad estadísticamente significativa de varianza de la implicación de los alumnos en los deberes escolares: *motivación intrínseca* ( $\lambda_{\text{Wilks}} = .967, F(3, 884) = 9.93, p < .001, \eta_p^2 = .033$ ), *interés* ( $\lambda_{\text{Wilks}} = .982, F(3, 884) = 5.35, p < .001, \eta_p^2 = .018$ ), *utilidad percibida* ( $\lambda_{\text{Wilks}} = .988, F(3, 884) = 3.48, p < .05, \eta_p^2 = .012$ ) y *ansiedad ante los deberes* ( $\lambda_{\text{Wilks}} = .984, F(3, 884) = 4.88, p < .05, \eta_p^2 = .016$ ). En todos los casos, el tamaño del efecto es pequeño.

Desde un punto de vista univariado, las cuatro variables motivacionales y afectivas explican una cantidad de varianza estadísticamente significativa de al menos dos de las tres variables dependientes relativas a la implicación del estudiante en los deberes escolares. Así, se obtuvo que la *motivación intrínseca hacia los deberes* explica significativamente la variabilidad en la cantidad de deberes realizados ( $F(1, 886) = 17.04, p < .001, \eta_p^2 = .019$ ) y en el aprovechamiento del tiempo dedicado a los deberes ( $F(1, 886) = 17.71, p < .001, \eta_p^2 = .020$ ); el *interés en los deberes escolares* está asociado con las tres variables

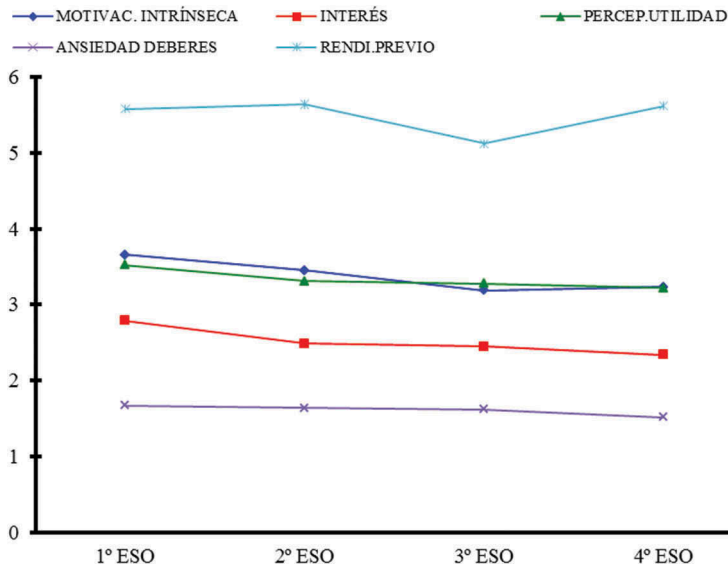


Figura 2. Representación gráfica de los niveles de las covariables (motivación intrínseca –MOTIVAC. INTRÍNSECA–, interés –INTERÉS–, percepción de utilidad –PERCEP. UTILIDAD–, ansiedad ante los deberes –ANSIEDAD.DEBERES– y rendimiento académico previo –RENDI.PREVIO–) según el curso. [La escala de medida del rendimiento previo es de 1 a 10. En las otras variables es de 1 a 5].

dependientes: cantidad de deberes realizados ( $F(1, 886) = 3.98, p < .05, \eta_p^2 = .004$ ), tiempo dedicado a los deberes ( $F(1, 886) = 7.83, p < .01, \eta_p^2 = .009$ ) y aprovechamiento del tiempo dedicado a los deberes ( $F(1, 886) = 8.76, p < .01, \eta_p^2 = .010$ ); la *utilidad percibida de los deberes escolares* explica significativamente la cantidad de deberes realizados ( $F(1, 886) = 7.40, p < .01, \eta_p^2 = .008$ ) y el tiempo dedicado a los deberes ( $F(1, 886) = 6.66, p < .01, \eta_p^2 = .007$ ) y la *ansiedad hacia los deberes escolares* explica significativamente tanto el tiempo dedicado a los deberes ( $F(1, 886) = 5.76, p < .05, \eta_p^2 = .006$ ) como el aprovechamiento del tiempo ( $F(1, 886) = 6.37, p < .05, \eta_p^2 = .007$ ).

Después de haber controlado estadísticamente el efecto del rendimiento previo y de las variables motivacionales y afectivas (consideradas en este estudio), queda por explicar una cantidad de varianza significativa asociada con el curso respecto de la *cantidad de deberes realizados* ( $F(3, 886) = 22.02, p < .001, \eta_p^2 = .069$ ), así como aquella asociada con el género respecto del tiempo dedicado a los deberes ( $F(1, 886) = 26.19, p < .001, \eta_p^2 = .069$ ) y del aprovechamiento del tiempo ( $F(1, 886) = 3.95, p < .05, \eta_p^2 = .004$ ), con un tamaño del efecto medio en todas ellas, excepto en la última que es pequeño. En la Figura 2 se puede observar los valores medios de cada una de las covariables.

## Discusión

Los resultados de este trabajo ponen de manifiesto la existencia de cambios en el nivel de implicación de los estudiantes en los deberes escolares a lo largo de los

cuatro cursos de ESO, así como también el papel modulador de las variables afectivo-motivacionales asociadas a dichos cambios. En consonancia con otras investigaciones (e.g., Bryan & Nelson, 1994; Hong et al., 2009; Núñez, Suárez, Cerezo et al., 2015), los datos recogidos parecen indicar que hay una cierta tendencia a la disminución de la cantidad de deberes realizados, del aprovechamiento del tiempo y del tiempo dedicado a los deberes, aunque esta tendencia es más clara en el caso de la cantidad de deberes realizados (de los prescritos por los profesores).

Por otra parte, los resultados encontrados indican que los cambios en la implicación en los deberes escolares a lo largo de los cursos de ESO son explicados en un 18.7% por los distintos niveles de rendimiento académico previo de los estudiantes. Más concretamente, los cambios a lo largo de los cursos en la cantidad de deberes realizados se explican en un 17.9% por los distintos niveles de rendimiento de los estudiantes, los cambios en el aprovechamiento del tiempo se explican en un 4.5% por los distintos niveles de rendimiento y los cambios en el tiempo dedicado a los deberes se explican en un 2% por los diferentes niveles de rendimiento. Sin embargo, una vez controlado estadísticamente este efecto del rendimiento previo, todavía se observó variabilidad asociada al curso: el 9.6% en la cantidad de deberes realizados, el 2% en el aprovechamiento del tiempo y el 1.1% en el tiempo dedicado a los deberes.

Asimismo, se observó la existencia de diferencias estadísticamente significativas en función del género respecto del aprovechamiento del tiempo y del tiempo dedicado a los mismos. Tal y como preveía la investigación previa, las chicas parecen emplear más tiempo en la realización de los deberes escolares (Trautwein, 2007) a pesar de que, según los resultados obtenidos en el presente estudio, aprovechan menos que los chicos ese tiempo empleado en los mismos.

Si por un momento invertimos el sentido de la relación, y asumimos que aquellos estudiantes que completan sus deberes suelen obtener mejor rendimiento académico que aquellos que no los completan (Cooper, 1989, 2007; Cooper & Valentine, 2001) y que el efecto de los deberes sobre el rendimiento académico también parece ser más fuerte en los cursos más altos (Cooper, Jackson, Nye, & Lindsay, 2001), pero si a medida que se avanza de curso en la ESO desciende la cantidad de deberes realizados y, en consecuencia, el rendimiento académico de los estudiantes, parece entonces evidente que los cambios que se producen en las tres variables vinculadas con la implicación en los deberes escolares a lo largo de los cuatro cursos de ESO tienen consecuencias muy negativas, sobre todo para aquellos estudiantes con los niveles más bajos de rendimiento académico previo, pues cuanto menos rinden todo parece indicar que menos se implicarán (Regueiro, Suárez, Valle, Núñez, & Rosário, 2015).

En el presente estudio, y a diferencia de otros, se analiza también la relevancia de algunas variables motivacionales y afectivas vinculadas con la implicación en los deberes escolares. Los resultados obtenidos indicaron que la motivación intrínseca hacia los deberes explicó un 3.5% de la varianza de los cambios en la implicación en los deberes escolares a lo largo de la ESO, la ansiedad un 2.1%, el

interés un 1.8% y la utilidad percibida un 1.3%. Controlados estadísticamente los efectos del rendimiento académico y de las variables motivacionales y afectivas mencionadas, todavía la variable curso explica un 6.9% de la varianza de la cantidad de deberes realizados.

La escasa aportación de las variables motivacionales y afectivas en la explicación de los cambios en la implicación en los deberes escolares pone de relieve que ésta no depende tanto de cómo estén los estudiantes de interesados y motivados intrínsecamente por los deberes, ni tampoco de cómo perciban de útiles esos deberes o del grado de ansiedad que les provoquen su realización, sino que está relacionados principalmente con los niveles de rendimiento previo. Una posible explicación podría residir en que muchos de los deberes que han de realizar los estudiantes les resultan, con frecuencia, aburridos y por ello no los ven como una de sus actividades preferidas fuera del horario escolar (Xu, 2008). Así, los resultados hallados en este estudio van en la misma dirección que los encontrados en los estudios clásicos de Eccles et al. (1997), según los cuales durante la Educación Secundaria se produce un desajuste entre las nuevas necesidades que surgen en la adolescencia y lo que la escuela ofrece. Así, un adolescente que requiere cada vez más autonomía y actividades más estimulantes se encuentra con una escuela que le ofrece un currículum cada vez más estructurado y cerrado, lo que conlleva a actividades poco estimulantes y poco motivantes. Es por ello por lo que los deberes son vistos con frecuencia por los estudiantes como una actividad rutinaria y sus actitudes hacia ellos suelen ser más negativas según van avanzando de curso (Bryan & Nelson, 1994; Cooper, Lindsay, Nye, & Greathouse, 1998), llegando a percibirlos más como una imposición de sus profesores que hay que realizar para obtener una buena nota que como una actividad motivadora, útil y favorecedora de aprendizajes profundos y significativos.

### ***Implicaciones educativas***

A pesar de las controversias e interrogantes existentes en torno a la investigación sobre los deberes escolares, los resultados de este estudio también permiten extraer algunas implicaciones educativas. Se espera que conforme los estudiantes avanzan de curso vayan siendo cada vez más conscientes del proceso de realización de los deberes escolares, y es por ello por lo que se hace necesario que antes de prescribir los deberes el profesorado debe reflexionar sobre cuál es el propósito de esos deberes para que los estudiantes sean conocedores de dichos propósitos, de lo contrario se confirmará lo que se indica en el presente estudio, en el cual según avanzan de curso su implicación empeorará, harán menos deberes, les dedicarán menos tiempo y este lo aprovecharán peor, ya que no comprenden cuál es su finalidad.

Por otro lado, y respecto de lo que el presente estudio indica, si a medida que se avanza de curso descende esta implicación y, en consecuencia, el rendimiento académico de los estudiantes sobre todo para aquellos estudiantes con peores niveles de rendimiento académico previo, entonces la prescripción de deberes debe estar adaptada a los conocimientos, competencias, necesidades e intereses de cada estudiante. El diseño de la misma cantidad, modalidad y nivel de dificultad de los deberes para todos los estudiantes es una medida que perjudica especialmente a aquellos que tienen

peores niveles de rendimiento, menos conocimientos, que están menos motivados o incluso para aquellos que tienen mayores dificultades. Viendo la importancia que tiene la motivación intrínseca, el interés y la percepción de utilidad en la implicación se hace necesario que las actividades asignadas constituyan un reto para los estudiantes. Con la finalidad de estimularlos y motivarlos, los deberes escolares deben tener un propósito claro y ser útiles para los estudiantes. Si ellos perciben los deberes como un trabajo rutinario, sin apenas utilidad y sin ningún objetivo claro, lo más probable es que su motivación intrínseca e interés por ellos tienda a disminuir, como los resultados de este estudio indican, y por lo tanto también lo hará su implicación en los mismos. Además de la motivación intrínseca, el interés y la percepción de utilidad, también la ansiedad juega un papel importante, por lo que los deberes no deberían prescribirse como una imposición sujeta a una evaluación sin criterios, sino que estos deberían ser claros y conocidos por los estudiantes. Así, si queremos evitar esta disminución en la implicación según se avanza de curso entonces los profesores deben transmitirle al alumnado cómo se valora y por qué el completar o no los deberes y también cómo se valora si los deberes se hacen o no correctamente.

### ***Limitaciones y futuras investigaciones***

Los resultados de este estudio deben interpretarse teniendo en cuenta ciertas limitaciones. Por un lado, está el carácter trasversal del estudio realizado, el cual resulta menos eficiente que los estudios de tipo longitudinal, y por otro lado, está la falta de triangulación de la información recogida (únicamente se utilizaron auto-informes). En futuras investigaciones sería interesante una triangulación intramétodo (pues de esta forma se incrementaría la calidad y validez de los datos) o incluso entre métodos, combinando métodos cuantitativos y/o cualitativos. Esto nos permitiría en futuros estudios utilizar los puntos fuertes y paliar las limitaciones o debilidades de cada uno de ellos, cruzar datos u observar si se llega a las mismas conclusiones.

También hay que destacar el uso de auto-informes en lo que respecta a la deseabilidad de las respuestas que dan los estudiantes o a que los estudiantes responden en base a lo que dicen que hacen, pero que no se contrasta lo que ellos indican con lo que realmente hacen.

Aunque los debates en torno a los efectos positivos y negativos de los deberes escolares han sido constantes a lo largo de los años, aún continúa habiendo numerosos interrogantes a los que la investigación actual todavía no es capaz de dar una respuesta clara y precisa. Por ello, resulta interesante continuar con futuras investigaciones, pues en la mayor parte de los estudios realizados es difícil aislar los efectos de los deberes, ya que no podemos estar seguros de qué parte del éxito académico se debe a los deberes escolares y qué parte se debe a los procesos de enseñanza que se dan en el aula, a los conocimientos previos del estudiante (Trautwein & Köller, 2003) o incluso a otras variables personales y familiares.

### **Disclosure statement**

No potential conflict of interest was reported by the authors. / *Los autores no han referido ningún potencial conflicto de interés en relación con este artículo.*



**References / Referencias**

- Bryan, T., & Nelson, C. (1994). Doing homework: Perspectives of elementary and junior high school students. *Journal of Learning Disabilities, 27*, 488–499. doi:10.1177/002221949402700804
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-esteem processes. In M. R. Gunnar, & L. A. Sroufe (Eds.), *Self-processes in development: Minnesota symposium on child psychology* (Vol. 23, pp. 167–216). Hillsdale, NJ: Erlbaum.
- Cooper, H. (1989). *Homework*. White Plains, NY: Longman.
- Cooper, H. (2007). *The battle over homework: Common ground for administrators, teachers, and parents*. Thousand Oaks, CA: Corwin Press.
- Cooper, H., Jackson, K., Nye, B., & Lindsay, J. J. (2001). A model of homework's influence on the performance evaluations of elementary school students. *Journal of Experimental Education, 69*, 181–199. doi:10.1080/00220970109600655
- Cooper, H., Lindsay, J. J., Nye, B., & Greathouse, S. (1998). Relationships among attitudes about homework, amount of homework assigned and completed, and student achievement. *Journal of Educational Psychology, 90*, 70–83. doi:10.1037/0022-0663.90.1.70
- Cooper, H., & Valentine, J. (2001). Using research to answer practical questions about homework. *Educational Psychologist, 36*, 143–153. doi:10.1207/S15326985EP3603\_1
- Eccles, J., Lord, S., Roeser, R., Barber, B., & Jozefowicz, D. (1997). The association of school transitions in early adolescence with developmental trajectories through high school. In J. Schulenberg, & J. L. M. K. Hurrelmann (Eds.), *Health risks and developmental transitions during adolescence* (pp. 283–321). New York, NY: Cambridge University Press.
- Finn, J. D., Panno, G. M., & Voelkl, K. E. (1995). Disruptive and inattentive-withdrawn behavior and achievement among fourth graders. *The Elementary School Journal, 95*, 421–454. doi:10.1086/461853
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*, 59–109. doi:10.3102/00346543074001059
- Goetz, T., Frenzel, A. C., Hall, N. C., & Pekrun, R. (2008). Antecedents of academic emotions: Testing the internal/external frame of reference model for academic enjoyment. *Contemporary Educational Psychology, 33*, 9–33. doi:10.1016/j.cedpsych.2006.12.002
- Hong, E., & Milgram, R. M. (2000). *Homework: Motivation and learning preference*. Westport, CT: Bergin & Garvey.
- Hong, E., Peng, Y., & Rowell, L. L. (2009). Homework self-regulation: Grade, gender, and achievement-level differences. *Learning and Individual Differences, 19*, 269–276. doi:10.1016/j.lindif.2008.11.009
- Mahatmya, D., Lohman, B. J., Matjasko, J. L., & Farb, A. F. (2012). Engagement across developmental periods. In S. L. En, A. L. R. Christenson, & C. Wylie (Eds.), *Handbook of research on students' engagement* (pp. 45–63). New York, NY: Springer.
- Núñez, J. C., Amieiro, N., Álvarez, D., García, T., & Dobarro, A. (2015). Escala de evaluación de la autorregulación del aprendizaje a partir de textos (ARATEX-R). *European Journal of Education and Psychology, 8*, 9–22. doi:10.1016/j.ejeps.2015.10.002
- Núñez, J. C., Suárez, N., Cerezo, R., González-Pienda, J. A., Rosário, P., Mourão, R., & Valle, A. (2015). Homework and academic achievement across Spanish Compulsory Education. *Educational Psychology, 35*, 726–746. doi:10.1080/01443410.2013.817537

- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Cerezo, R., & Valle, A. (2015). Teachers' feedback on homework, homework-related behaviors and academic achievement. *The Journal of Educational Research*, *108*, 204–216. doi:10.1080/00220671.2013.878298
- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Valle, A., & Epstein, J. L. (2015). Relationships between perceived parental involvement in homework, student homework behaviors and academic achievement: Differences among elementary, junior high and high school students. *Metacognition and Learning*, *10*, 375–406. doi:10.1007/s11409-015-9135-5
- Pan, I., Regueiro, B., Ponte, B., Rodríguez, S., Piñeiro, I., & Valle, A. (2013). Motivación, implicación en los deberes escolares y rendimiento académico. *Aula Abierta*, *41*(3), 13–22.
- Regueiro, B., Suárez, N., Valle, A., Núñez, J. C., & Rosário, P. (2015). La motivación e implicación en los deberes escolares a lo largo de la escolaridad obligatoria. *Revista de Psicodidáctica*, *20*, 47–63. doi:10.1387/RevPsicodidact.12641
- Trautwein, U. (2007). The homework-achievement relation reconsidered: Differentiating homework time, homework frequency, and homework effort. *Learning and Instruction*, *17*, 372–388. doi:10.1016/j.learninstruc.2007.02.009
- Trautwein, U., & Köller, O. (2003). The relationship between homework and achievement—still much of a mystery. *Educational Psychology Review*, *15*, 115–145. doi:10.1023/A:1023460414243
- Trautwein, U., Lüdtke, O., Schnyder, I., & Niggli, A. (2006). Predicting homework effort: Support for a domain-specific, multilevel homework model. *Journal of Educational Psychology*, *98*, 438–456. doi:10.1037/0022-0663.98.2.438
- Valle, A., Pan, I., Núñez, J. C., Rosário, P., Rodríguez, S., & Regueiro, B. (2015). Deberes escolares y rendimiento académico en Educación Primaria. *Anales de Psicología*, *31*, 562–569. doi:10.6018/analesps.31.2.171131
- Valle, A., Pan, I., Regueiro, B., Suárez, N., Tuero, E., & Nunes, R. (2015). Predicting approach to homework in Primary school students. *Psicothema*, *27*, 334–340.
- Valle, A., Regueiro, B., Estévez, I., Piñeiro, I., Rodríguez, S., & Freire, C. (2015). Implicación y motivación hacia los deberes escolares en los estudiantes de Primaria según el rendimiento académico y el curso. *European Journal of Investigation in Health, Psychology and Education*, *5*, 345–355.
- Valle, A., Regueiro, B., Rodríguez, S., Piñeiro, I., Freire, C., Ferradás, M., & Suárez, N. (2015). Perfiles motivacionales como combinación de expectativas de autoeficacia y metas académicas en estudiantes universitarios. *European Journal of Education and Psychology*, *8*, 1–8. doi:10.1016/j.ejeps.2015.10.001
- Xu, J. (2007). Middle-school homework management: More than just gender and family involvement. *Educational Psychology*, *27*, 173–189. doi:10.1080/01443410601066669
- Xu, J. (2008). Models of secondary school students' interest in homework: A multilevel analysis. *American Educational Research Journal*, *45*, 1180–1205. doi:10.3102/0002831208323276
- Younger, M., & Warrington, M. (1996). Differential achievement of girls and boys at GCSE: Some observations from the perspective of one school. *British Journal of Sociology of Education*, *17*, 299–313. doi:10.1080/0142569960170304

