



A person-centered approach to homework behavior: Students' characteristics predict their homework learning type[☆]



Barbara Flunger^{a,*}, Ulrich Trautwein^a, Benjamin Nagengast^a, Oliver Lüdtke^{b,c}, Alois Niggli^d, Inge Schnyder^e

^a Hector Research Institute of Education Sciences and Psychology, University of Tübingen, Europastrasse 6, 72072 Tübingen, Germany

^b IPN, Leibniz Institute for Science and Mathematics Education, Olshausenstrasse 62, 24118 Kiel, Germany

^c Centre for International Student Assessment, Germany

^d College of Teacher Education Fribourg, Av. Europe 20, 1700 Fribourg, Switzerland

^e University of Fribourg, Regina Mundi, Rue Faucigny 2, 1700 Fribourg, Switzerland

ARTICLE INFO

Article history:

Available online 17 July 2016

Keywords:

Students' homework behavior

Person-centered approach

Motivation

Conscientiousness

Cognitive abilities

ABSTRACT

Homework time (i.e., the total amount of time spent on homework) and homework effort (i.e., the extent to which students work seriously on their homework) are defined as two central aspects that characterize students' homework behavior. Recent research has identified homework learning types by considering differences in students in both homework effort and homework time with a person-centered approach (Flunger et al., 2015). The present study investigated how students' characteristics (i.e., motivation, conscientiousness, gender, and verbal abilities) are associated with these homework behavior profiles. To this end, data on homework behavior in the subject of French as a second language of 1649 Swiss eighth-grade students were reanalyzed by applying latent profile analyses (LPAs) with covariates in a modified three-step method (Vermunt, 2010). The findings suggest that large amounts of homework time can be a characteristic of favorable homework behavior: When students simultaneously invested a great deal of effort in their homework, spending a lot of time on homework was associated with high motivation and high conscientiousness. By contrast, when students exerted low effort, large amounts of homework time were found to be associated with low motivation and low conscientiousness.

© 2016 Elsevier Inc. All rights reserved.

1. Introduction

As students spend billions of hours on homework every year around the globe, a better understanding of how students can optimally do their homework remains a pressing issue in educational psychology. Homework can be understood as “tasks assigned to students by schoolteachers that are meant to be carried out during non-school hours” (Cooper, 1989, p. 7). One of the currently most vexing questions in educational research concerns the role of *homework time* (i.e., the amount of time spent on homework; Cooper, 2001), which is the most frequently used indicator of

homework behavior (see Cooper, Robinson, & Patall, 2006). High amounts of homework time are often viewed as an indicator of better study habits (e.g., Cooper et al., 2006), but the association between students' motivation (in particular, competence and value beliefs) and homework time is still unclear. In the rare cases when a significant association was found between homework time and competence beliefs, it was negative (e.g., Trautwein, Lüdtke, Schnyder, & Niggli, 2006). This finding suggests that highly motivated students tend to spend less time on homework than less motivated students. Yet, does this also mean that students who spend large amounts of time on homework automatically have low competence and value beliefs?

The findings for homework time can certainly be contrasted with research on *homework effort* (e.g., Trautwein, 2007), the second central indicator of homework behavior. Homework effort is defined as the degree to which students work seriously on their homework (e.g., Trautwein & Köller, 2003). Students with high value and competence beliefs have often been found to demonstrate high homework effort (e.g., Trautwein, Lüdtke, Schnyder, et al., 2006).

[☆] This research was funded in part by German Research Foundation Grant FL 867/1-1 awarded to Barbara Flunger, Ulrich Trautwein, Benjamin Nagengast, and Oliver Lüdtke.

* Corresponding author at: Department of Pedagogical and Educational Sciences, University of Utrecht, Heidelberglaan 1, 3584 CS Utrecht, Netherlands.

E-mail addresses: barbara.flunger@uni-tuebingen.de, b.flunger@uu.nl (B. Flunger), ulrich.trautwein@uni-tuebingen.de (U. Trautwein), benjamin.nagengast@uni-tuebingen.de (B. Nagengast), oluedtke@ipn.uni-kiel.de (O. Lüdtke), alois.niggli@gmail.com (A. Niggli), inge.schnyder@unifr.ch (I. Schnyder).

However, such prior findings resulted from variable-centered analyses in which the association between one outcome (either homework time or effort) and competence or value beliefs was investigated. Recently, a study showed that students could be classified as distinct homework learning types by applying person-centered methods (i.e., latent profile analysis; LPA), which allowed for the identification of qualitatively different profiles of students by simultaneously considering homework time and homework effort (Flunger et al., 2015). With its exclusive focus on the link between students' homework behavior and academic achievement, this earlier investigation was completely in line with the dominant educational effectiveness approach to homework (e.g., Cooper et al., 2006): In this prominent and productive research tradition, the focus is almost exclusively on whether or not homework is effective for predicting achievement, whereas psychological predictors (most important: motivational predictors) are of negligible concern (see Trautwein, Lüdtke, Nagengast, & Flunger, 2015).