### 5.1.5. Publicación V

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Year	Total Cites	Journal Impact Factor	Impact Factor Without Journal Self Cites	5 Year Impact Factor	Immediacy Index	Citable Items	Cited Half-Life	Citing Half-Life	Eigenfactor Score	Article Influence Score	% Articles in Citable Items	Normalizer Eigenfactor	Average JIF Percentile
2017	2,330	1.867	1.808	2.287	0.614	70	>10.0	>10.0	0.00...	0.719	95.71	0.40...	66.296
2016	1,876	1.778	1.706	1.903	0.550	60	10.0	>10.0	0.00...	0.629	100.00	0.34...	63.178
2015	1,629	1.276	1.237	1.422	0.833	60	>10.0	>10.0	0.00...	0.536	98.33	0.29...	58.527
2014	1,374	1.198	1.172	1.229	0.379	66	>10.0	>10.0	0.00...	0.466	96.97	0.24...	54.651
2013	1,213	1.226	1.190	1.327	0.353	119	>10.0	>10.0	0.00...	0.467	99.16	0.17...	60.853
2012	1,096	0.632	0.609	1.485	0.140	43	>10.0	>10.0	0.00...	0.599	95.35	Not ...	29.762
2011	1,039	0.404	0.362	1.097	0.073	41	>10.0	>10.0	0.00...	0.415	97.56	Not ...	22.000
2010	1,023	1.087	1.053	1.117	0.304	46	>10.0	>10.0	0.00...	0.422	100.00	Not ...	50.417
2009	967	1.338	1.323	1.257	0.400	40	>10.0	>10.0	0.00...	0.470	95.00	Not ...	59.375
2008	820	0.833	0.697	1.000	0.704	27	9.8	9.0	0.00...	0.344	100.00	Not ...	48.020
2007	649	0.272	0.239	0.763	0.632	38	>10.0	9.9	0.00...	0.347	100.00	Not ...	14.216
2006	715	0.571	0.482	Not ...	0.017	58	>10.0	>10.0	Not ...	Not ...	98.28	Not ...	36.869
2005	603	0.648	0.648	Not ...	0.059	34	>10.0	>10.0	Not ...	Not ...	97.06	Not ...	49.010
2004	550	0.587	0.571	Not ...	0.136	22	>10.0	>10.0	Not ...	Not ...	90.91	Not ...	45.500

**Source Data**

**Rank**

**Cited Journal Data**

**Citing Journal Data**

**Box Plot**

**Journal Relationships**

**JCR Impact Factor**

JCR Year	PSYCHOLOGY, MULTIDISCIPLINARY		
	Rank	Quartile	JIF Percentile
2017	46/135	Q2	66.296
2016	48/129	Q2	63.178
2015	54/129	Q2	58.527
2014	59/129	Q2	54.651
2013	51/129	Q2	60.853
2012	89/126	Q3	29.762
2011	98/125	Q4	22.000
2010	60/120	Q2	50.417
2009	46/112	Q2	59.375
2008	53/101	Q3	48.020
2007	88/102	Q4	14.216
2006	63/99	Q3	36.869
2005	52/101	Q3	49.010

## Motivational profiles in high school students: Differences in behavioural and emotional homework engagement and academic achievement

Bibiana Regueiro<sup>1</sup>, José C. Núñez<sup>2</sup>, Antonio Valle<sup>1</sup>, Isabel Piñeiro<sup>1</sup>, Susana Rodríguez<sup>1</sup>, and Pedro Rosário<sup>3</sup>

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This work examined whether combinations of academic and non-academic goals generated different motivational profiles in high school students. Besides, differences in homework behavioural engagement (i.e. amount of homework, time spent in homework, homework time management), homework emotional engagement (i.e. homework anxiety) and academic achievement were analysed. Participants were 714 high school students (43.4% boys and 56.6% girls). The study of potential motivational profiles was conducted by latent profile analysis, and the differences between the motivational profiles regarding homework variables and academic achievement were analysed using multivariate analysis. The results indicate the existence of five groups of motivational profiles: a group of students with multiple goals, a group of unmotivated students, two groups of students with a predominance of learning goals and, finally, a group comprising students with a high fear of failure. Both the group with multiple goals and the learning goals-oriented groups reported to do more homework, spending more time on homework, making better use of that time and having a higher academic achievement than counterparts. The avoidance-failure group and the group with multiple goals showed higher levels of homework anxiety. Globally, these results provide support for a person-centred approach.

**Keywords:** Motivational profiles; Homework; Academic achievement; Secondary education.

Many researchers have been examining the impact of motivation on student engagement and academic achievement under the academic goals theory (Hulleman, Schrager, Bodmann, & Harackiewicz, 2010). Extant literature presents the construct “academic goals” as the most prolific in the area of motivation with regard to categories and subcategories (Murphy & Alexander, 2000). In fact, students pursue different types of goals in their learning processes, and these can be understood from different perspectives depending on the theoretical perspectives (Dweck & Leggett, 1988). In the early stages of research, a dichotomous framework distinguishing between learning goals and performance goals was currently used. In the beginning of the twenty-first century, Elliot and McGregor (2001) proposed the 2 × 2 model of academic

goals, which divided learning and performance goals into two goals focusing on approach and avoidance. The study of different goals, taken individually, resulted in a *variable-centred approach*.

However, in recent years, several researchers on achievement goals have chosen a *person-centred approach*, whose interest focuses on how individuals combine the different goals to motivate their behaviour (e.g. Bråten & Olaussen, 2005; Tuominen-Soini, Salmela-Aro, & Niemivirta, 2008, 2011; Valle et al., 2003, 2010; Valle, Núñez, et al., 2015; Valle, Regueiro, Rodríguez, et al., 2015). Both approaches have made important contributions to understand the human motivation; still, some authors (e.g. Schwinger, Steinmayr, & Spinath, 2012) consider that a person-centred approach

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involves a more realistic view and allows the integration, within the same perspective, of the amount and quality of motivated behaviour.

The person-centred approach, also called the *multiple goals* perspective (Suárez, Cabanach, & Valle, 2001; Tuominen-Soini et al., 2008, 2011; Valle et al., 2003, 2010; Valle, Núñez, et al., 2015; Valle, Regueiro, Rodríguez, et al., 2015), assumes that students can combine learning goals, social goals and performance goals. These combinations are likely to vary (e.g. harmony or conflict, change over time) depending on the context. However, research lacks information about how different goals are articulated and integrated within the same student. For example, whether students combine goals simultaneously, or conversely, they alternate between goals during a specific task (Harackiewicz & Linnenbrink, 2005; Wormington & Linnenbrink-Garcia, 2016).

This approach implies that individuals who display similar combinations of motivation can be grouped together to identify common patterns of goal endorsement (i.e. *goal profiles*) and thus, facilitate a clearer understanding of which combinations of goals typically emerge in a population and are worth studying (Wormington & Linnenbrink-Garcia, 2016). Therefore, a person-centred approach focuses on particular combinations of motivational variables within individuals or groups of students, rather than taking each variable itself as the focal point (Hayenga & Corpus, 2010).

Although most research has focused on academic goals, it currently also takes into account social goals (e.g. need for others' respect, avoidance of significant others' rejection), assuming that maintaining social goals and successful peer relationships can encourage students to become more involved in learning and achieve higher grades (Wentzel, 2005).

Consequently, four categories of goals were considered (Núñez, González-Pienda, González-Pumariega, García, & Roces, 1997): (a) task-related goals (goals to acquire competence and control, and study goals due to interest in the subjects); (b) goals related to self-worth, expressing the pride and satisfaction following success or avoiding the "shame" that accompanies failure (study goals to defend the ego, work-avoidance goals to defend the ego and study goals to seek self-aggrandisement); (c) social assessment goals (study social goals to achieve recognition, and study goals due to the desire for a worthy future job); and (d) goals related to achieving external rewards or avoiding punishment (study goals to avoid punishment).

The relationships between the motivational and cognitive variables involved in learning have been mostly studied focusing on the work done in class. In fact, little attention has been paid to the relationships among

these variables throughout the process of doing homework (Valle, Regueiro, Estévez, et al., 2015). In order to succeed in doing homework, students are expected to self-regulate their homework behaviours (e.g. set homework goals, select learning strategies, sustain motivation, monitor progress and assess outcomes). Thus, similarly to what takes place in the classroom, students face homework considering the reasons and motives for doing it (Regueiro, Rodríguez, et al., 2015), as well as their self-set goals.

One of the areas where students' self-regulation play a dominant role is the management of time spent on homework, because good time management can have a positive influence on academic achievement (Claessens, Van Eerde, Rutte, & Roe, 2007). In sum, research has generated important findings about the variables associated with homework engagement and its relationship with academic achievement. For example, research indicates the amount of homework completed as the variable that best predicts academic achievement (e.g. Valle, Pan, Núñez, et al., 2015). Still, there is much controversy about the appropriate amount of homework to be done.

Moreover, the experiences of academic success and high homework engagement have important consequences at the motivational, behavioural and affective level (Regueiro, Suárez, Valle, Núñez & Rosário, 2015). In fact, the students who do more homework are likely to show higher perceived competence (Zimmerman & Kitsantas, 2005).

Our purposes are twofold. The first, as observed in other studies (e.g. Bråten & Olaussen, 2005; Tuominen-Soini et al., 2008, 2011; Valle et al., 2003, 2010; Valle, Núñez, et al., 2015; Valle, Regueiro, Rodríguez, et al., 2015), is to analyse whether combinations of academic and non-academic goals generate distinct *motivational profiles* in high school students. The second goal is to investigate whether there are significant differences among the groups in the following variables: student behavioural and emotional homework engagement and academic achievement.

This study adds literature in two ways. First, by generating motivational profiles as a combination of different types of goals (e.g. learning and performance goals and other goals such as social, and instrumental goals) using latent profile analysis (LPA). In addition, our study opens a new line for homework research under the framework of the person-centred approach.

## METHOD

### Participants

Participants were 714 students (aged between 12 and 16 years;  $M = 13.54$ ,  $SD = 1.17$ ) of Compulsory Secondary Education (CSE) from 14 centres in three



provinces in the north of Spain, 12 of which are public and 2 charter schools. Half of the schools are located in urban areas, and the other half are in rural or semi-urban areas. Of all the participants (43.4% boys and 56.6% girls), 26.6% were in first grade of CSE, 20.8% were second graders, 24.9% were third graders and 27.7% were fourth graders.

## Instruments

Academic goals were assessed with the *Cuestionario para la Evaluación de Metas Académicas en Secundaria (CEMA-II; Questionnaire for the Assessment of Academic Goals in Secondary School)*. This instrument (Núñez et al., 1997) differentiates the following types of goals: *study engagement goals to acquire competence and control* (e.g. “I make an effort in my studies because the learnings enable me to be more competent”); *study goals due to interest in subjects* (e.g. “I make an effort in my studies because what I’m studying is very interesting”); *study goals to defend the ego—performance-avoidance goals—*(e.g. “I make an effort in my studies because I don’t want my classmates to make fun of me”); *work-avoidance goals to defend the ego* (e.g. “I avoid working in class if I see that I will be the worst”); *study goals to seek self-aggrandisement—performance-approach goals—*(e.g. “I make an effort in my studies because I want to have one of the best records of my promotion”); *study goals to acquire social recognition* (e.g. “I make an effort in my studies because I want the people who matter most to me to feel proud of me”); *study goals due to the desire for a worthy future job* (e.g. “I make an effort in my studies because I want to get a good job in the future”); *study goals to avoid punishment* (e.g. “I make an effort in my studies because I want to avoid the punishment I would receive if I don’t get good outcomes”). The reliability indexes (Cronbach’s alpha) ranged from .75 for the factor “work-avoidance goals for ego-defence” to .87 for the factor “goals focused on interest in the subjects.” This questionnaire comprises 42 items rated on a Likert-type response format, ranging from 1 (*never*) to 5 (*always*).

To measure the variables related to homework behavioural and emotional engagement, we used the *Encuesta sobre los Deberes Escolares (EDE; School Homework Survey)*, a scale that assesses different dimensions related to the effectiveness of homework for learning and students’ academic achievement (see Núñez et al., 2015; Valle, Pan, Núñez, et al., 2015; Valle, Pan, Regueiro, et al., 2015).

To assess behavioural homework engagement, we collected information about the following variables: (a) *amount of homework the students habitually did*; (b) *time*

*dedicated to homework*; and (c) *homework time management*. The estimate of the amount of homework done by students was obtained through responses to an item about the amount of homework usually done, using a 5-point Likert-type scale (1 = *none*, 2 = *some*, 3 = *one half*, 4 = *almost all*, 5 = *all*).

Regarding the daily time dedicated to homework, students responded to three items (in general, during a typical week and on a typical weekend) with the general formulation “How much time do you usually spend doing homework?”, with the following response options: 1 (*less than 30 minutes*), 2 (*30 minutes to 1 hour*), 3 (*between 1 hour and 1-1/2 hours*), 4 (*between 1-1/2 hours to 2 hours*) and 5 (*more than 2 hours*) ( $\alpha = .72$ ).

Homework time management was measured through students’ responses to three items (in general, during a typical week and on a typical weekend) on which they were requested to indicate their regular level of homework-time optimisation on a 5-point Likert-type scale with the following options: 1 = *I don’t optimise it at all (I am continually distracted by everything)*, 2 = *I don’t optimise it as much as I should*, 3 = *regular*, 4 = *I optimise pretty much*, 5 = *I optimise it completely (I concentrate and until I am finished, I don’t think about anything else)* ( $\alpha = .78$ ).

Emotional homework engagement was assessed using the variable *homework anxiety* due to its importance in homework process. A dimension comprising four items (e.g. “just thinking about homework makes me nervous”) with a 5-point Likert-type scale ranging from 1 (*totally false*) to 5 (*absolutely true*) was used to access this variable ( $\alpha = .80$ ).

The *average academic achievement* was collected using the final academic grades in Spanish language, English language, Mathematics and Social Sciences. Average achievement was calculated with the mean grades in these subjects.

## Procedure

Data was collected during regular school hours, after obtaining the consent of the school directors, the parents and the students’ teachers. The questionnaires were administered in a single session by research assistants. Participants answered all the questionnaires individually and without time limit. The confidentiality of all the data collected was ensured for all participants.

## Data analysis

The motivational profiles were defined on the basis of various combinations of the eight types of goals measured by the CEMA-II. LPA was conducted to obtain the groups of students (*motivational profiles*). The goal of this type of analysis is to classify individuals from a heterogeneous

**TABLE 1**  
Results obtained for the fit of the six LPA models

Criteria	Latent classes models					
	1 Class	2 Class	3 Class	4 Class	5 Class	6 Class
AIC	16,546.115	15,113.344	14,611.850	14,259.553	13,995.087	13,844.921
BIC	16,619.603	15,228.170	14,768.014	14,457.054	14,233.925	14,125.096
SSA-BIC	16,568.798	15,148.787	14,660.053	14,320.515	14,068.808	13,931.402
MLRT	—	1426.726	510.884	364.160	277.785	165.379
<i>p</i>	—	.000	.005	.009	.013	.059
Size	—	0	0	0	0	0
Entropy	—	.830	.838	.841	.850	.837

Note: AIC = Akaike information criterion; BIC = Bayesian information criterion; entropy = quality classification of subjects into classes; MLRT = Lo-Mendell-Rubin adjusted likelihood ratio test; size = number of classes with fewer than 5% of subjects of the total sample; SSA-BIC = sample-size-adjusted BIC.

**TABLE 2**  
Number and percentage of cases and average latent class probabilities for most likely latent class membership (row) by latent class (column)

	Latent classes					
	Class 1	Class 2	Class 3	Class 4	Class 5	
Number of cases ( <i>n</i> )	122	67	227	105	209	
Percentage of cases (%)	16.72	9.18	31.09	14.38	28.63	
Probability of correct classification	Class 1	.906	.034	.037	.024	.000
	Class 2	.032	.925	.043	.000	.000
	Class 3	.021	.014	.886	.049	.029
	Class 4	.044	.000	.065	.849	.042
	Class 5	.000	.000	.038	.029	.932

population into smaller homogeneous subgroups based on the individuals' scores in the numerical variables. To determine the model that best fits the data, we used the Mplus program, version 6.11 (Muthén & Muthén, 1998–2012). The selected model was established using the formal adjusted maximum likelihood ratio test (MLRT), the Akaike information criterion (AIC), the Bayesian information criterion of Schwarz (BIC) and the sample-size adjusted BIC (SSA-BIC), as well as the value of entropy. The *p*-value associated with the MLRT test indicates whether the solution with more or fewer classes provides the best fit to the data. The AIC, BIC and SSA-BIC criteria are descriptive fit indexes in which the lowest values indicate a better fit of the model, and they are used as a complement of the MLRT test. We note that small classes (those containing less than 5% of the sample) are typically considered spurious classes. Another criterion that will be taken into account in the evaluation of the selected model as involves the analysis of the between-class differences in the variables used to form the classes.

Once the final model with adequate number of classes was chosen, we used the automatic Mplus command DE3STEP for estimating the mean of a distal continuous outcome across latent profiles (Asparouhov & Muthén, 2014). This command reports mean levels across profiles for each auxiliary variable and tests the equality of outcome means across the various profiles using a Wald chi-square test of statistical significance.

## RESULTS

### Identification of motivational profiles

Various models of latent profiles, which include solutions of two, three, four, five and six classes, were fit to the data. The fit of the models was detained when a statistically non-significant MLRT was obtained. The goodness-of-fit indexes of the model for each LPA are shown in Table 1. All the statistics point to the five-class model as the most adequate. The MLRT test showed that the five-class solution provided a better fit of the data than the four-class solution, as the improvement was statistically significant (MLRT = 277.78, *p* = .0136), and also better than the six-class solution because it did not significantly improve the five-class solution (MLRT = 165.38, *p* = .0594). Moreover, the chosen five-class model was of better quality than the six-class one (entropy of the five-class model was .850 and entropy of the six-class model was .837). Although the AIC, BIC and SSA-BIC criteria showed a slight decrease in the six-class solution compared with the five-class one (the lower the criteria, the better fit of the model), they were not taken into consideration, because this situation was expected, as these models are nested. In short, we chose the five-class model as the most adequate because it was the most parsimonious and the one that best classified the participants (85% correctly classified).

Table 2 reports the amount of students, in absolute (*n*) and relative (%) terms, in each of the five classes of the

chosen model, as well as the accuracy of classification in each class. As can be observed in Table 2, there are two classes that have a considerably higher number of students than the rest (Class 3 with 227 students, 31.09%; and Class 5 with 209 students, 28.63%), and three classes that contain a considerably lower number (Class 2 with 67 students, 9.18%; Class 4 with 105 students, 14.38%; and Class 1 with 122 participants, 16.72%). The accuracy with which they were classified was good, with three classes being higher than 90%, and two classes with accuracy close to 90% (see diagonal of Table 2).

Lastly, we observed statistically significant differences between the five groups in the eight goals: goals of acquisition, competence and control,  $F(4,709) = 222.181$ ,  $p < .001$ ,  $\eta_p^2 = .556$ ; goals of interest in subjects,  $F(4,709) = 93.560$ ,  $p < .001$ ,  $\eta_p^2 = .345$ ; performance-avoidance goals,  $F(4,709) = 473.464$ ,  $p < .001$ ,  $\eta_p^2 = .728$ ; work-avoidance goals,  $F(4,709) = 68.043$ ,  $p < .001$ ,  $\eta_p^2 = .277$ ; performance-approach goals,  $F(4,709) = 371.626$ ,  $p < .001$ ,  $\eta_p^2 = .677$ ; social recognition goals,  $F(4,709) = 397.805$ ,  $p < .001$ ,  $\eta_p^2 = .692$ ; obtaining future work goals,  $F(4,709) = 194.772$ ,  $p < .001$ ,  $\eta_p^2 = .524$ ; and punishment-avoidance goals,  $F(4,709) = 124.189$ ,  $p < .001$ ,  $\eta_p^2 = .412$ . The size of the effect was large in all cases.

Having selected the five-class model as the best solution, the next step was to interpret these classes. The mean performances (in raw and standardised scores) of the participants belonging to the five latent classes are shown in Table 3. Likewise, Figure 1 graphically represents these profiles based on the standardised scores.

To classify the five groups of students, we took as reference the means of the variables in each class (see Table 3 and Figure 1) as well as the values of the original rating scale of the eight types of goals (1 = *never*, ... 5 = *always*). According to this, a first group (LG<sub>1</sub> group), composed of 122 students (16.72%), was mainly motivated towards learning and development of competences, and achieving a future job. They were also characterised by not avoiding work and by a clear lack of interest in achieving high performance or social recognition unless it is through learning (16.72%). The second group (UNMOTIV group) included 67 students (9.18% of the participants) and was characterised by low or very low scores in each one of the assessed goals. It was defined as the group of unmotivated students. The third group (FAIL-AV group), comprising 227 students (31.09% of the participants), showed a predominance of study involvement for ego defence (performance-avoidance goals), work-avoidance goals for ego defence and of study goals to avoid punishment. This group was defined by a motivational profile oriented towards avoidance of failure. The fourth group (LG<sub>2</sub> group), made up of 105 students (14.38%), to some extent similar to group LG<sub>1</sub>, was characterised by high motivation towards learning

TABLE 3

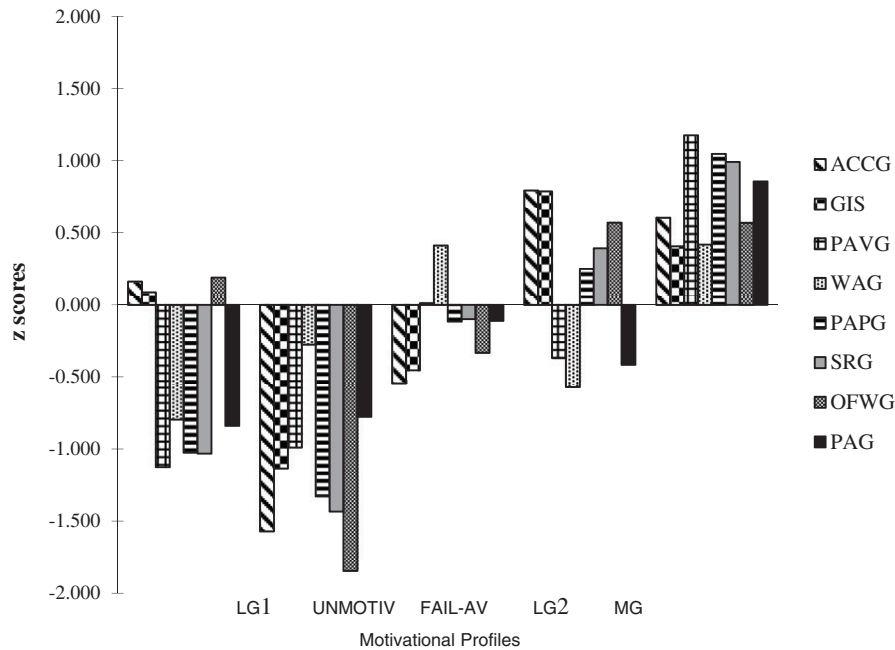
Description of the model of five latent classes (group means in raw and standardised scores)

	Raw scores	Standardised scores
Latent class 1: LG <sub>1</sub> Group		
ACCG	3.640	0.161
GIS	2.978	0.086
PAVG	1.358	-1.126
WAG	1.418	-0.796
PAPG	1.832	-1.025
SRG	2.110	-1.033
OFWG	4.227	0.188
PAG	2.086	-0.840
Latent class 2: UNMOTIV Group		
ACCG	2.012	-1.571
GIS	1.781	-1.136
PAVG	1.528	-0.990
WAG	1.904	-0.276
PAPG	1.510	-1.329
SRG	1.679	-1.434
OFWG	2.435	-1.846
PAG	2.164	-0.777
Latent class 3: FAIL-AV Group		
ACCG	2.981	-0.546
GIS	2.450	-0.454
PAVG	2.664	0.011
WAG	2.510	0.411
PAPG	2.800	-0.116
SRG	3.154	-0.099
OFWG	3.785	-0.333
PAG	3.045	-0.112
Latent class 4: LG <sub>2</sub> Group		
ACCG	4.282	0.793
GIS	3.768	0.787
PAVG	2.222	-0.369
WAG	1.579	-0.570
PAPG	3.142	0.249
SRG	3.630	0.392
OFWG	4.607	0.570
PAG	2.501	-0.417
Latent class 5: MG Group		
ACCG	4.068	0.604
GIS	3.303	0.406
PAVG	4.041	1.176
WAG	2.504	0.418
PAPG	3.995	1.047
SRG	4.292	0.991
OFWG	4.579	0.568
PAG	3.841	0.856

Note: LG<sub>1</sub> Group = Moderate Learning Goals Group; UNMOTIV Group = Unmotivated Group; FAIL-AV = Failure Avoidance Group; LG<sub>2</sub> = Positive Goals Group; MG Group = Multiple Goals Group; ACCG = acquisition, competence and control goals; GIS = goals of interest in subjects; PAVG = performance-avoidance goals; WAG = work-avoidance goals; PAPG = performance-approach goals; SRG = social recognition goals; OFWG = obtaining future work goals; PAG = punishment-avoidance goals.

and competence acquisition, but also towards obtaining a good performance and social recognition. This group can be defined as the positive goals group. Finally, the fifth group, made up of 209 students (28.63%), was defined by high levels of all eight types of goals, so we called them students with multiple goals (MG group).





**Figure 1.** Graphical representation of five motivational profiles. *Note:* LG<sub>1</sub> = Moderate Learning Goals Group; UNMOTIV = Unmotivated Group; FAIL-AV = Failure Avoidance Group = LG<sub>2</sub>; Positive Goals Group; MG = Multiple Goals Group; ACCG = acquisition, competence and control goals; GIS = goals of interest in subjects; PAVG = performance-avoidance goals; WAG = work-avoidance goals; PAPG = performance-approach goals; SRG = social recognition goals; OFWG = obtaining future work goals; PAG = punishment-avoidance goals.

### Relationship between the motivational profiles, behavioural homework engagement (i.e. amount of homework, time spent in homework, homework time management), emotional homework engagement (i.e. homework anxiety) and academic achievement

The relationships between the motivational profiles, homework engagement, and academic achievement are reported in Table 4. Those results show statistically significant differences between the motivational profiles in the amount of homework done ( $\chi^2 = 140.68, p < .001$ ), time spent on homework ( $\chi^2 = 30.95, p < .001$ ), homework time management ( $\chi^2 = 69.62, p < .001$ ), homework anxiety ( $\chi^2 = 73.61, p < .001$ ) and academic achievement ( $\chi^2 = 88.17, p < .001$ ).

The findings indicate that both the multiple goals and the learning goals groups presented significantly higher scores in the amount of homework done, time spent on homework, homework time management and academic achievement. Regarding homework anxiety, the groups oriented to failure avoidance and to multiple goals presented the highest levels in this variable. However, the learning goals group and the unmotivated group showed lower levels of anxiety. Concerning academic achievement, the learning-goals oriented group presented significantly higher scores than the other groups in this variable. The lowest scores in academic achievement were obtained by the failure-avoidance group and the unmotivated group.

### DISCUSSION

Five groups of different motivational profiles were identified; four of which match the groups identified in a work previously conducted with another sample of high school students. Regarding the group differences, findings indicated that the two profiles of students oriented towards learning goals showed higher scores in all the variables studied except for homework anxiety. These groups do more homework, spend more time on homework, manage homework time better and, in addition, obtain a higher academic achievement. Very similar results were obtained by the students with multiple goals, but homework engagement may be less stressful for the two groups of students oriented towards learning goals, mainly due to the low levels of anxiety generated by homework completion. The multiple-goals group, combining different types of goals that can be conflictual, probably maintains a high level of expected performance, which can also lead to higher levels of homework anxiety.

However, out of all groups identified, the failure-avoidance group presents the highest levels of homework anxiety. The fear of failure that characterises students with this motivational profile leads to constantly avoid looking incompetent. While this may benefit their self-image, it likely to impact negatively in school involvement and homework commitment. In fact, due to homework anxiety these students are likely to avoid being involved for fear of failure. Focusing on

**TABLE 4**

Results from the Wald chi-square equality tests of means across classes using the auxiliary analysis (DE3STEP) for amount of homework, time spent in homework, homework time management, homework anxiety and academic achievement<sup>a</sup>

	Global $\chi^2$	C <sub>1</sub> vs. C <sub>2</sub>	C <sub>1</sub> vs. C <sub>3</sub>	C <sub>1</sub> vs. C <sub>4</sub>	C <sub>1</sub> vs. C <sub>5</sub>	C <sub>2</sub> vs. C <sub>3</sub>	C <sub>2</sub> vs. C <sub>4</sub>	C <sub>2</sub> vs. C <sub>5</sub>	C <sub>3</sub> vs. C <sub>4</sub>	C <sub>3</sub> vs. C <sub>5</sub>	C <sub>4</sub> vs. C <sub>5</sub>
VD <sub>1</sub>	140.68*	48.97*	27.86*	3.01	0.48	12.54*	72.49*	67.40*	63.38*	55.92*	2.04
VD <sub>2</sub>	30.95*	12.21*	5.95	1.40	0.03	3.87	14.49*	14.95*	12.50*	9.26*	1.37
VD <sub>3</sub>	69.62*	20.70*	15.31*	3.76	0.04	3.66	38.75*	26.88*	35.21*	24.19*	4.23
VD <sub>4</sub>	73.61*	9.89*	74.06*	4.37	40.88*	4.54	2.52	1.32	27.89*	2.06	13.14*
VD <sub>5</sub>	88.17*	27.67*	37.53*	0.32	6.07	0.24	30.39*	13.74*	37.36*	18.21*	7.91*

Notes: VD<sub>1</sub> = amount of homework; VD<sub>2</sub> = time spent on homework; VD<sub>3</sub> = homework time management; VD<sub>4</sub> = homework anxiety; VD<sub>5</sub> = academic achievement; C<sub>1</sub> = moderate learning goals group; C<sub>2</sub> = group of unmotivated students; C<sub>3</sub> = failure avoidance group; C<sub>4</sub> = positive goals group; C<sub>5</sub> = multiple goals group. Wald  $\chi^2$  based on 4 degrees of freedom (*df*) for the overall test and 1 *df* for the pairwise tests.

<sup>a</sup>Summary for means differences: VD<sub>1</sub>: C<sub>2</sub> < C<sub>3</sub> < C<sub>1</sub> = C<sub>4</sub> = C<sub>5</sub>; C<sub>2</sub> < C<sub>4</sub>; C<sub>2</sub> < C<sub>5</sub>; C<sub>3</sub> < C<sub>4</sub>; C<sub>3</sub> < C<sub>5</sub>; C<sub>4</sub> = C<sub>5</sub>. VD<sub>2</sub>: C<sub>2</sub> < C<sub>1</sub> = C<sub>3</sub> = C<sub>4</sub> = C<sub>5</sub>; C<sub>2</sub> < C<sub>4</sub>; C<sub>2</sub> < C<sub>5</sub>; C<sub>3</sub> < C<sub>4</sub>; C<sub>3</sub> < C<sub>5</sub>; C<sub>4</sub> = C<sub>5</sub>. VD<sub>3</sub>: C<sub>2</sub> < C<sub>1</sub> = C<sub>4</sub> = C<sub>5</sub>; C<sub>2</sub> < C<sub>4</sub>; C<sub>2</sub> < C<sub>5</sub>; C<sub>3</sub> < C<sub>1</sub>; C<sub>3</sub> < C<sub>4</sub>; C<sub>3</sub> < C<sub>5</sub>; C<sub>2</sub> = C<sub>3</sub>; C<sub>4</sub> = C<sub>5</sub>. VD<sub>4</sub>: C<sub>1</sub> < C<sub>2</sub> = C<sub>3</sub> = C<sub>4</sub> = C<sub>5</sub>; C<sub>1</sub> < C<sub>3</sub>; C<sub>1</sub> < C<sub>5</sub>; C<sub>4</sub> < C<sub>3</sub>; C<sub>4</sub> < C<sub>5</sub>; C<sub>1</sub> = C<sub>4</sub>; C<sub>2</sub> = C<sub>5</sub>. VD<sub>5</sub>: C<sub>2</sub> < C<sub>1</sub> = C<sub>4</sub> = C<sub>5</sub>; C<sub>2</sub> < C<sub>4</sub>; C<sub>2</sub> < C<sub>5</sub>; C<sub>3</sub> < C<sub>4</sub>; C<sub>3</sub> < C<sub>5</sub>; C<sub>5</sub> < C<sub>4</sub>; C<sub>42</sub> = C<sub>3</sub>.

\**p* ≤ .001 ( $\alpha$  corrected).

students’ perspective (at an affective, emotional level), it is expected that this constant fear of failure leads them to situations in which they will avoid anything that poses a possible threat to their personal self-worth, causing high levels of anxiety, and low academic achievement. In general, these findings are consistent with those of other studies showing a positive relationship between avoidance goals and anxiety (e.g. Middleton & Midgley, 1997).

Ultimately, the most positive groups would be those with a profile in which the learning goals predominate (LG<sub>1</sub> and LG<sub>2</sub> groups). Precisely, these goals are positively related to numerous favourable educational outcomes, such as the use of strategies that contribute to comprehensive learning, high persistence, interest and intrinsic motivation (Hulleman et al., 2010). Consequently, a motivational orientation towards learning goals will help students to maintain their sense of personal efficacy even experiencing failure, because it will instigate cognitive commitment and, hence, a better achievement (Valle, Regueiro, Rodríguez, et al., 2015) while protecting them from negative factors such as anxiety.

Moreover, the learning-goals groups not only engage more deeply in homework but also obtain better academic outcomes, and with less anxiety, than counterparts. Thus, students motivated to learn, are likely to do more homework, spend more time on homework, manage that time better and, as a consequence, achieve higher. Students who adopt a deep approach to learning (Rosário, Núñez, Ferrando, et al., 2013; Rosário, Núñez, Valle, et al., 2013). are likely to engage homework with the intention of learning and training the knowledge taught in class (e.g. solving queries arising while doing homework, and relating homework to prior knowledge). Whether or not students adopt a deep approach to homework depends on many factors but, along with the goals they hope to achieve, their motives and reasons for doing homework may be among the most decisive motivational variables when it comes to engaging in homework.

In sum, findings are consistent with those of extant research, and show that, when analysing goals, it is necessary to take into account the different profiles found, and not just study students’ goals independently considered. This comprehensive perspective provides a more objective and accurate view of the reality of the classroom (Inglés, Martínez-Monteagudo, García-Fernández, Valle, & Castejón, 2015; Valle, Regueiro, Rodríguez, et al., 2015).

### Educational implications

Our findings provide evidence on the relevance of identifying students’ type of motivational profile in order to adjust the teaching strategies to the students’ motivational needs. Besides we believe that data may contribute to help school administrators policies for preventing school failure and school drop-out. By considering the different motivational profiles as a combination of several goals, some degree of flexibility is guaranteed so that the student can effectively adapt to different situations of the school setting, and optimise their learning process. Students who implement various goals, along with other factors (e.g. adaptive causal attributions, use of learning strategies), need a high level of self-confidence in their skills in order to design audacious goals and believe they can achieve them (Inglés et al., 2015).

The knowledge about students’ different motivational profiles and the stability of these profiles over time may be relevant to educational practice. While acknowledging students’ motivational profiles, teachers are likely to respond adequately to students needs and goals, paying, for example, special attention to groups at risk. This further underlines the importance of the teachers’ ability to deliver content adjusted to students’ various educational needs (i.e. cognitive, motivational and emotional) and goals.

## Limitations of the work

All the variables considered herein, with the exception of academic achievement, were evaluated using self-reports, and data were collected at a single moment. It would therefore be interesting in future investigations to use more sophisticated and complex procedures to capture these dynamics, including longitudinal studies with multiple data in multiple contexts (Pintrich, 2003). Moreover, the current work does not present information regarding the development of the profiles analysed and the student characteristics underlying the goal preferences. This corpus of information could have helped to understand the complex relationship between the motivational profiles, behaviour and emotional homework engagement and academic achievement. Finally, future research should consider the possibility of controlling for the effect of certain potentially relevant variables (e.g. covariates), which may mediate or moderate the relationships studied herein (e.g. prior performance, skills and self-efficacy).

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## REFERENCES

- Asparouhov, T., & Muthén, B. (2014). Auxiliary variables in mixture modeling: Three-step approaches using Mplus. *Structural Equation Modeling, 21*, 329–341.
- Bråten, I., & Olaussen, B. S. (2005). Profiling individual differences in student motivation: A longitudinal cluster analytic study in different academic contexts. *Contemporary Educational Psychology, 30*, 359–396.
- Claessens, B. J. C., Van Eerde, W., Rutte, C. G., & Roe, R. A. (2007). A review of the time management literature. *Personnel Review, 36*(2), 255–276.
- Dweck, C. S., & Leggett, E. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256–273.
- Elliot, A. J., & McGregor, H. (2001). A 2 × 2 achievement goal framework. *Journal of Personality and Social Psychology, 80*, 501–519.
- Harackiewicz, J. M., & Linnenbrink, E. A. (2005). Multiple achievement goals and multiple pathways for learning: The agenda and impact of Paul R. Pintrich. *Educational Psychologist, 40*(2), 75–84.
- Hayenga, A. O., & Corpus, J. H. (2010). Profiles of intrinsic and extrinsic motivations: A person-centered approach to motivation and achievement in middle school. *Motivation and Emotion, 34*, 371–383.
- Hulleman, C. S., Schrager, S. M., Bodmann, S. M., & Harackiewicz, J. M. (2010). A meta-analytic review of achievement goal measures: Different labels for the same constructs or different constructs with similar labels? *Psychological Bulletin, 136*, 422–449.
- Inglés, C. J., Martínez-Montegudo, M. C., García-Fernández, J. M., Valle, A., & Castejón, J. L. (2015). Goal orientation profiles and self-concept of high school students. *Revista de Psicodidáctica, 20*, 99–116.
- Middleton, M., & Midgley, C. (1997). Avoiding the demonstration of lack of ability: An under-explored aspect of goal theory. *Journal of Educational Psychology, 89*, 710–718.
- Murphy, P. K., & Alexander, P. A. (2000). A motivated look at motivational terminology. [Special Issue]. *Contemporary Educational Psychology, 25*, 3–53.
- Muthén, L. K., & Muthén, B. O. (1998–2012). *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.
- Núñez, J. C., González-Pienda, J. A., González-Pumariega, S., García, M., & Roces, C. (1997). *Cuestionario para la Evaluación de Metas Académicas en Secundaria (CEMA-II) [Questionnaire to assess academic goals in high school]*. Spain: Departamento de Psicología, Universidad de Oviedo.
- Núñez, J. C., Suárez, N., Cerezo, R., González-Pienda, J. A., Rosário, P., Mourao, R., & Valle, A. (2015). Homework and academic achievement across Spanish compulsory education. *Educational Psychology, 35*(6), 726–746.
- Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology, 95*, 667–686.
- Regueiro, B., Rodríguez, S., Piñeiro, I., Estévez, I., Ferradás, M., & Suárez, N. (2015). Differences in the perception of parental involvement in homework depending on the level of student motivation. *European Journal of Investigation in Health, Psychology and Education, 5*(3), 313–323.
- Regueiro, B., Suárez, N., Valle, A., Núñez, J. C., & Rosário, P. (2015). Homework motivation and engagement throughout compulsory education. *Revista de Psicodidáctica, 20*(1), 47–63.
- Rosário, P., Núñez, J. C., Ferrando, P., Paiva, O., Lourenço, A., Cerezo, R., & Valle, A. (2013). The relationship between approaches to teaching and approaches to studying: A two-level structural equation model for biology achievement in high school. *Metacognition and Learning, 8*, 44–77. doi:10.1007/s11409-013-9095-6.
- Rosário, P., Núñez, J. C., Valle, A., Paiva, O., & Polydoro, S. (2013). Approaches to teaching in high school when considering contextual variables and teacher variables. *Revista de Psicodidáctica, 18*, 25–45. doi:10.1387/RevPsicodidact.6215.
- Schwinger, M., Steinmayr, R., & Spinath, B. (2012). Not all roads lead to Rome: Comparing different types of motivational regulation profiles. *Learning and Individual Differences, 22*, 269–279.
- Suárez, J. M., Cabanach, R. G., & Valle, A. (2001). Multiple-goal pursuit and its relation to cognitive, self-regulatory, and motivational strategies. *British Journal of Educational Psychology, 71*, 561–572.
- Tuominen-Soini, H., Salmela-Aro, K., & Niemivirta, M. (2008). Achievement goal orientations and subjective well-being: A person-centred analysis. *Learning and Instruction, 18*, 251–266.
- Tuominen-Soini, H., Salmela-Aro, K., & Niemivirta, M. (2011). Stability and change in achievement goal orientations: A person-centered approach. *Contemporary Educational Psychology, 36*, 82–100.
- Valle, A., Núñez, J. C., Cabanach, R. G., Rodríguez, S., Rosário, P., & Inglés, C. (2015). Motivational profiles as a combination of academic goals in higher education. *Educational Psychology, 35*(5), 634–650.

- Valle, A., Pan, I., Núñez, J. C., Rosário, P., Rodríguez, S., & Regueiro, B. (2015). Homework and academic performance in primary education. *Annals of Psychology, 31*(2), 562–569.
- Valle, A., Pan, I., Regueiro, B., Suárez, N., Tuero, E., & Rosário, P. (2015). Predicting approach to homework in primary school students. *Psicothema, 27*(4), 334–340.
- Valle, A., Regueiro, B., Estévez, I., Piñeiro, I., Rodríguez, S., & Freire, C. (2015). Homework involvement and motivation in elementary school students according to academic achievement and grade. *European Journal of Investigation in Health, Psychology and Education, 5*(3), 345–355.
- Valle, A., Regueiro, B., Rodríguez, S., Piñeiro, I., Freire, C., Ferradás, M., & Suárez, N. (2015). Motivational profiles as a combination of self-efficacy expectations and academic goals in university students. *European Journal of Education and Psychology, 8*(1), 1–8.
- Valle, A., Cabanach, R. G., Núñez, J. C., González-Pienda, J. A., Rodríguez, S., & Piñeiro, I. (2003). Multiple goals, motivation and academic learning. *British Journal of Educational Psychology, 73*, 71–87.
- Valle, A., Núñez, J. C., Rodríguez, S., Cabanach, R., González-Pienda, J. A., & Rosário, P. (2010). Motivational profiles and differences in affective, motivational, and achievement variables. *Universitas Psychologica, 9*, 109–121.
- Wentzel, K. (2005). Peer relationships, motivation, and academic performance at school. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 279–296). New York: Guilford Publications.
- Wormington, S. V., & Linnenbrink-Garcia, L. (2016). A new look at multiple goal pursuit: The promise of a person-centered approach. *Educational Psychology Review, 1*–39. doi:10.1007/s10648-016-9358-2.
- Zimmerman, B. J., & Kitsantas, A. (2005). Homework practices and academic achievement: The mediating role of self-efficacy and perceived responsibility beliefs. *Contemporary Educational Psychology, 30*(4), 397–417.

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2017	19,707	2.089	1.776	2.749	0.295	2,092	3.4	9.7	0.07...	0.895	92.26	8.85...	71.481
2016	14,320	2.321	1.966	2.820	0.326	1,812	2.9	9.4	0.06...	0.995	92.66	7.72...	74.806
2015	9,540	2.463	1.969	2.885	0.423	1,729	2.6	9.3	0.04...	1.031	90.51	5.39...	77.907
2014	6,105	2.560	2.058	3.039	0.518	1,244	2.4	9.1	0.02...	1.047	88.02	3.31...	82.558
2013	3,230	2.843	2.225	2.869	0.524	815	2.1	8.6	0.01...	0.948	87.12	1.66...	84.884

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2014	23/129	Q1	82.558
2013	20/129	Q1	84.884





# Academic Goals, Student Homework Engagement, and Academic Achievement in Elementary School

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There seems to be a general consensus in the literature that doing homework is beneficial for students. Thus, the current challenge is to examine the process of doing homework to find which variables may help students to complete the homework assigned. To address this goal, a path analysis model was fit. The model hypothesized that the way students engage in homework is explained by the type of academic goals set, and it explains the amount of time spend on homework, the homework time management, and the amount of homework done. Lastly, the amount of homework done is positively related to academic achievement. The model was fit using a sample of 535 Spanish students from the last three courses of elementary school (aged 9 to 13). Findings show that: (a) academic achievement was positively associated with the amount of homework completed, (b) the amount of homework completed was related to the homework time management, (c) homework time management was associated with the approach to homework, (d) and the approach to homework, like the rest of the variables of the model (except for the time spent on homework), was related to the student's academic motivation (i.e., academic goals).

**Keywords:** homework, academic goals, student homework engagement, approach to homework, academic achievement, elementary school

## INTRODUCTION

Literature indicates that doing homework regularly is positively associated with students' academic achievement (Zimmerman and Kitsantas, 2005). Hence, as expected, the amount of homework done is one of the variables that shows a strong and positive relationship with academic achievement (Cooper et al., 2001).

It seems consensual in the literature that doing homework is always beneficial to students, but it is also true that the key for the academic success does not rely on the amount of homework done, but rather on *how* students engage on homework (Trautwein et al., 2009; Núñez et al., 2015c), and on *how* homework engagement is related with student motivation (Martin, 2012). There is, therefore, a call to analyze the process of homework rather than just the product; that is, to examine the extent to which the *quality* of the process of doing homework may be relevant to the final outcome.

## TRAUTWEIN'S MODEL OF HOMEWORK

The model by Trautwein et al. (2006b) is rooted in the motivational theories, namely the theory of the expectancy value (Eccles (Parsons) et al., 1983; Pintrich and De Groot, 1990), and the theory of self-determination (Deci et al., 2002), as well as on theories of learning and instruction (Boekaerts, 1999). Trautwein and colleagues' model analyzes students' related variables in two blocks, as follows: the motivational (aiming at directing and sustaining the behavior) and the cognitive and behavioral implications (cognitions and behaviors related to the moment of doing homework). These two blocks of variables are rooted in the literature. Motivational variables are related with the theory of expectancy-value by Eccles (Parsons) et al. (1983), while the variables addressing students' implication are related with the school engagement framework (e.g., Fredricks et al., 2004). However, as Eccles and Wang (2012) stress, both models are interrelated due to the fact that both variables are closely related and show reciprocal relationships.

## STUDENT HOMEWORK ENGAGEMENT: THE INTERPLAY BETWEEN COGNITIVE AND BEHAVIORAL COMPONENTS

Engagement is a relatively new construct with great relevance in the field of psychology and instruction (Fredricks et al., 2004). Generally considered, engagement has been described as the active implication of the person in an activity (Reeve et al., 2004). However, despite the close relation between engagement and motivation, literature clearly differentiates between them (e.g., Martin, 2012), stressing engagement as the behavioral manifestation of motivation (Skinner and Pitzer, 2012), or arguing that motivation is a precursor of engagement rather than part of it. In sum, motivation relates to the "why" whereas the engagement focuses on the "what" of a particular behavior.

Consistent with this perspective, the current research fitted a model with the variable engagement mediating the relationship between motivation and academic achievement (see Eccles and Wang, 2012). Engagement is a complex construct with observational and non-observational aspects (Appleton et al., 2008). Some researchers conceptualize engagement with two dimensions—behavior and emotions (e.g., Marks, 2000)—while others define engagement with four dimensions—academic, behavioral, cognitive, and emotional (e.g., Appleton et al., 2006). In the current study, we followed Fredricks' et al. (2004) conceptualization of engagement as a construct with three dimensions: cognitive (e.g., approaches to learning), behavioral (e.g., student homework behaviors), and emotional (e.g., interest, boredom). For the purpose of the present study, the dimension of emotion was not included in the model (see **Figure 1**).

### Cognitive Homework Engagement

In the past few decades, a robust body of research has been addressing the relationship between the way students deal with their learning process and academic outcomes (Marton and Säljö, 1976a,b; Struyven et al., 2006; Rosário et al., 2010a,

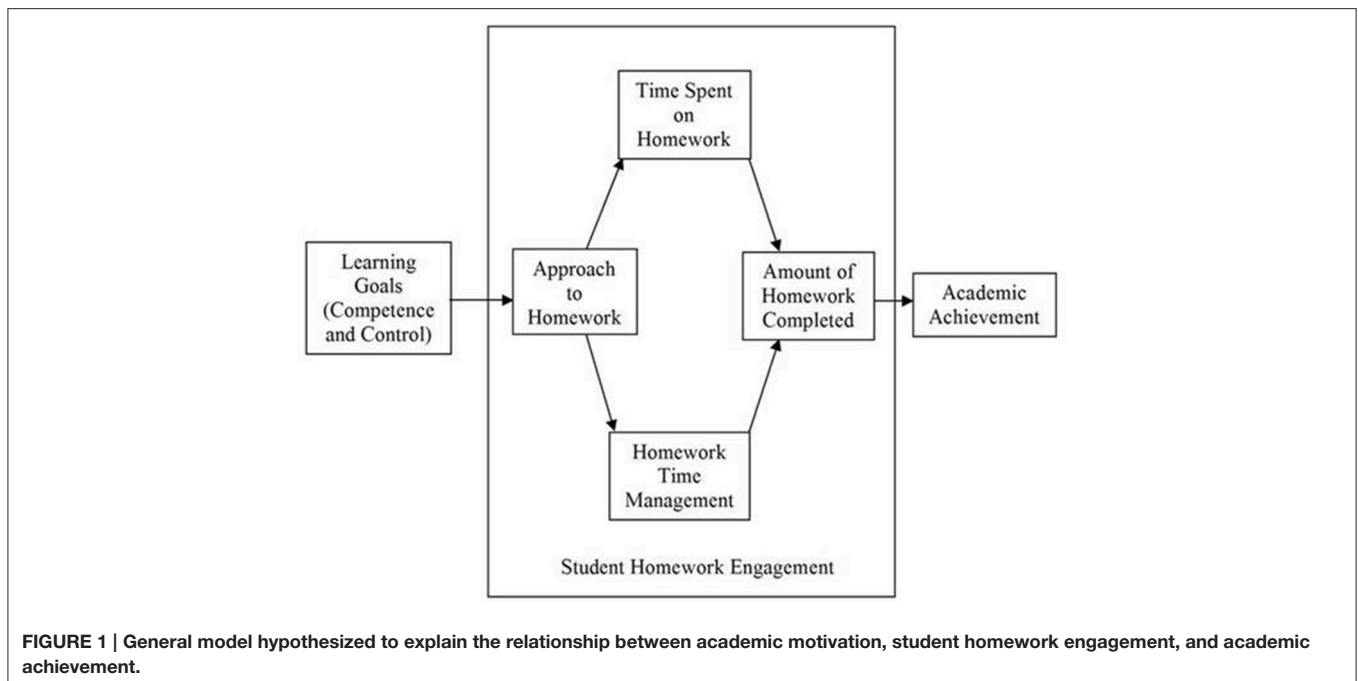
2013a). Marton and Säljö (1976a,b) examined how students studied an academic text and found two ways of approaching the task: a surface and a deep approach. The surface approach is characterized by learning the contents aiming at achieving goals that are extrinsic to the learning content. In contrast, the deep approach is characterized by an intrinsic interest in the task and students are likely to be focused on understanding the learning content, relating it to prior knowledge and to the surrounding environment (Entwistle, 2009; Rosário et al., 2010b). The metaphor "surface vs. deep" constitutes an easy to perceive conceptual framework, both in the classroom setting and in other educational settings (i.e., doing homework at home), and has been shown to be a powerful tool for parents, teachers, and students when conceptualizing the ways students approach school tasks (Entwistle, 1991; Rosário et al., 2005). The core of the concept of approaches to studying (or to learning) is the metacognitive connection between an intention to approach a task and a strategy to implement it (Rosário et al., 2013b).

The process of doing homework focuses on what students do when completing homework, that is, how they approach their work and how they manage their personal resources and settings while doing homework. It is likely that students' approaches to homework may influence not only the final homework outcome but also the quality of that process. Students who adopt a deep approach are likely to engage their homework with the intention of deepening their understanding of the knowledge learned in class. In this process, students often relate the homework exercises to prior knowledge and monitor their mastery of the content learned. This process involves intrinsic intention to understand the ideas and the use of strategies to build meaning (Cano et al., 2014). In contrast, students who approach homework with a surface approach are likely to do homework with extrinsic motivation (e.g., rewards of their parents, fear of upsetting their teacher). Their goals may target finishing homework as soon as and with the less effort possible to be able to do more interesting activities. Students using this approach are more likely to do homework to fulfill an external obligation (e.g., hand in homework in class and get a grade), than for the benefits for learning.

### Behavioral Homework Engagement

Findings from prior research indicate that the more the implication of students in doing their homework the better the academic achievement (Cooper et al., 2006). Following Trautwein et al. (2006b), our conceptualization of student homework engagement includes behaviors related with the amount of homework done, time spent on homework, and homework time management (e.g., concentration). In the present investigation, these three variables were included in the model (see **Figure 1**).

Extant findings on the relationship between the amount of homework done and academic achievement are in need of further clarification. Some authors argue for a strong and positive relationship (e.g., Cooper et al., 2006), while others found that this relationship is higher throughout schooling (Cooper et al., 2001; Zimmerman and Kitsantas, 2005). Authors explained this last finding arguing that the load of homework



assigned by teachers vary throughout schooling, and also that the cognitive competencies of students are likely to vary with age (Muhlenbruck et al., 2000). More recently, Núñez et al. (2015c) found that the relationship between these two variables varied as a function of the age of the students enrolled. Particularly, this relationship was found to be negative in elementary school, null in junior high school, and positive in high school.

Moreover, the relationship between the amount of homework done and academic achievement relates, among other factors, with the students' age, the quality of the homework assigned, the type of assessment, and the nature of the feedback provided. For example, some students may always complete their homework and get good grades for doing it, which does not mean that these students learn more (Kohn, 2006). In fact, more important than the quantity of the homework done, is the quality of that work (Fernández-Alonso et al., 2014).

Another variable included in the model was the time spent on homework. Findings on the relationship between time spent on homework and academic achievement are mixed. Some studies found a positive relationship (Cooper et al., 2001, 2006) while others found a null or a negative one (Trautwein et al., 2006b, 2009). In 2009, Dettmers, Trautwein and Lüdtke conducted a study with data from the PISA 2003 (Dettmers et al., 2009). Findings on the relationship between the number of hours spent on homework and academic achievement in mathematics show that the students in countries with higher grades spend fewer hours doing homework than students in countries with low academic grades. At the student level, findings showed a negative relationship between time spent on homework and academic achievement in 12 out of 40 countries.

The relationship between the amount of homework done, time dedicated to homework, and academic achievement was hypothesized to be mediated by the homework time

management. Xu (2007) was one of the pioneers examining the management of the time spent on homework. Initially, Xu (2007) did not find a relationship between time management and academic achievement (spend more time on homework is not equal to use efficient strategies for time management). Later, Xu (2010) found a positive relationship between students' grade level, organized environment, and homework time management. More recently, Núñez et al. (2015c) found that effective homework time management affects positively the amount of homework done, and, consequently, academic achievement. This relationship is stronger for elementary students when compared with students in high school.

## ACADEMIC MOTIVATION AND STUDENT HOMEWORK ENGAGEMENT RELATIONSHIP

Literature has consistently shown that a deep approach to learning is associated positively with the quality of the learning outcomes (Rosário et al., 2013b; Cano et al., 2014; Vallejo et al., 2014). The adoption of a deep approach to homework depends on many factors, but students self-set goals and their motives for doing homework are among the most critical motivational variables when students decide to engage in homework.

Literature on achievement motivation highlights academic goals as an important line of research (Ng, 2008). In the educational setting, whereas learning goals focus on the comprehension and mastery of the content, performance goals are more focused on achieving a better performance than their colleagues (Pajares et al., 2000; Gaudreau, 2012).

Extant literature reports a positive relationship between adopting learning goals and the use of cognitive and



self-regulation strategies (Elliot et al., 1999; Núñez et al., 2013). In fact, students who value learning and show an intention to learn and improve their competences are likely to use deep learning strategies (Suárez et al., 2001; Valle et al., 2003a,b, 2015d), which are aimed at understanding the content in depth. Moreover, these learning-goal oriented students are likely to self-regulate their learning process (Valle et al., 2015a), put on effort to learn, and assume the control of their learning process (Rosário et al., 2016). These students persist much longer when they face difficult and challenging tasks than colleagues pursuing performance goals. The former also use more strategies oriented toward the comprehension of content, are more intrinsically motivated, and feel more enthusiasm about academic work. Some researchers also found positive relationships between learning goals and pro-social behavior (e.g., Inglés et al., 2013).

Reviewing the differentiation between learning goals and performance goals, Elliot and colleagues (Elliot and Church, 1997; Elliot, 1999; Elliot et al., 1999) proposed a three-dimensional framework for academic goals. In addition to learning goals, performance goals were differentiated as follows: (a) performance-approach goals, focused on achieving competence with regard to others; and (b) performance-avoidance goals, aimed at avoiding incompetence with regard to others. Various studies have provided empirical support for this distinction within performance goals (e.g., Wolters et al., 1996; Middleton and Midgley, 1997; Skaalvik, 1997; Rodríguez et al., 2001; Valle et al., 2006). Moreover, some authors proposed a similar differentiation for learning goals (Elliot, 1999). The rationale was as follows: learning goals are characterized by high engagement in academic tasks, so an avoidance tendency in such goals should reflect avoidance of this engagement. Hence, students who pursue a work avoidance goal are likely to avoid challenging tasks and to put on effort to do well, only doing the bare minimum to complete the task. In general, learning goals are associated with a large amount of positive results in diverse motivational, cognitive, and achievement outcomes, whereas performance goals have been linked to less adaptive outcomes, or even to negative outcomes (Valle et al., 2009).

## AIMS OF THIS STUDY

Several relationships between motivational, cognitive, and behavioral variables involving self-regulated learning in the classroom have recently been studied (Rosário et al., 2013a). However, there is a lack of knowledge of the relationships between these variables throughout the process of doing homework.

The principal purpose of this work (see **Figure 1**) is to analyze how student homework engagement (cognitive and behavioral) mediates motivation and academic performance. This study aims to provide new information about an issue that is taken for granted, but which, as far as we know, lacks empirical data. The question is: to what extent students acknowledge homework as a good way to acquire competence, improve their skills and performance? Our working hypothesis is that student value

homework in this regard. Therefore, we hypothesized that the more students are motivated to learn, the more they will be involved (cognitively and behaviorally) in their homework, and the higher their academic achievement.

To address this goal, we developed a path analysis model (see **Figure 1**) in which we hypothesized that: (a) the student's motivational level is significantly related to their cognitive homework engagement (i.e., the approach to studying applied to homework), and their behavioral homework engagement (i.e., amount of time spent and homework time management, and amount of homework completed); (b) student's cognitive and behavioral homework engagement are positively associated with academic achievement; and (c) cognitive and behavioral homework engagement are related (the more deep cognitive engagement, the more time spent and time management, and the more amount of homework is done).

## METHODS

### Participants

The study enrolled 535 students, aged between 9 and 13 ( $M = 10.32$ ,  $SD = 0.99$ ), of four public schools, from the last three years of the Spanish Elementary Education (4th, 5th, and 6th grade level), of whom 49.3% were boys. By grade, 40.4% ( $n = 216$ ) were enrolled in the 4th grade, 35.1% ( $n = 188$ ) in the 5th grade, and 24.5% ( $n = 131$ ) in the 6th grade.

### Measures

#### Learning Goals

The level and type of motivation for academic learning was assessed with the Academic Goals Instrument (Núñez et al., 1997). Although, this instrument allows differentiating a broad range of academic goals, for the purposes of this work, we only used the subscale of *learning goals* (i.e., competence and control). The instrument is rated on a 5-point Likert-type scale, with responses ranging from one (not at all interested) to five (absolutely interested in learning and acquiring competence and control in the different subjects). An example item is: "I make an effort in my studies because performing the academic tasks allows me to increase my knowledge." The reliability of the scale is good ( $\alpha = 0.87$ ).

#### Approach to Homework

To measure the process of approaching homework, we adapted the *Students' Approaches to Learning Inventory* (Rosário et al., 2010a, 2013a), taking into account both the students' age and the homework contexts. This instrument is based on voluminous literature on approaches to learning (e.g., Biggs et al., 2001; Rosário et al., 2005), and provides information about two ways of approaching homework. For the purpose of this research, we only used the deep approach (e.g., "Before starting homework, I usually decide whether what was taught in class is clear and, if not, I review the lesson before I start"). Students respond to the items on a 5-point Likert-type scale ranging from one (not at all deep approach) to five (completely deep approach). The reliability of the scale is good ( $\alpha = 0.80$ ).

## Time Spent on Homework, Homework Time Management, and Amount of Homework Completed

To measure these three variables, we used the Homework Survey (e.g., Rosário et al., 2009; Núñez et al., 2015a,b; Valle et al., 2015b,c). To measure the *time spent on homework*, students responded to three items (in general, in a typical week, on a typical weekend) with the general formulation, “How much time do you usually spend on homework?” with the response options 1, <30 min; 2, 30 min to 1 h; 3, 1 h to an hour and a half; 4, 1 h and a half to 2 h; 5, more than 2 h. Homework time management was measured through the responses to three items (in general, in a typical week, on a typical weekend) in which they were asked to indicate how they managed the time normally spent doing homework, using the following scale: 1, I waste it completely (I am constantly distracted by anything); 2, I waste it more than I should; 3, regular; 4, I manage it pretty much; 5, I optimize it completely (I concentrate and until I finish, I don’t think about anything else). Finally, the *amount of homework completed* by students (assigned by teachers) was assessed through responses to an item about the amount of homework usually done, using a 5-point Likert-type scale (1, none; 2, some; 3, one half; 4, almost all; 5, all).

### Academic Achievement

Assessment of academic achievement was assessed through students’ report card grades in Spanish Language, Galician Language, English Language, Knowledge of the Environment, and Mathematics. Average achievement was calculated with the mean grades in these five areas.

### Procedure

Data of the target variables was collected during regular school hours, by research assistants, after obtaining the consent of the school administration and of the teachers and students. Prior to the application of the questionnaires, which took place in a single session, the participants were informed about the goals of the project, and assured that data was confidential and used for research purposes only.

### Data Analysis

The model was fit with AMOS 18 (Arbuckle, 2009). The data were previously analyzed and individual cases presenting a significant number of missing values were eliminated (2.1%), whereas the rest of the missing values were replaced by the mean. Taking into account the analysis of the characteristics of the variables (e.g., skewness and kurtosis in **Table 1**), we used the maximum likelihood method to fit the model and estimate the values of the parameters.

A series of goodness-of-fit statistics were used to analyze our model. Beyond chi-square ( $\chi^2$ ) and its associated probability ( $p$ ), the information provided by the goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI; Jöreskog and Sörbom, 1983); the comparative fit index (CFI) (Bentler, 1990); and the root mean square error of approximation (RMSEA; Browne and Cudeck, 1993) was used. According to these authors, the model fits well when GFI and AGFI > 0.90, CFI > 0.95, and RMSEA  $\leq$  0.05.

**TABLE 1 | Means, standard deviations, skewness, kurtosis, and correlation matrix of the target variables.**

	1	2	3	4	5	6
1. Learning goals	–					
2. Approach to homework	0.50**	–				
3. Amount of homework done	0.42**	0.33**	–			
4. Time spent on homework	–0.01	–0.03	0.10*	–		
5. Time management	0.45**	0.45**	0.39**	–0.02	–	
6. Academic achievement	0.43**	0.13**	0.34**	–0.01	0.24**	–
<i>M</i>	4.26	4.02	4.28	2.41	3.77	3.21
<i>SD</i>	0.74	0.80	0.63	1.05	0.97	1.02
Skewness	–1.26	–0.89	–1.10	0.37	–0.67	–0.13
Kurtosis	1.05	0.62	1.29	–0.72	–0.10	–0.56

\* $p < 0.05$ . \*\* $p < 0.01$ .

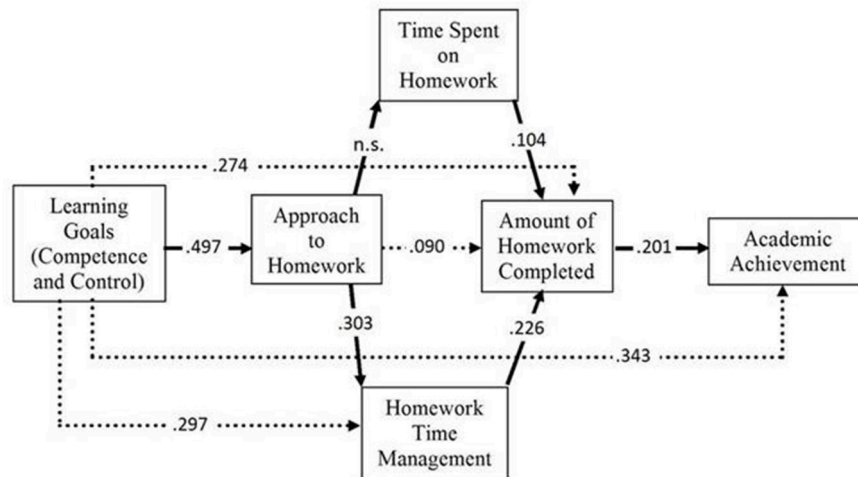
## RESULTS

### Descriptive Analysis

The relations between the variables included in the model as well as the descriptive statistics are shown in **Table 1**. All the variables were significantly and positively related, except for the time spent on homework, which was only related to the amount of homework done. According to the value of the means of these variables, students in the last years of elementary school: (a) reported a high level of motivation to learn and mastery; (b) used preferentially a deep approach to homework; (c) did the homework assigned by the teachers most of the times; (d) usually spent about an hour a day on homework; (e) reported to manage their study time effectively; and (f) showed a medium-high level of academic achievement.

### Evaluation and Re-specification of the Initial Model

The data obtained indicated that the initial model (see **Figure 1**) presented a poor fit to the empirical data:  $\chi^2 = 155.80$ ,  $df = 8$ ,  $p < 0.001$ ,  $GFI = 0.917$ ,  $AGFI = 0.783$ ,  $TLI = 0.534$ ,  $CFI = 0.751$ ,  $RMSEA = 0.186$ , 90% CI (0.161, 0.212),  $p < 0.001$ . Analysis of the modification indexes revealed the need to include three direct effects initially considered as null, and to eliminate a finally null effect (included in the initial model as significant). The strategy adopted to modify the initial model involved including and estimating the model each time a new effect was included. The final model comprised three effects (academic goals on homework time management, on amount of homework done, and on academic achievement) and the elimination of the initially established effect of the approach to studying on the time spent doing homework. The inclusion or elimination of the effects in the model was determined accounting for their statistical and theoretical significance. The final model resulting from these modifications is shown in **Figure 2**, with an adequate fit to the empirical data:  $\chi^2 = 12.03$ ,  $df = 6$ ,  $p = 0.061$ ,  $GFI = 0.993$ ,  $AGFI = 0.974$ ,  $TLI = 0.975$ ,  $CFI = 0.990$ ,  $RMSEA = 0.043$ , 90% CI (0.000, 0.079),  $p = 0.567$ .



**FIGURE 2 |** The results of the fit of the hypothesized model (standardized outcomes): Relations in dashed lines were found to be statistically significant, but this was not established in the initial model.

## Assessment of the Relationships on the Final Model

Table 2 presents the data obtained for the relationships considered in the final model (see also Figure 2).

The data from Table 2 and Figure 2 indicates that the majority of the relationships between the variables are consistent with the hypotheses. First, we found a statistically significant association between the learning goals (i.e., competence and control), the approach to homework ( $b = 0.50$ ,  $p < 0.001$ ), two of the variables associated with engagement in homework (the amount of homework done [ $b = 0.27$ ,  $p < 0.001$ ], homework time management [ $b = 0.30$ ,  $p < 0.001$ ]), and academic achievement ( $b = 0.34$ ,  $p < 0.001$ ). These results indicate that the more oriented students are toward learning goals (i.e., competence and control), the deeper the approach to homework, the more homework is completed, the better the homework time management, and the higher the academic achievement.

Second, a statistically significant association between the deep approach and homework time management ( $b = 0.30$ ,  $p < 0.001$ ) and the amount of homework done ( $b = 0.09$ ,  $p < 0.05$ ) was found. These results reflect that the deeper the students' approach to homework, the better the management of the time spent on homework, and the more the homework done. Third, there was a statistically significant association between homework time management, time spent on homework, and the amount of homework done ( $b = 0.23$ ,  $p < 0.001$ , and  $b = 0.10$ ,  $p < 0.01$ , respectively). These results confirm, as expected, that the more time students spent doing homework and the better students manage their homework time, the more homework they will do. Four, we found a statistically significant relation between the amount of homework done and academic achievement ( $b = 0.20$ ,  $p < 0.001$ ). This indicates that the more homework students complete the better their academic achievement.

In summary, our findings indicate that: (a) academic achievement is positively associated with the amount of

homework completed; (b) the amount of homework done is related to homework time management; (c) homework time management is associated with *how* homework is done (approach to homework); and (d) consistent with the behavior of the variables in the model (except for the time spent on homework), *how* homework is done (i.e., approach to homework) is explained to a great extent (see total effects in Table 3) by the student's type of academic motivation.

Finally, taking into account both the direct effects (represented in Figure 2) and the indirect ones (see Table 3), the model explained between 20 and 30% of the variance of the dependent variables (except for the time spent on homework, which is not explained at all): approach to homework (24.7%), time management (26.9%), amount of homework done (24.4%), and academic achievement (21.6%).

## DISCUSSION

Consistent with prior research (e.g., Cooper et al., 2001), our findings showed that students' academic achievement in the last years of elementary education is closely related to the amount of homework done. In addition, the present study also confirms the importance of students' effort and commitment to doing homework (Trautwein et al., 2006a,b), showing that academic achievement is also related with students' desire and interest to learn and improve their skills. Therefore, when teachers assign homework, it is essential to attend to students' typical approach to learning, which is mediated by the motivational profile and by the way students solve the tasks proposed (Hong et al., 2004). The results of this investigation suggest that the adoption of learning goals leads to important educational benefits (Meece et al., 2006), among which is doing homework.

Importantly, our study shows that the amount of homework done is associated not only with the time spent, but also with the time management. Time spent on homework should not be

**TABLE 2 | Fit of the hypothesized model (standardized outcomes): final model of student engagement in homework.**

	<i>b</i> <sup>a</sup>	<i>b</i> <sup>b</sup>	SE	CR	<i>P</i> <
Learning goals → Approach to homework	0.536	0.497	0.040	13.248	0.001
Approach to homework → Time-management	0.350	0.303	0.049	7.093	0.001
Learning goals → Time-management	0.370	0.297	0.053	6.960	0.001
Time-management → Amount of homework	0.179	0.226	0.035	5.143	0.001
Learning goals → Amount of homework	0.270	0.274	0.045	6.054	0.001
Time spent on homework → Amount of homework	0.067	0.104	0.024	2.768	0.006
Approach to homework → Amount of homework	0.082	0.090	0.042	1.974	0.048
Amount of homework → Academic achievement	0.310	0.201	0.065	4.763	0.004
Learning goals → Academic achievement	0.521	0.343	0.064	8.128	0.202

<sup>a</sup>Nonstandardized regression coefficients; <sup>b</sup>Standardized regression coefficients.

**TABLE 3 | Standardized direct, indirect, and total effects for the final model.**

—(direction of the effect)—→	Approach to homework	Time management	Amount of homework completed	Academic achievement
<b>STANDARDIZED OUTCOMES</b>				
Academic goals	0.497	0.297	0.274	0.343
Approach to homework	–	0.303	0.090	0.000
Time spent on homework	0.000	0.000	0.104	0.000
Time management	0.000	–	0.226	0.000
Amount of homework done	0.000	0.000	–	0.201
<b>STANDARDIZED INDIRECT EFFECTS</b>				
Academic goals	0.000	0.150	0.146	0.084
Approach to homework	–	0.000	0.068	0.032
Time spent on homework	0.000	0.000	0.000	0.021
Time management	0.000	–	0.000	0.046
Amount of homework done	0.000	0.000	–	0.000
<b>STANDARDIZED TOTAL EFFECTS</b>				
Academic goals	0.497	0.447	0.420	0.428
Approach to homework	–	0.303	0.158	0.032
Time spent on homework	0.000	0.000	0.104	0.021
Time management	0.000	–	0.226	0.046
Amount of homework done	0.000	0.000	–	0.201

considered an absolute indicator of the amount of homework done, because students' cognitive skills, motivation, and prior knowledge may significantly affect the time needed to complete the homework assignment (Regueiro et al., 2015). For students, managing homework time is a challenge (Corno, 2000; Xu, 2008), but doing it correctly may have a positive influence on their academic success (Claessens et al., 2007), on homework completion (Xu, 2005), and on school achievement (Eilam, 2001).

Despite that previous studies reported a positive relationship between the time spent on homework and academic achievement (Cooper et al., 2006), the present research shows that time spent on homework is not a relevant predictor of academic achievement. Other studies have also obtained similar results (Trautwein et al., 2009; Núñez et al., 2015a), indicating that time spent on homework is negatively associated to academic achievement, perhaps because spending a lot of time on homework may indicate an inefficient working style and lack of motivation (Núñez et al., 2015a). Besides, our data indicates that

spending more time on homework is positively associated to the amount of homework done.

Although, some studies have found that students who spend more time on homework also tend to report greater commitment to school work (Galloway et al., 2013), our findings indicated that spending more time doing homework was not related to a deeper engagement on the task. A possible explanation may be that using a deep approach to school tasks subsumes engaging in homework with the aim of practicing but also to further extend the content learned in class. This approach does not depend on the time spent doing homework, rather on the students' motives for doing homework.

Another important contribution of this study concerns learning-oriented goals—usually associated with positive outcomes in motivational, cognitive, and achievement variables (Pajares et al., 2000). Results indicate that the motivation to increase competence and learning is also related to approaching homework deeply and to manage homework efficiently.



Consistent with previous findings (Xu, 2005), these results provide additional empirical support to time management goals (Pintrich, 2004).

There is a robust relationship between learning-oriented goals and a deep approach, and between a deep approach and the amount of homework done. All this indicates that these results are in line with prior research, meaning that the adoption of a deep approach to learning is related with high quality academic achievement (Lindblom-Ylänne and Lonka, 1999; Rosário et al., 2013b).

## Educational Implications and Study Limitations

One of the major limitations of this study lies in the type of research design used. We used a cross-sectional design to examine the effects among the variables within a path analysis model. However, to establish a cause-effect relationship a temporal sequence between two variables is needed a requirement that can only be met with longitudinal designs. Future studies should consider address this limitation.

Despite the above limitation, our results can be considered relevant and show important educational implications. It is essential for teachers and school administrators to be sensitized about the effects of teachers' homework follow-up practices on students' homework engagement (Rosário et al., 2015), and of these variables in students' school engagement and academic success. Likewise, research on students' learning should be undertaken from the perspective of the learners to understand how students use their knowledge and skills to do homework and to solve problems posed therein. On

the other hand, research should examine in-depth the use of learning strategies during homework, as well as how students' motivations at an early age may foster homework completion and increase the quality of school outcomes. For this last purpose, teachers should pay attention not only to the acquisition of curricular content but also to the development of the appropriate thinking skills and self-regulated learning strategies (Rosário et al., 2010b; Núñez et al., 2013). Finally, the amount of homework done and its positive relationship with academic achievement should be considered as a final outcome of a process rooted on a comprehensive and meaningful learning. Students motivated to learn are likely to approach homework deeply and manage homework time efficaciously. As a result, they tend to do more homework and outperform. In sum, is doing homework a good way to acquire competence, improve skills, and outperform? Our data suggest a positive answer.

## AUTHOR CONTRIBUTIONS

AV and BR Collect data, data analysis, writing the paper. JN and PR data analysis, writing the paper. SR and IP writing the paper.

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## REFERENCES

- Appleton, J. J., Christenson, S. L., and Furlong, M. J. (2008). Student engagement with school: critical conceptual and methodological issues of the construct. *Psychol. Sch.* 45, 369–386. doi: 10.1002/pits.20303
- Appleton, J. J., Christenson, S. L., Kim, D., and Reschly, A. L. (2006). Measuring cognitive and psychological engagement: validation of the student engagement instrument. *J. Sch. Psychol.* 44, 427–445. doi: 10.1016/j.jsp.2006.04.002
- Arbuckle, J. L. (2009). *Amos 18.0 User's Guide*. Crawfordville, FL: Amos Development Corporation.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychol. Bull.* 107, 238–246. doi: 10.1037/0033-2909.107.2.238
- Biggs, J., Kember, D., and Leung, D. Y. (2001). The revised two-actor study process questionnaire: R-SPQ-2F. *Br. J. Educ. Psychol.* 71, 133–149. doi: 10.1348/000709901158433
- Boekaerts, M. (1999). Self-regulated learning: where are today. *Int. J. Educ. Res.* 31, 445–458. doi: 10.1016/S0883-0355(99)00014-2
- Browne, M. W., and Cudeck, R. (1993). "Alternative ways of assessing model fit," in *Testing Structural Equation Models*, eds K. Bollen and J. Long (Newbury Park, CA: Sage), 136–162.
- Cano, F., García, A., Justicia, F., and García-Berbén, A. B. (2014). Enfoques de aprendizaje y comprensión lectora: el papel de las preguntas de los estudiantes y del conocimiento previo [Approaches to learning and reading comprehension: the role of students' questions and of prior knowledge]. *Rev. Psicodidáctica* 19, 247–265. doi: 10.1387/RevPsicodidact.10186
- Classens, B. J. C., van Eerde, W., Rutte, C. G., and Roe, R. A. (2007). A review of the time management literature. *Pers. Rev.* 36, 255–276. doi: 10.1108/00483480710726136
- Cooper, H., Jackson, K., Nye, B., and Lindsay, J. J. (2001). A model of homework's influence on the performance evaluations of elementary school students. *J. Exp. Educ.* 69, 181–200. doi: 10.1080/00220970109600655
- Cooper, H., Robinson, J. C., and Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research, 1987–2003. *Rev. Educ. Res.* 76, 1–62. doi: 10.3102/00346543076001001
- Corno, L. (2000). Looking at homework differently. *Element. Sch. J.* 100, 529–548. doi: 10.1086/499654
- Deci, E. L., and Ryan, R. M. (2002). *Handbook of Self-Determination Research*. New York, NY: University of Rochester Press.
- Dettmers, S., Trautwein, U., and Lüdtke, O. (2009). The relationship between homework time and achievement is not universal: evidence from multilevel analyses in 40 countries. *Sch. Eff. Sch. Improv.* 20, 375–405. doi: 10.1080/09243450902904601
- Eccles, J., and Wang, M. T. (2012). "Part I Commentary: so what is student engagement anyway?," in *Handbook of Research on Student Engagement*, eds S. L. Christenson, A. L. Reschly, and C. Wylie (New York, NY: Springer), 133–145.
- Eccles (Parsons), J., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., et al. (1983). "Expectancies, values, and academic choice: origins and changes," in *Achievement and Achievement Motivation*, ed J. Spence (San Francisco, CA: Freeman), 75–146.
- Eilam, B. (2001). Primary strategies for promoting homework performance. *Am. Educ. Res. J.* 38, 691–725. doi: 10.3102/00028312038003691
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educ. Psychol.* 34, 169–189. doi: 10.1207/s15326985ep3403\_3
- Elliot, A. J., and Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *J. Pers. Soc. Psychol.* 72, 218–232. doi: 10.1037/0022-3514.72.1.218

- Elliot, A. J., McGregor, H. A., and Gable, S. (1999). Achievement goals, study strategies, and exam performance: a mediational analysis. *J. Educ. Psychol.* 91, 549–563. doi: 10.1037/0022-0663.91.3.549
- Entwistle, N. J. (1991). Approaches to learning and perceptions of the learning environment. *High. Educ.* 22, 201–204. doi: 10.1007/BF00132287
- Entwistle, N. J. (2009). *Teaching for Understanding at University: Deep Approaches and Distinctive Ways of Thinking*. Basingstoke: Palgrave Macmillan.
- Fernández-Alonso, R., Suárez-Álvarez, J., and Muñiz, J. (2014). Tareas escolares en el hogar y rendimiento en matemáticas: una aproximación multinivel con estudiantes de Enseñanza Primaria [Homework and academic performance in mathematics: a multilevel approach with Primary school students]. *Rev. Psicol. Educ.* 9, 15–29.
- Fredricks, J. A., Blumenfeld, P. C., and Paris, A. (2004). School engagement: potential of the concept, state of the evidence. *Rev. Educ. Res.* 74, 59–109. doi: 10.3102/00346543074001059
- Galloway, M., Conner, J., and Pope, D. (2013). Nonacademic effects of homework in privileged, high-performing high schools. *J. Exp. Educ.* 81, 490–510. doi: 10.1080/00220973.2012.745469
- Gaudreau, P. (2012). Goal self-concordance moderates the relationship between achievement goals and indicators of academic adjustment. *Learn. Individ. Differ.* 22, 827–832. doi: 10.1016/j.lindif.2012.06.006
- Hong, E., Milgram, R. M., and Rowell, L. L. (2004). Homework motivation and preference: a learner-centered homework approach. *Theory Pract.* 43, 197–203. doi: 10.1207/s15430421tip4303\_5
- Inglés, C. J., Martínez-González, A. E., and García-Fernández, J. M. (2013). Conducta prosocial y estrategias de aprendizaje en una muestra de estudiantes españoles de Educación Secundaria Obligatoria [Prosocial behavior and learning strategies in a sample of Spanish students of Compulsory Secondary Education]. *Eur. J. Educ. Psychol.* 6, 33–53. doi: 10.1989/ejep.v6i1.101
- Jöreskog, K. G., and Sörbom, D. (1983). *LISREL - 6 User's Reference Guide*. Mooresville, IN: Scientific Software.
- Kohn, A. (2006). Abusing research: the study of homework and other examples. *Phi Delta Kappan* 88, 9–22. doi: 10.1177/003172170608800105
- Lindblom-Ylänne, S., and Lonka, K. (1999). Individual ways of interacting with the learning environment - are they related to study success? *Learn. Instruct.* 9, 1–18. doi: 10.1016/S0959-4752(98)00025-5
- Marks, H. (2000). Student engagement in instructional activity: patterns in the elementary, middle, and high school years. *Am. Educ. Res. J.* 37, 153–184. doi: 10.3102/00028312037001153
- Martin, A. J. (2012). "Motivation and engagement: conceptual, operational, and empirical clarity," in *Handbook of Research on Student Engagement*, eds S. L. Christenson, A. L. Reschly, and C. Wylie (New York, NY: Springer), 303–311.
- Marton, F., and Säljö, R. (1976a). On qualitative differences in learning. *I: outcome and process*. *Br. J. Educ. Psychol.* 46, 4–11. doi: 10.1111/j.2044-8279.1976.tb02980.x
- Marton, F., and Säljö, R. (1976b). On qualitative differences in learning. *II: outcome as a function of the learner's conception of the task*. *Br. J. Educ. Psychol.* 46, 115–127. doi: 10.1111/j.2044-8279.1976.tb02304.x
- Meece, J. L., Anderman, E. M., and Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annu. Rev. Psychol.* 57, 487–503. doi: 10.1146/annurev.psych.56.091103.070258
- Middleton, M., and Midgley, C. (1997). Avoiding the demonstration of lack of ability: an unexplored aspect of goal theory. *J. Educ. Psychol.* 89, 710–718. doi: 10.1037/0022-0663.89.4.710
- Muhlenbruck, L., Cooper, H., Nye, B., and Lindsay, J. J. (2000). Homework and achievement: explaining the different strengths of relation at the elementary and secondary school levels. *Soc. Psychol. Educ.* 3, 295–317. doi: 10.1023/A:1009680513901
- Ng, C. H. (2008). Multiple-goal learners and their differential patterns of learning. *Educ. Psychol.* 28, 439–456. doi: 10.1080/01443410701739470
- Núñez, J. C., González-Pianda, J. A., González-Pumariega, S., García, M., and Roces, C. (1997). *Cuestionario Para la Evaluación de Metas Académicas [Academic Goals Assessment Questionnaire]*. Department of Psychology, University of Oviedo.
- Núñez, J. C., Suárez, N., Cerezo, R., González-Pianda, J. A., Rosário, P., Mourão, R., et al. (2015a). Homework and academic achievement across Spanish Compulsory Education. *Educ. Psychol.* 35, 726–746. doi: 10.1080/01443410.2013.817537
- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Cerezo, R., and Valle, A. (2015b). Teachers' feedback on homework, homework-related behaviors and academic achievement. *J. Educ. Res.* 108, 204–216. doi: 10.1080/00220671.2013.878298
- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Valle, A., and Epstein, J. L. (2015c). Relationships between parental involvement in homework, student homework behaviors, and academic achievement: differences among elementary, junior high, and high school students. *Metacogn. Learn.* 10, 375–406. doi: 10.1007/s11409-015-9135-5
- Núñez, J., Rosário, P., Vallejo, G., and González-Pianda, J. (2013). A longitudinal assessment of the effectiveness of a school-based mentoring program in middle school. *Contemp. Educ. Psychol.* 38, 11–21. doi: 10.1016/j.cedpsych.2012.10.002
- Pajares, F., Britner, S. L., and Valiante, G. (2000). Relation between achievement goals and self-beliefs of middle school students in writing and science. *Contemp. Educ. Psychol.* 25, 406–422. doi: 10.1006/ceps.1999.1027
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educ. Psychol. Rev.* 16, 385–407. doi: 10.1007/s10648-004-0006-x
- Pintrich, P. R., and De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom performance. *J. Educ. Psychol.* 82, 33–40. doi: 10.1037/0022-0663.82.1.33
- Reeve, J., Jang, H., Carrell, D., Jeon, S., and Barch, J. (2004). Enhancing students' engagement by increasing teachers' autonomy support. *Motiv. Emot.* 28, 147–169. doi: 10.1023/B:MOEM.0000032312.95499.6f
- Regueiro, B., Suárez, N., Valle, A., Núñez, J. C., and Rosário, P. (2015). La motivación e implicación en los deberes escolares a lo largo de la escolaridad obligatoria [Homework motivation and engagement throughout compulsory education]. *Rev. Psicodidáctica* 20, 47–63. doi: 10.1387/RevPsicodidact.12641
- Rodríguez, S., Cabanach, R. G., Piñero, I., Valle, A., Núñez, J. C., and González-Pianda, J. A. (2001). Metas de aproximación, metas de evitación y múltiples metas académicas [Approach goals, avoidance goals and multiple academic goals]. *Psicothema* 13, 546–550.
- Rosário, P., González-Pianda, J. A., Pinto, R., Ferreira, P., Lourenço, A., and Paiva, O. (2010a). Efficacy of the program "Testas' (mis)adventures" to promote the deep approach to learning. *Psicothema* 22, 828–834.
- Rosário, P., Mourão, R., Baldaque, M., Nunes, T., Núñez, J. C., González-Pianda, J. A., et al. (2009). Homework, self-regulation of learning and math performance. *Rev. Psicodidáctica* 14, 179–192.
- Rosário, P., Núñez, J. A., Ferrando, J. P., Paiva, O., Lourenço, A., Cerezo, R., et al. (2013a). The relationship between approaches to teaching and approaches to studying: a two-level structural equation model for biology achievement in high school. *Metacogn. Learn.* 8, 47–77. doi: 10.1007/s11409-013-9095-6
- Rosário, P., Núñez, J. C., González-Pianda, J. A., Almeida, L., Soares, S., and Rúbio, M. (2005). Academic learning from the perspective of Model 3P of J. Biggs. *Psicothema* 17, 20–30.
- Rosário, P., Núñez, J. C., González-Pianda, J. A., Valle, A., Trigo, L., and Guimarães, C. (2010b). Enhancing self-regulation and approaches to learning in first-year college students: a narrative-based program assessed in the Iberian Peninsula. *Eur. J. Psychol. Educ.* 25, 411–428. doi: 10.1007/s10212-010-0020-y
- Rosário, P., Núñez, J. C., Vallejo, G., Cunha, J., Azevedo, R., Pereira, R., et al. (2016). Promoting Gypsy children school engagement: a story-tool project to enhance self-regulated learning. *Contemp. Educ. Psychol.* doi: 10.1016/j.cedpsych.2015.11.005. [Epub ahead of print].
- Rosário, P., Núñez, J. C., Vallejo, G., Cunha, J., Nunes, T., Suárez, N., et al. (2015). The effects of teachers' homework follow-up practices on students' EFL performance: a randomized-group design. *Front. Psychol.* 6:1528. doi: 10.3389/fpsyg.2015.01528
- Rosário, P., Núñez, J., Valle, A., González-Pianda, J., and Lourenço, A. (2013b). Grade level, study time, and grade retention and their effects on motivation, self-regulated learning strategies, and mathematics achievement: a structural equation model. *Eur. J. Psychol. Educ.* 28, 1311–1331. doi: 10.1007/s10212-012-0167-9
- Skaalvik, E. (1997). Self-enhancing and self-defeating ego orientation: relations with task and avoidance orientation, achievement, self-perceptions, and anxiety. *J. Educ. Psychol.* 89, 71–81. doi: 10.1037/0022-0663.89.1.71
- Skinner, E. A., and Pitzer, J. R. (2012). "Developmental dynamics of student engagement, coping, and everyday resilience," in *Handbook of Research on Student Engagement*, eds S. L. Christenson, A. L. Reschly, and C. Wylie (New York, NY: Springer), 21–44.

- Struyven, K., Dochy, F., Janssens, S., and Gielen, S. (2006). On the dynamics of students' approaches to learning: the effects of the teaching/learning environment. *Learn. Instr.* 16, 279–294. doi: 10.1016/j.learninstruc.2006.07.001
- Suárez, J. M., Cabanach, R. G., and Valle, A. (2001). Multiple-goal pursuit and its relation to cognitive, self-regulatory, and motivational strategies. *Br. J. Educ. Psychol.* 71, 561–572. doi: 10.1348/000709901158677
- Trautwein, U., Lüdtke, O., Kastens, C., and Köller, O. (2006a). Effort on homework in grades 5 through 9: development, motivational antecedents, and the association with effort on classwork. *Child Dev.* 77, 1094–1111. doi: 10.1111/j.1467-8624.2006.00921.x
- Trautwein, U., Lüdtke, O., Schnyder, I., and Niggli, A. (2006b). Predicting homework effort: support for a domain-specific, multilevel homework model. *J. Educ. Psychol.* 98, 438–456. doi: 10.1037/0022-0663.98.2.438
- Trautwein, U., Schnyder, I., Niggli, A., Neumann, M., and Lüdtke, O. (2009). Chameleon effects in homework research: the homework-achievement association depends on the measures used and the level of analysis chosen. *Contemp. Educ. Psychol.* 34, 77–88. doi: 10.1016/j.cedpsych.2008.09.001
- Valle, A., Cabanach, R. G., Núñez, J. C., González-Pienda, J. A., Rodríguez, S., and Piñero, I. (2003a). Cognitive, motivational, and volitional dimensions of learning: an empirical test of a hypothetical model. *Res. High. Educ.* 44, 557–580. doi: 10.1023/A:1025443325499
- Valle, A., Cabanach, R. G., Núñez, J. C., González-Pienda, J. A., Rodríguez, S., and Piñero, I. (2003b). Multiple goals, motivation and academic learning. *Br. J. Educ. Psychol.* 73, 71–87. doi: 10.1348/000709903762869923
- Valle, A., Cabanach, R. G., Rodríguez, S., Núñez, J. C., and González-Pienda, J. A. (2006). Metas académicas, estrategias cognitivas y estrategias de autorregulación del estudio [Academic goals, cognitive and self-regulatory strategies]. *Psicothema* 18, 166–170.
- Valle, A., Núñez, J. C., Cabanach, R. G., González-Pienda, J. A., Rodríguez, S., Rosário, P., et al. (2009). Academic goals and learning quality in higher education students. *Span. J. Psychol.* 12, 96–105. doi: 10.1017/S1138741600001517
- Valle, A., Núñez, J. C., Cabanach, R., Rodríguez, S., Rosário, P., and Inglés, C. (2015a). Motivational profiles as a combination of academic goals in higher education. *Educ. Psychol.* 35, 634–650. doi: 10.1080/01443410.2013.819072
- Valle, A., Pan, I., Núñez, J. C., Rosário, P., Rodríguez, S., and Regueiro, B. (2015b). Deberes escolares y rendimiento académico en Educación Primaria [Homework and academic achievement in Primary Education]. *An. Psicol.* 31, 562–569. doi: 10.6018/analesps.31.2.171131
- Valle, A., Pan, I., Regueiro, B., Suárez, N., Tuero, E., and Nunes, A. R. (2015c). Predicting approach to homework in primary school students. *Psicothema* 27, 334–340. doi: 10.7334/psicothema2015.118
- Valle, A., Regueiro, B., Rodríguez, S., Piñero, I., Freire, C., Ferradás, M., et al. (2015d). Perfiles motivacionales como combinación de expectativas de autoeficacia y metas académicas en estudiantes universitarios [Motivational profiles as a combination of self-efficacy expectations and academic goals in university students]. *Eur. J. Educ. Psychol.* 8, 1–8. doi: 10.1016/j.ejeps.2015.10.001
- Vallejo, G., Tuero, E., Núñez, J. C., and Rosário, P. (2014). Performance evaluation of recent information criteria for selecting multilevel models in behavioral and social sciences. *Int. J. Clin. Health Psychol.* 14, 48–57. doi: 10.1016/S1697-2600(14)70036-5
- Wolters, C. A., Yu, S. L., and Pintrich, P. R. (1996). The relation between goal orientation and students' motivational beliefs and self-regulated learning. *Learn. Individ. Differ.* 8, 211–238. doi: 10.1016/s1041-6080(96)90015-1
- Xu, J. (2005). Purposes for doing homework reported by middle and high school students. *J. Educ. Res.* 99, 46–55. doi: 10.3200/JOER.99.1.46-55
- Xu, J. (2007). Middle-school homework management: more than just gender and family involvement. *Educ. Psychol.* 27, 173–189. doi: 10.1080/01443410601066669
- Xu, J. (2008). Validation of scores on the Homework Management Scale for high school students. *Educ. Psychol. Meas.* 68, 304–324. doi: 10.1177/0013164407301531
- Xu, J. (2010). Predicting homework time management at the secondary school level: a multilevel analysis. *Learn. Individ. Differ.* 20, 34–39. doi: 10.1016/j.lindif.2009.11.001
- Zimmerman, B. J., and Kitsantas, A. (2005). Homework practices and academic achievement: the mediating role of self-efficacy and perceived responsibility beliefs. *Contemp. Educ. Psychol.* 30, 397–417. doi: 10.1016/j.cedpsych.2005.05.003

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## 6. Síntesis y discusión general de los resultados

A continuación se presenta una síntesis de los resultados más importantes obtenidos en los seis trabajos de investigación que han dado lugar a las distintas publicaciones que conforman la presente Tesis Doctoral.

### 6.1. *Las características contextuales y personales y su incidencia en el compromiso en los deberes escolares*

Uno de los principales objetivos de esta Tesis Doctoral era analizar si existían diferencias en el *engagement* o compromiso conductual (cantidad de deberes realizados, tiempo dedicado a los deberes y aprovechamiento del tiempo) en función de variables contextuales como la edad, el curso, el género o la procedencia; así como respecto al rendimiento previo y a la implicación parental.

Como se indicó en la contextualización de este trabajo, el hecho de que el alumnado se implique más o menos en la realización de los deberes debería estar, al menos parcialmente, relacionado con el curso en el que se encuentra (Muhlenbruck, Cooper, Nye y Lindsay, 2000). Los resultados de las investigaciones llevadas a cabo en dos de los artículos que componen esta Tesis Doctoral (publicados en la *Revista de Psicodidáctica* y en la revista *Cultura y Educación*) sugieren que, efectivamente, el compromiso conductual en los deberes covaría con el curso. Concretamente, la cantidad de deberes realizados y el aprovechamiento del tiempo disminuyen a medida que el alumnado avanza de curso, tal y como habían evidenciado investigaciones previas (Hong et al., 2009; Núñez, Suárez, Cerezo et al., 2015). Por lo tanto, es posible que a medida que los estudiantes avanzan de curso realicen menos cantidad de deberes, les dediquen menos tiempo y aprovechen peor el tiempo que les dedican. En el trabajo publicado en la revista *Cultura y Educación* los resultados indican que, además del compromiso conductual, el compromiso motivacional también varía con el curso. En el trabajo de *Cultura y Educación* se ha obtenido evidencia clara de que el alumnado de los cursos más altos está menos interesado en los deberes y su actitud hacia ellos se va volviendo más negativa conforme pasan los años. También se ha observado que el estudiantado, conforme avanza de curso, tiene menos motivación intrínseca hacia los deberes y los percibe menos útiles.

Por lo que respecta al rendimiento académico previo, los resultados del trabajo publicado en la *Revista de Psicodidáctica* nos indican una relación significativa tanto con



las variables de compromiso conductual como con la motivación intrínseca, el interés y la percepción de utilidad. Especialmente, la variable cantidad de deberes realizados es la que se ve más influenciada por el mismo. Tal y como apuntan otros estudios (Cooper et al., 2001; Núñez, Suárez, Cerezo et al., 2015; Trautwein et al., 2002; Trautwein y Lüdtke, 2009), la mayor cantidad de tareas realizadas es un predictor de mejor rendimiento académico. En este mismo trabajo se encontraron también diferencias estadísticamente significativas en función del género respecto del aprovechamiento del tiempo y del tiempo dedicado a los deberes. Tal y como mostró la investigación previa, las chicas parecen emplear más tiempo en la realización de los deberes escolares, a pesar de que aprovechan peor el tiempo que los chicos (Trautwein, 2007).

En cuanto a las diferencias en el compromiso conductual en función de la procedencia, los resultados del trabajo publicado en *Frontiers in Psychology* sugieren que todas las variables relativas a la implicación conductual del estudiante en la realización de los deberes, excepto el tiempo dedicado, correlacionan de forma positiva y significativa con el rendimiento académico en la población inmigrante. Además, se constatan diferencias estadísticamente significativas en la implicación en función del curso en el alumnado inmigrante. A medida que se pasa de curso desde 3º de Primaria hasta 4º de la ESO disminuye la cantidad de deberes realizados de los prescritos así como la concentración y aprovechamiento del tiempo durante la realización de los deberes. Por otra parte, se observa que el beneficio que aporta al estudiante inmigrante la realización de deberes es menor a medida que se suceden los cursos, es decir, hacer los deberes resulta más beneficioso en términos de rendimiento académico en Educación Primaria que en Educación Secundaria Obligatoria. Los resultados relativos a poblaciones como la procedencia inmigrante concuerdan con la literatura previa en alumnado nativo (Núñez, Suárez, Cerezo et al., 2015).

Los alumnos nativos hacen más deberes y de más calidad que los estudiantes inmigrantes, y también se benefician más de su realización, dedican más tiempo y obtienen un mayor rendimiento que sus compañeros inmigrantes.

Por último, los resultados de este trabajo indican que la población inmigrante no difiere estadísticamente en las variables de implicación en función del género y los resultados en este punto no coinciden con lo encontrado para otras poblaciones inmigrantes (Bang, 2011; Trautwein, 2007) donde se observa que las mujeres se implican más en los deberes escolares. Quizás esta discrepancia con la literatura previa respecto al papel del género en el compromiso académico sea debida a condicionantes

socio-familiares de las poblaciones. Es posible que algunas familias inmigrantes que disponen de menos recursos, demanden más ayuda de las jóvenes para ayudar en tareas domésticas, como puede ser el cuidado de otros hermanos, etc., lo cual les resta tiempo a estas para la realización de sus tareas escolares (véase p.e., Bang et al., 2009).

Finalmente, en el trabajo publicado en la *Revista Española de Pedagogía* se han estudiado una serie de variables para evaluar la percepción de implicación parental que podrían influir en los deberes y en su relación con el rendimiento académico de los alumnos (teniendo en cuenta el curso). Concretamente, se observa que los niveles más altos de rendimiento académico se asocian con mayores expectativas parentales y una mayor satisfacción de los padres con los logros académicos de los hijos. Al tiempo que, aunque no se han encontrado diferencias estadísticamente significativas, el acompañamiento parental durante la realización de los deberes es menos relevante entre los alumnos con mejor rendimiento respecto a los que rinden peor. Cabe hipotetizar que los padres que confían más en las posibilidades de los hijos sienten una menor necesidad de acompañarles durante el proceso de realización de los deberes. Por otra parte, se han observado diferencias en las variables de nivel de satisfacción de los padres con el rendimiento académico de sus hijos y expectativas parentales de capacidad de sus hijos. Quizá esto se deba a que este tipo de variables sí se ponen de manifiesto a partir de la observación del rendimiento de los hijos (cuando obtienen buenos resultados, los padres están más satisfechos y también los consideran más capaces y viceversa) (González-Pienda et al., 2002).

Otro de los hallazgos de este trabajo pone de manifiesto la progresiva disminución de la implicación parental con el paso de los cursos. Se puede observar que, a medida que los estudiantes van avanzando de curso, perciben una disminución en el interés parental por sus progresos académicos, en el acompañamiento parental al realizar los deberes, en el nivel de satisfacción de sus padres por los resultados académicos; así como también respecto al control y apoyo parental en los deberes. Esta disminución en la implicación parental percibida podría deberse a que los estudiantes se van sintiendo más autónomos y van haciendo un mejor uso autorregulado de estrategias de estudio.

## 6.2. *El compromiso motivacional y su incidencia en el compromiso conductual*

Desde una perspectiva centrada en la persona (*person-centred approach*) el trabajo publicado en la revista *International Journal of Psychology* nos ha permitido

diferenciar cinco perfiles motivacionales en función de las distintas combinaciones de orientaciones a metas de los estudiantes. Un primer grupo de estudiantes se caracterizaría por la adopción de múltiples metas, un segundo grupo integraría a los estudiantes más desmotivados, otros dos grupos de estudiantes se han caracterizado por el predominio de metas de aprendizaje y un último grupo por su alto miedo al fracaso.

El estudio de la vinculación entre estos perfiles motivacionales y el compromiso motivacional con los deberes nos ha permitido constatar que los dos grupos con predominio de orientación a metas de aprendizaje presentan medias significativamente más altas que el resto en todas las variables de implicación, excepto en ansiedad ante la tarea. Además de evidenciar el rendimiento académico más elevado, son también estos dos grupos orientados al dominio los que más deberes realizan, quienes más tiempo dedican a los deberes y quienes mejor lo aprovechan. Se obtuvieron resultados similares a estos, en compromiso conductual y motivacional con los deberes, para el grupo de estudiantes con múltiples metas; si bien a diferencia de los dos grupos con orientación a metas de aprendizaje, los estudiantes con múltiples metas mostraban niveles más altos de ansiedad.

El miedo al fracaso que caracteriza a los estudiantes del último de los perfiles encontrados podría asociarse con los niveles más negativos tanto en el compromiso motivacional como conductual con los deberes escolares. Las tasas más elevadas de ansiedad ante los deberes escolares que caracterizan este perfil podrían estar detrás de la evitación, característica del grupo de alumnos más preocupados por no dar una imagen de incompetencia. En general, estos hallazgos son consistentes con los de otros estudios que muestran una relación positiva entre las metas de evitación y la ansiedad (por ejemplo, Middleton y Midgley, 1997).

En línea con los trabajos que han vinculado las metas de aprendizaje a la persistencia, interés y motivación intrínseca, así como al empleo de estrategias de aprendizaje más elaboradas y a mejores resultados académicos (Hulleman, Schragger, Bodmann y Harackiewicz, 2010), este trabajo también constata que son los perfiles motivacionales en los que predominan las metas de aprendizaje los que muestran un *engagement* más positivo con los deberes. Los grupos con predominio de metas de aprendizaje se involucran más profundamente en los deberes, obtienen mejores resultados académicos y presentan menos ansiedad que otros.

### 6.3. *El compromiso motivacional, cognitivo y conductual en los deberes escolares y su incidencia en el rendimiento académico*

En consonancia con los resultados de investigaciones anteriores que indican claramente que la asignación y realización los deberes escolares está asociada positivamente con el rendimiento (Cooper et al., 2001; Cooper, Lindsay, Nye y Greathouse, 1998; Trautwein 2007; Trautwein et al., 2002) los resultados del último trabajo publicado en la revista *Frontiers in Psychology* ponen de manifiesto que el rendimiento académico de los estudiantes se encuentra determinado en gran medida por la cantidad de deberes realizados de los prescritos por el profesorado.

Este sexto trabajo que compone esta Tesis Doctoral pretende contribuir a ampliar nuestro conocimiento en torno a la explicación del rendimiento académico incorporando variables relativas a los deberes escolares y a su realización. Desde esta óptica se reitera el potencial de las razones de aprendizaje a la hora de enfrentarse y resolver los deberes escolares (Hong y Milgram, 2000; Hong, Milgram y Rowell, 2004) con importantes beneficios educativos (Elliott y Dweck, 1988; Meece, Anderman y Anderman, 2006).

Del mismo modo, este trabajo evidencia que la cantidad de deberes realizados, que incide directamente en el rendimiento académico alcanzado por el alumno, depende tanto del tiempo invertido como de su aprovechamiento. De acuerdo con estos resultados, y en contra de lo que informan algunos estudios previos (Cooper, 1989; Cooper et al., 2006), el tiempo dedicado a realizar los deberes escolares no es una variable relevante en la predicción del rendimiento académico. En línea con otro conjunto de trabajos que concluían que el tiempo invertido en la realización de los deberes podría llegar a ser incluso un predictor negativo del rendimiento académico (Núñez, Suárez, Rosário et al., 2015; Tam, 2009; Trautwein, 2007; Trautwein et al., 2009), entendemos que emplear mucho tiempo en la realización de los deberes puede indicar un estilo de realización de los mismos ineficiente y falta de motivación (Núñez, Suárez, Cerezo et al., 2015). En cualquier caso, atendiendo a la débil asociación entre el tiempo dedicado a los deberes y las calificaciones del estudiante (Cooper y Valentine, 2001; Cooper, 2007), se sugiere que el papel del tiempo en el rendimiento académico podría ser relevante únicamente en la medida que contribuye a la cantidad de deberes que finalmente el estudiante realiza. En el mismo sentido podríamos interpretar la incidencia del aprovechamiento del tiempo sobre la cantidad de deberes. Una gestión

eficiente del tiempo (Corno, 1996; Xu, 2004, 2008), y específicamente del tiempo dedicado a los deberes, tendrá una influencia positiva en el éxito académico (Claessens, van Eerde, Rutte y Roe, 2007), en la finalización de los deberes (Xu, 2005) y en su rendimiento (Eilam, 2001).

Al demostrarse una relación consistente entre las metas orientadas al aprendizaje y el enfoque profundo, entre el enfoque profundo y la cantidad de deberes y siendo la cantidad de deberes, junto con las propias metas lo que explica el rendimiento, todo parece indicar lo que numerosos estudios han intentado demostrar anteriormente: la adopción de enfoques profundos por parte de los estudiantes está fuertemente relacionada con mayores logros académicos de calidad (Hay, 2007; Prosser, Trigwell, Hazel y Waterhouse, 2000).

## **7. Limitaciones e investigación futura**

Como sucede en el último artículo, por las características del estudio no tenemos certeza de la dirección de la relación entre compromiso en los deberes escolares y rendimiento académico; es decir, si una mayor implicación es la causante de un mayor rendimiento académico, si mejores resultados académicos llevan a que el alumno se implique más o si ambas direcciones tienen un peso importante en esta relación. Quizás en futuros estudios sea necesario un modelo predictivo con el que pronosticar la varianza explicada del constructo total, en el que se tomase la calidad de la tarea realizada como una variable moduladora entre la relación entre implicación y rendimiento, dada la correlación positiva y significativa encontrada entre esta última variable y el rendimiento académico.

Por otra parte, aunque los debates en torno a los efectos positivos y negativos de los deberes escolares han sido constantes a lo largo de los años, aún continúa habiendo numerosos interrogantes a los que la investigación actual todavía no es capaz de dar una respuesta clara y precisa. Por ello, lo adecuado sería continuar con futuras investigaciones, pues en la mayor parte de los estudios realizados es difícil aislar los efectos de los deberes; ya que no podemos estar seguros de qué parte del éxito académico se debe a los deberes escolares y qué parte se debe a los procesos de enseñanza que se dan en el aula, a los conocimientos previos del estudiante (Trautwein y Köller, 2003) o incluso a otras variables personales y contextuales.

En futuras investigaciones también sería interesante una triangulación intramétodo (pues de esta forma se incrementaría la calidad y validez de los datos) o incluso entre métodos, combinando métodos cuantitativos y/o cualitativos. Esto nos permitiría en futuros estudios utilizar los puntos fuertes y paliar las limitaciones o debilidades de cada una de las investigaciones llevadas a cabo, cruzar datos u observar si se llega a las mismas conclusiones; así como llevar a cabo estudios longitudinales sobre el compromiso en los deberes escolares, por ser más eficientes y estadísticamente más potentes.

## 8. Conclusiones e implicaciones educativas

Del análisis de los resultados de las investigaciones que componen esta Tesis Doctoral extraemos las **CONCLUSIONES** que se presentan a continuación:

### 1. *Mantener viva la motivación a lo largo de la escolaridad*

Sería interesante ayudar a los estudiantes a aprender a mejorar o mantener su motivación en los deberes escolares así como enseñarles a ejercer una mayor autonomía en su realización. Al igual que cualquier otro aspecto de la educación, los estudiantes tienen que entender cómo los aprendizajes les beneficiarán en el mundo real. De lo contrario resulta casi imposible que estén motivados. Viendo la importancia que tiene la motivación intrínseca, el interés y la percepción de utilidad en la implicación, se hace necesario que las actividades asignadas constituyan un reto para los estudiantes. Con la finalidad de estimularlos y motivarlos, los deberes escolares deben ser útiles para los estudiantes. Si ellos perciben los deberes como un trabajo rutinario y sin ningún objetivo claro, lo más probable es que su motivación intrínseca e interés por ellos tienda a disminuir, como los resultados de esta Tesis Doctoral indican, y por lo tanto también lo hará su implicación o compromiso en los mismos. Por otro lado, conocer los diferentes perfiles motivaciones de los estudiantes y el grado de estabilidad de estos perfiles a lo largo del tiempo puede ser relevante para la práctica educativa. De esta forma, resulta más sencillo que los profesores puedan responder adecuadamente a las necesidades y metas de los estudiantes, prestando incluso mayor atención a los grupos en riesgo (como pueden ser los alumnos inmigrantes).

### 2. *Prescripción de deberes adaptada al estudiante*

Respecto de lo que las investigaciones aquí presentadas indican, si a medida que se avanza de curso descende la implicación en los deberes, sobre todo para aquellos estudiantes con peores niveles de rendimiento académico previo, entonces la prescripción de deberes debe estar adaptada a los conocimientos, competencias, necesidades e intereses de cada estudiante. El diseño de la misma cantidad, modalidad y nivel de dificultad de los deberes para todos los estudiantes es una medida que perjudica especialmente a aquellos que tienen mayores dificultades, que tienen peores niveles de rendimiento, menos conocimientos y/o que están menos motivados. Antes de prescribir los deberes escolares, el profesorado debe hacer una previsión del tiempo que es

necesario dedicarle a su realización, teniendo en cuenta que este tiempo puede variar en función de la edad, del nivel de desarrollo, de los conocimientos y de las capacidades.

### *3. Atender a la procedencia*

Los resultados de nuestro trabajo indican que aunque el hecho de realizar los deberes escolares resulta beneficioso para el alumnado inmigrante, las poblaciones estudiadas presentan diferencias en las variables que miden la implicación escolar. Estas variables guardan relación con el rendimiento académico. Las diferencias encontradas nos hacen sospechar que quizás existan otros factores que puedan influir en la implicación del estudiante, como puede ser el dominio del idioma, la cultura de procedencia o la propia ayuda ofrecida por los padres; es por ello por lo que a la hora de prescribir deberes es necesario tener en cuenta la procedencia de los estudiantes.

### *4. Padres: una implicación de calidad*

Otro de los resultados que se ha derivado de nuestras investigaciones es que la implicación parental en general decrece a medida que los alumnos asisten a cursos superiores. Sin embargo esto no quiere decir que esta implicación no sea necesaria, sino todo lo contrario. Las escuelas deben promover la implicación familiar para incrementar en sus hijos el interés y, en definitiva, el éxito educativo. Como ocurre en casi todos los escenarios de la vida, en el ámbito académico el apoyo es fundamental. Contar con el respaldo de los padres o de la familia puede ser de gran ayuda para que los jóvenes se sientan competentes y no abandonen tempranamente el sistema educativo. En esta línea sería interesante aumentar la calidad de la ayuda de los padres con los deberes. Dado que las figuras parentales son la primera y principal fuente de socialización de los hijos, otra opción está en fortalecer las relaciones familia-escuela, con profesores que asesoren a los padres sobre su participación en el proceso de los deberes, pero sin cometer el error de desempeñar un papel formal de “maestros” en los deberes. En su lugar, los padres deben facilitar y supervisar los deberes, ofrecer orientación pero no respuestas, estar disponibles para responder a preguntas sencillas, ofrecer retroalimentación positiva, proporcionar un tiempo y lugar tranquilo y bien iluminado para que sus hijos estudien, garantizar que los materiales necesarios estén disponibles, ayudar con el tiempo y la gestión de la carga de trabajo y ponerse en contacto con el profesor si hay algún problema que no pueden resolver. Por otro lado, mejorar las habilidades de los padres para que puedan ayudar eficazmente con los deberes puede ser también



especialmente importante. Se anima, por tanto, con el presente trabajo a involucrarse con los padres para ayudarles a mejorar con respecto a la participación en los deberes y para que no disminuya esta implicación con el paso de los cursos.

#### *5. Padres motivados, alumnos motivados*

De forma general, los alumnos alcanzan mayores triunfos cuando se encuentran motivados por sus padres, cuando reciben apoyo afectivo y emocional al hacer los deberes y cuando dialogan con ellos sobre la escuela, sobre sus posibles elecciones y sus proyectos de estudio, tanto presentes como futuros. Se trata de que la implicación parental en relación a los deberes esté centrada en incrementar las condiciones motivacionales y de soporte afectivo, más que en la ayuda de resolver, como tal, las actividades de los deberes escolares asignados. Si los estudiantes ven que los deberes son importantes para lo que viven fuera de la escuela, responden a sus intereses y contribuyen a reforzar sus conocimientos, también verán importante su significado. Los padres también serán partícipes de todo este proceso contemplando la validez de los deberes escolares como una herramienta que contribuye a consolidar los aprendizajes realizados en el aula.

#### *6. Los deberes escolares deben realizarlos los propios estudiantes sin la ayuda de ninguna otra persona*

Los deberes escolares deben realizarlos los propios estudiantes sin la ayuda de ninguna otra persona. Por eso, los padres deben proporcionar apoyo motivacional y afectivo y, en todo caso, supervisar y controlar que sus hijos hagan sus deberes, pero en ningún caso deben ayudarles en sus deberes ni, por supuesto, hacer ellos los deberes que sus hijos o bien no saben, no quieren o no se sienten capaces de realizarlos.

#### *7. Los deberes, ¿para qué?*

Se espera que conforme los estudiantes avanzan de curso vayan siendo cada vez más conscientes del proceso de realización de los deberes escolares, y es por ello por lo que se hace necesario que antes de prescribir los deberes el profesorado debe reflexionar sobre cuál es el propósito de esos deberes para que los estudiantes sean conocedores de dichos propósitos. De lo contrario se confirmará lo que se indica en la presente Tesis Doctoral: según avanzan de curso su implicación empeorará, harán menos deberes, les

dedicarán menos tiempo y este lo aprovecharán peor, ya que no comprenden cuál es su sentido y finalidad.

#### 8. *Evaluación clara de los deberes*

Además de la motivación intrínseca, el interés y la percepción de utilidad, también la ansiedad juega un papel importante, según los resultados aportados por las distintas investigaciones que conforma esta Tesis Doctoral. Por lo tanto, los deberes no deberían prescribirse como una imposición sujeta a una evaluación sin criterios, sino que estos deberían ser claros y conocidos por los estudiantes. Así, si queremos evitar esta disminución en la implicación según se avanza de curso, entonces los profesores deben transmitirle al alumnado cómo se valora y por qué el completar o no los deberes y también cómo se valora si los deberes se hacen o no correctamente. Dado que algunos estudiantes, si no completan los deberes, puede ser debido a problemas de organización, dificultad de la tarea o por otras razones, hay que tener en cuenta que penalizarlos puede ser algo inapropiado. Por eso, es necesario que el profesorado explique con claridad las medidas a tomar para aquellos casos en los que algún estudiante no completa los deberes o no los realiza adecuadamente.

## 9. Conclusions and educational implications

From the analysis of the results of these studies, some *conclusions* were drawn and presented below:

### 1. *Keep motivation alive throughout schooling*

It would be interesting to help out students to learn how to improve or stay motivated toward homework as well as to teach them to exercise greater autonomy in their performance. As in all other aspects of education, students must understand how learning outcomes will benefit them in their real life. Otherwise, it seems almost impossible for them to stay motivated. Given the importance of intrinsic motivation, interest and the perception of utility in involvement, it is necessary that the assigned activities constitute a challenge for students. In order to encourage and motivate them, homework should be useful for students. If homework is perceived as a routine work and without any clear objective, it is likely that their intrinsic motivation and interest for it tends to diminish, as the results of this Doctoral Thesis indicate, as well as their involvement and engagement toward it. On the other hand, knowing the different motivational profiles of the students and the stability of these profiles over time can be relevant for the educational practice.

Accordingly, it is easier for teachers to respond adequately to the needs and goals of students, paying even more attention to groups at risk (such as immigrant students).

### 2. *Homework assignment adapted to the student*

Research presented here indicate that as the course progresses the involvement in homework falls, especially for those students with worse levels of previous academic achievement; so then the assignment of homework must be adapted to the knowledge, competencies, needs, and interests of every student. The design of the same amount, modality and difficulty level of homework for all students is a measure that especially harms those who have greater difficulties, who have lower levels of performance, less knowledge and/or who are less motivated. Before assigning homework, the teacher must preview the time needed to dedicate to its performance, taking into account that this time may vary depending on the age, the level of development, knowledge, and skills.

### *3. Pay attention to students' background*

The results of our research indicate that although doing homework is beneficial for immigrant students, studied populations present differences in those variables that measure school involvement. These variables are related to academic achievement. The differences found make us suspect that there may be other factors that may influence on student's involvement, such as language proficiency, the culture of origin or even the help offered by the parents; this is why, when assigning homework, it is necessary to take into account the origin of students.

### *4. Parents: a quality involvement*

Another result that has been derived from our findings is that parental involvement in general decreases with increased schooling. However, this does not mean that this implication is not necessary, but the opposite. Schools must promote family involvement to increase interest in their children and, ultimately, educational success. As in almost all life scenarios, support is fundamental in the academic field. Having the support of parents or the family can be of great help so that youngsters feel competent and prevent early school leaving. In this line, it would be interesting to increase the quality of parents' help with homework. Given that parental figures are the first and main source of socialization of children, another option is to strengthen family-school relationships, with teachers who advise parents about their participation in the process of homework, but without making the mistake to play a formal role as "teachers" in homework. Instead, parents should facilitate and monitor homework, offer guidance but not answers, be available to answer simple questions, provide positive feedback, provide a quiet place and time, well-lit environment for their children to study, ensure that necessary materials are available, help with time and workload management and get in touch with the teacher if there is a problem they can not solve. On the other hand, improving the skills of parents so they can effectively help with homework can also be especially important. Therefore, with this research, it is encouraged to get parents involved to help students improve in their homework performance and do not diminish it through courses.

5. *Motivated parents, motivated students*

In general, students achieve greater success when they are motivated by their parents, when they receive affective and emotional support when doing homework and when they talk with them about the school, about their possible choices and their study projects, both present and future. Parental involvement in relation to homework should be focused on increasing motivational and emotional support conditions, rather than solving such activities of assigned homework. If students see that homework is important for what they live outside of school, respond to their interests and contribute to reinforcing their knowledge, they will also see its significance. Parents will also participate in this process contemplating the validity of homework as a tool that contributes to consolidate the learning made in the classroom.

6. *Homework should be done by students themselves, without being helped by any other person*

Therefore, parents should provide motivational and emotional support and, in any case, supervise and control that their children do their homework, but in no case should they help them in their homework or, of course, do the homework that their children do not know or do not want or do not feel capable of completing.

7. *Homework, what is the purpose?*

It is expected that as students' progress through school they will be more and more aware of the process of performing homework, and that is why it is necessary that before homework assignment the teacher should think over the purpose of that homework so then students are aware of these purposes. Otherwise, what is indicated in this research will be confirmed: as their course progresses, their involvement will worsen, they will do less homework, they will spend less time and homework-time management will be worse since they do not understand what the purpose is.

8. *A clear assessment of homework*

In addition to the intrinsic motivation, the interest and the perception of utility, anxiety also plays an important role, according to the results provided by the different investigations that complete this Doctoral Thesis. Homework should not be assigned as an imposition, subject to an evaluation without criteria, but should be clear and known

to students. Thus, if we want to avoid this decrease in involvement as the course progresses, teachers must convey to students how homework is valued, the importance of completing or not homework, and also how it is assessed if it is done correctly or not. Since some students do not complete homework and it may be due to organizational problems, the difficulty of the task or other reasons, it must be taken into account that penalizing them may be inappropriate. Therefore, it is needed that the teacher explains clearly the measures to be taken for those cases in which a student does not complete homework or does not perform it successfully.

## Referencias bibliográficas

- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools, 45*, 369–386.
- Bang, H. J. (2011). Newcomer Immigrant Students' Perspectives on What Affects Their Homework Experiences. *The Journal of Educational Research, 104*(6), 408-419.
- Bang, H. J., Suárez-Orozco C., Pakes J., & O'Connor E. (2009). The importance of homework in determining immigrant students' grades in schools in the USA context. *The Journal of Educational Research, 51*(1), 1-25.
- Boekaerts, M. (1999). Self-regulated learning: where are today. *International Journal of Educational Research, 31*, 445-458.
- Brewster, C. & Fager, J. (2000). *Increasing Student Engagement and Motivation: From Time-on-Task to Homework*. Portland: Northwest Regional Educational Laboratory.
- Bryan, T., Nelson, C., & Mathur, S. (1995). Homework: A survey of primary students in regular, resource, and self-contained special education classrooms. *Journal of Learning Disabilities, 27*, 85-90.
- Carr, S. (2012). High task/high ego oriented students' reasons for endorsing task and ego goals in the context of physical education. *Applied Psychology: An International Review, 61*, 540-563.
- Carr, S. & Weigand, D. A. (2008). Children's goal profiles and perceptions of the motivational climate: Interactive association with self-determined motivation and affective patterns in physical education. *Journal of Social, Behavioral, and Health Sciences, 2*, 8-32.
- Chen, C. & Stevenson, H. W. (1989). Homework: A cross-cultural examination. *Child Development, 60*, 551-561.
- Christenson, S. L., Reschly, A. L., & Wylie, C. (Eds.). (2012). *Handbook of research on student engagement*. New York, NY, US: Springer Science + Business Media.
- Claessens, B. J. C., van Eerde, W., Rutte, C. G., & Roe, R. A. (2007). A review of the time management literature. *Personnel Review, 36*, 255–276.
- Connell, J. P. & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-esteem processes. En M. R. Gunnar y L. A. Sroufe (Eds.), *Self-processes in development: Minnesota symposium on child psychology* (Vol. 23, pp. 167-216). Hillsdale, NJ: Erlbaum.

- Connell, J. P., Spencer, M. B., & Aber, J. L. (1994). Educational risk and resilience in African-American youth: Context, self, action, and outcomes in school. *Child Development, 65*, 493–506.
- Cooper, H. & Valentine, J. C. (2001). Using research to answer practical questions about homework. *Educational Psychologist, 36*, 143-153
- Cooper, H. (1989). *Homework*. White Plains, Nueva York: Longman.
- Cooper, H. (2001). Homework for all-in moderation. *Educational Leadership, 58*(7), 34-38.
- Cooper, H. (2007). *The battle over homework* (3rd ed.). Thousand Oaks, CA: Corwin Press.
- Cooper, H., Jackson, K., Nye, B., y Lindsay, J. J. (2001). A model of homework's influence on the performance evaluations of elementary school students. *Journal of Experimental Education, 69*(2), 181-200. doi: 10.1080/00220970109600655
- Cooper, H., Lindsay, J. J., Nye, B. A., & Greathouse, S. (1998). Relationships among attitudes about homework assigned and completed and student achievement. *Journal of Educational Psychology, 90*, 70-83.
- Cooper, H., Robinson J. C., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research, 1987-2003. *Review of Educational Research, 76*(1), 1-62. doi: 10.3102/00346543076001001
- Corno, L. (1996). Homework is a complicated thing. *Educational Researcher, 25*(8), 27-30.
- Coutts, P. M. (2004). Meanings of homework and implications for practice. *Theory into Practice, 43*, 182-187.
- Covington, M. V. (1998). *The will to learn: A guide for motivating young people*. Cambridge, UK: Cambridge University Press.
- Deci, E. L. & Ryan, R. M. (2002). *Hanbook of self-determination research*. Rochester, New York: The University of Rochester Press.
- Dumont, H., Trautwein, U., Lüdtke, O., Neumann, M., Niggli, A., & Schnyder, I. (2012). Does parental homework involvement mediate the relationship between family background and educational outcomes?, *Contemporary Educational Psychology, 37*, 55-69.
- Eccles, J. S. (1983). Expectancies, values, and academic behaviors. En J. T. Spence (Ed.), *Achievement and Achievement Motives* (pp. 75-146). San Francisco, CA: Freeman.



- Eilam, B. (2001). Primary strategies for promoting homework performance. *American Educational Research Journal*, 38, 691–725.
- Elliot, A. J. & Thrash, T. M. (2001). Achievement goals and the hierarchical model of achievement motivation. *Educational Psychology Review*, 12, 139-156.
- Elliott, E. S. & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, 54, 5-12.
- Epstein, J. L. & Van Voorhis F. L. (2001). More than minutes: Teachers' roles in designing homework. *Educational Psychology*, 36(3), 182-193.
- Fernández-Alonso, R., Suárez-Álvarez, J., & Muñiz, J. (2014). Tareas escolares en el hogar y rendimiento en matemáticas: Una aproximación multinivel con estudiantes de Enseñanza Primaria [Homework and academic performance in mathematics: A multilevel approach with Primary school students]. *Revista de Psicología y Educación*, 9, 15-29.
- Galton, M., Hargreaves, L., & Pell, T. (2003). Progress in the middle years of schooling: continuities and discontinuities at transfer. *Education 3-13*, 31(2), 9-19.
- Gill, B. P. & Schlossman, S. L. (2004). Villain or Savior? The American discourse on homework, 1850-2003. *Theory into Practice*, 43(3), 174-181.
- González-Pienda, J.A., Núñez Pérez, J.C., Álvarez, L., González-Pumariega, S., Roces, C., González, P., Muñiz, R., & Bernardo, A. (2002). Inducción parental a la autorregulación, autoconcepto y rendimiento académico. *Psicothema*, 14, 853-860.
- Guthrie, J. T., Wigfield, A., & You, W. (2012). Instructional contexts for engagement and achievement in reading. In S. Christensen, A. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 601-634). New York: Springer Science.
- Harackiewicz, J. M. & Linnenbrink, E. A. (2005). Multiple achievement goals and multiple pathways for learning: The agenda and impact of Paul R. Pintrich. *Educational Psychologist*, 40(2), 75-84.
- Harris, S., Nixon, J., & Rudduck, J. (1993). School work, homework and gender. *Gender and Education*, 5(1), 3-14.
- Hay, D. B. (2007). Using concept maps to measure deep, surface and non-learning outcomes. *Studies in Higher Education*, 32, 39-57.
- Hetherington, R. (2005). Homework: Some is good, more is not better. About kids health. Retrieved from <http://www.aboutkidshealth.ca>

- Hong E. & Milgram R. M. (2000). *Homework: Motivation and learning preferent*. Westport, CT: Bergin y Garvey.
- Hong, E., Milgram, R. M., & Rowell, L. L. (2004). Homework Motivation and Preference: A Learner-Centered Homework Approach. *Theory into Practice*, 43(3), 197-204.
- Hong, E., Peng, Y., & Rowell, L. L. (2009). Homework self-regulation: Grade, gender, and achievement-level differences. *Learning and Individual Differences*, 19(2),
- Horowitz, S. H. (2005). Research roundup. National Center for Learning Disabilities. Retrieved from <http://www.nclld.org/content/view/577>
- Hulleman, C. S., Schrager, S. M., Bodmann, S. M., & Harackiewicz, J. M. (2010). A meta-analytic review of achievement goal measures: Different labels for the same constructs or different constructs with similar labels? *Psychological Bulletin*, 136, 422–449.
- Jackson, C. (2003). Motives for "laddishness" at school: Fear of failure and fear of the "femme." *British Educational Research Journal*, 29(4), 583-598.
- Lohman, B. J., Kaura, S. A., & Newman, B. M. (2007). Matched or mismatched environments? The relationship of family and school differentiation to adolescents' psychosocial adjustment. *Youth & Society*, 39(1), 3-32.
- Mahatmya, D., Lohman, B. J., Matjasko, J. L., & Farb, A. F. (2012). Engagement across developmental periods. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 45-63). New York, NY, US: Springer Science + Business Media.
- Mau, W. & Lynn, R. (1999). Racial and ethnic differences in motivation for educational achievement in the United States. *Personality and Individual Differences*, 27(6), 1091-1096.
- Meece, J., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology*, 57, 487–503.
- Middleton, M. & Midgley, C. (1997). Avoiding the demonstration of lack of ability: An unexplored aspect of goal theory. *Journal of Educational Psychology*, 89, 710–718.
- Muhlenbruck, L., Cooper, H., Nye, B., & Lindsay, J. J. (2000). Homework and achievement: Explaining the different relations at the elementary and secondary school levels. *Social Psychology of Education*, 3(4), 295-317.
- Newmann, F. M. (Ed.). (1992). *Student engagement and achievement in American secondary schools*. New York: Teachers College Press.

- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Valle, A., & Epstein, J. L. (2015). Relationships between parental involvement in homework, student homework behaviors, and academic achievement: Differences among elementary, junior high, and high school students. *Metacognition and Learning*, *10*, 375-406.
- Núñez, J. C., Suárez, N., Cerezo, R., González-Pienda, J.A., Rosário, P., Mourão, R., & Valle, A. (2015). Homework and academic achievement across Spanish Compulsory Education. *Educational Psychology*, *35*(6), 726-746.
- Patall, E., Cooper, H., & Robinson, J. C. (2008). Parent involvement in homework. *Review of Educational Research*, *78*(4), 1039-1101.
- Pintrich, P. & De Groot, A. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, *82*(1), 33-40.
- Pomerantz, E. M. & Eaton, M. M. (2001). Maternal intrusive support in the academic context: Transactional socialization processes, *Developmental Psychology*, *37*, 174-186.
- Prosser, M., Trigwell, K., Hazel, E., & Waterhouse, F. (2000). Students' experiences of studying physics concepts: The effects of disintegrated perceptions and approaches. *European Journal of Psychology of Education*, *15*(1), 61-74.
- Pytel, B. (2007). *Homework-What Research Says?* Retrieved from [http://educationalissues.suite101.com/article.cfm/homework\\_what\\_research\\_sas](http://educationalissues.suite101.com/article.cfm/homework_what_research_sas).
- Rosário, P., González-Pienda, J. A., Cerezo, R., Pinto, R., Ferreira, P., Abilio, L., & Paiva, O. (2010). Eficacia del programa «(Des)venturas de Testas» para la promoción de un enfoque profundo de estudio. *Psicothema*, *22*(4), 828-834.
- Rosário, P., Mourão, R., Núñez, J. C., González-Pienda, J., & Valle, A. (2006). SRL and EFL homework: Gender and grade effects. *Academic Exchange Quarterly*, *10*(4), 135-140.
- Rosário, P., Núñez, J. A., Ferrando, J. P., Paiva, O., Lourenço, A., Cerezo, R., & Valle, A. (2013). The relationship between approaches to teaching and approaches to studying: A two-level structural equation model for biology achievement in high school. *Metacognition and Learning*, *8*, 47-77.
- Rosário, P., Núñez, J.C., Valle, A., Paiva, O., & Polydoro, S. (2013). Approaches to teaching in High School when considering contextual variables and teacher variables. *Revista de Psicodidáctica*, *28*, 25-45.
- Skaggs, A. M. N. (2007). *Homework: A nightly ritual beginning in the elementary grades*. Paper submitted for the degree of Master of Science in Education, Dominican University of California, San Rafael, CA.

- Skinner, E. A., Wellborn, J. G., & Connell, J. P. (1990). What it takes to do well in school and whether I've got it: The role of perceived control in children's engagement and school achievement. *Journal of Educational Psychology, 82*, 22–32.
- Soenens, B. & Vansteenkiste, M. (2005). Antecedents and outcomes of self-determination in three life domains: The role of parents' and teachers' autonomy support. *Journal of Youth and Adolescence, 34*, 589–604.
- Standage, M. & Treasure, D. C. (2002). Relationship among achievement goal orientations and multidimensional situational motivation in physical education. *British Journal of Educational Psychology, 72*, 87-103.
- Tam, V. C. (2009). Homework involvement among Hong Kong primary school students. *Asian Pacific Journal of Education, 29*, 213-227.
- Trautwein, U. (2007). The homework-achievement relation reconsidered: Differentiating homework time, homework frequency, and homework effort. *Learning and Instruction, 17*, 372-388.
- Trautwein, U. & Köller, O. (2003). The relationship between homework and achievement – still much of a mystery. *Educational Psychology Review, 15*, 116–145.
- Trautwein, U. & Lüdtke, O. (2009). Predicting homework motivation and homework effort in six school subjects: The role of person and family characteristics, classroom factors and school track. *Learning and Instruction, 19*, 243-258.
- Trautwein, U., Köller, O., Schmitz, B., & Baumert, J. (2002). Do homework assignments enhance achievement? A multilevel analysis in 7th grade mathematics. *Contemporary Educational Psychology, 27*(1), 26-50.
- Trautwein, U., Lüdtke, O., Kastens, C., & Köller, O. (2006). Effort on homework in grades 5–9: Development, motivational antecedents, and the association with effort on classwork. *Child Development, 77*(4), 1094-1111.
- Trautwein, U., Lüdtke, O., Schnyder, I., & Niggli, A. (2006). Predicting homework effort: Support for a domain-specific, multilevel homework model. *Journal of Educational Psychology, 98*(2), 438-456.
- Trautwein, U., Schnyder, I., Niggli, A., Neumann, M., & Ludtke, O. (2009). Chameleon effects in homework research: The homework-achievement association depends on the measures used and the level of analysis chosen. *Contemporary Educational Psychology, 34*, 77-88.
- Valle, A., Pan, I., Núñez, J. C., Rosário, P., Rodríguez, S., & Regueiro, B. (2015). Deberes escolares y rendimiento académico en Educación Primaria. *Anales de Psicología, 31*(2), 562-569.

- Valle, A., Pan, I., Regueiro, B., Suárez, N., Tuero, E. & Nunes, R. (2015). Predicting approach to homework in Primary school students. *Psicothema*, 27, 334-340.
- Van Voorhis, F. L. (2011). Adding families to the homework equation: A longitudinal study of mathematics achievement. *Education and Urban Society*, 43(3), 313-338.
- Vansteenkiste, M., Lens, W., Elliot, A. J., Soenens, B., & Mouratidis, A. (2014). Moving the achievement goal approach one step forward: Toward a systematic examination of the autonomous and controlled reasons underlying achievement goals. *Educational Psychologist*, 49, 153-174.
- Vatterott, C. (2009). *Rethinking homework: Best practices that support diverse needs*. Alexandria, VA: ASCD.
- Wagner, P., Schober, B., & Spiel, C. (2008). Time students spend working at home for school. *Learning and Instruction*, 18(4), 309-320.
- Wang, C. K. J., Biddle, S. J. H., & Elliot, A. J. (2007). The 2x2 achievement goal framework in a physical education context. *Psychology of Sport and Exercise*, 8, 147-168.
- Wang, C. K. J., Chatzisarantis, N. L. D., Spray, C. M., & Biddle, S. J. H. (2002). Achievement goal profiles in school physical education: Differences in self-determination, sport ability beliefs and physical activity. *British Journal of Educational Psychology*, 72, 433-455.
- Wigfield, A. & Eccles, J., S. (1994). Children's competence beliefs, achievement values, and general self-esteem: change across elementary and middle school. *Journal of Early Adolescence*, 14(2), 107-138.
- Wigfield, A., Eccles, J. S., Yoon, K. S., Harold, R. D., Arbreton, A. J. A., Freedman-Doan, C., y Blumenfeld, P. C. (1997). Change in children's competence beliefs and subjective task values across the elementary school years: A 3-year study. *Journal of Educational Psychology*, 89(3), 451-469. doi: 10.1037/0022-0663.89.3.451
- Xu, J. (2004). Family help and homework management in urban and rural secondary schools. *Teachers College Record*, 106(9), 1786-1803.
- Xu, J. (2005). Purposes for doing homework reported by middle and high school students. *Journal of Educational Research*, 99, 46-55.
- Xu, J. (2006). Gender and homework management reported by high school students. *Educational Psychology*, 26(1), 73-91.
- Xu, J. (2007). Middle-School homework management: More than just gender and family involvement. *Educational Psychology*, 27(2), 173-189.

- Xu, J. (2008). Models of secondary school students' interest in homework: A multilevel analysis. *American Educational Research Journal*, 45, 1180-1205.
- Xu, J. (2010). Predicting homework time management at the secondary school level: A multilevel analysis. *Learning and Individual Differences*, 20(1), 34-39.
- Xu, J. & Corno, L. (2003). Family help and homework management reported by middle school students. *Elementary School Journal*, 103, 503-518.
- Xu, J. & Corno, L. (2006). Gender, family help and homework management reported by rural middle school students. *Journal of Research in Rural Education*, 21(2), 1-13.
- Younger, M. & Warrington, M. (1996). Differential achievement of girls and boys at GCSE: Some observations from the perspective of one school. *British Journal of Sociology of Education*, 17, 299-313.
- Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25(1), 3-17.