In the present article, we expanded on this earlier work by applying a systematic investigation of motivational/psychological predictors of homework learning types. This was done by estimating LPAs with covariates, a procedure that enabled us to simultaneously consider both homework effort and homework time as outcomes and competence and/or value beliefs as covariates. Thereby, we were able to obtain a more fine-grained picture of students' differences, regarding both their personal characteristics and homework behavior. We also considered additional student characteristics (i.e., conscientiousness, gender, and cognitive abilities) as covariates of the homework learning types. Data on homework behavior in the subject of French as a second language of 1649 Swiss eighth-grade students were reanalyzed via LPAs with covariates in a modified three-step approach (e.g., Vermunt, 2010).

1.1. A person-centered approach to students' homework behavior

Researchers have often highlighted the idea that “the relationship between homework and academic performance is not linear” (Fernández-Alonso, Suárez-Álvarez, & Muñoz, 2015, p. 7; see also Cooper & Valentine, 2001; Daw, 2012). That is, previous research has pointed to an inconsistent association between students' homework time and academic achievement (see, e.g., the wide range of correlations reported in the meta-analyses by Cooper et al., 2006; Hendriks, Luyten, Scheerens, & Sleegers, 2014). When a significant association between homework time and achievement was found, it was mainly small and negative (e.g., Chang, Wall, Tare, Golonka, & Vatz, 2014; De Jong, Westerhof, & Creemers, 2000; Paschal, Weinstein, & Walberg, 1984).

However, students' homework behavior cannot be fully captured by focusing solely on homework time. Both time-on-task (Fredricks, Blumenfeld, & Paris, 2004) and effort (Skinner, Kindermann, & Furrer, 2008) are understood as facets of behavioral engagement (Fredricks, Blumenfeld, Friedel, & Paris, 2005). Accordingly, homework effort is acknowledged as the second central indicator of homework behavior (e.g., Schmitz & Skinner, 1993; Trautwein, 2007). Several subfacets of homework effort (e.g., homework compliance, homework persistence, and seasonal effort) have been identified. Homework compliance refers to the care students put into homework tasks (e.g., working on them as well as they can; Trautwein, Lüdtke, Kastens, & Köller, 2006). Moreover, it is common in homework research to assess homework persistence as a subfacet of homework effort (see, e.g., the formulation of items such as “I finish my homework even if they are difficult (...),” Fernández-Alonso et al., 2015, p. 3). Homework persistence is understood as students' willingness to continue investing time in homework when the tasks are difficult (e.g., Hong, Peng, & Rowell, 2009). Another subfacet of homework effort,

seasonal homework effort, refers to potential variability in students' homework behavior. Some students fail to work on homework on a regular basis (e.g., Katz, Eilott, & Nevo, 2014) and show periodic shifts in their homework effort. Thus, homework-specific seasonal effort refers to the inconsistency in the degree of concentrated and engaged learning over time (e.g., depending on the proximity of exams). Many studies have confirmed a positive association between homework effort or homework persistence and achievement (e.g., Fernández-Alonso et al., 2015; Natriello & McDill, 1986; Schmitz & Skinner, 1993; Trautwein, 2007).

However, prior research has not sufficiently differentiated between the amount of engaged and off-task behavior when measuring the time spent on homework (Trautwein & Köller, 2003). Recently, it was proposed that more could be learned about the meaning of students' homework behavior if homework time and effort were studied in conjunction (Flunger et al., 2015). The person-centered approach was the technique that was best suited to meet this objective because it enabled to study person-specific configurations of homework effort and homework time (Flunger et al., 2015). Person-centered methods represent a cluster-analytical approach (Lazarsfeld, Henry, & Anderson, 1968). Thereby, students with a similar profile on a set of variables can be classified as one type (e.g., Vermunt & Magidson, 2002). Amongst person-centered methods, LPA has the advantage that it represents a model-based approach which allows to evaluate the model fit and the comparison of different models with distinct numbers of profiles (Vermunt & Magidson, 2002).

Using LPA, it was investigated whether students with similar patterns in both homework effort and time could be identified that differed in this respect from students classified as other learning types. Four indicators of students' homework behavior were used (homework compliance, persistence, seasonal efforts, and homework time) that were measured twice in a large longitudinal data-set of 1915 8th grade students.

At both time points, five distinct learning types with similar patterns on both homework effort and time in French as a second language were found (Flunger et al., 2015). They were labeled *fast learners*, *high-effort learners*, *average students*, *struggling learners*, and *minimalists* (see Fig. 1 for more information regarding the mean scores in the profiles of students' homework behavior and the frequencies of students classified as specific homework learning types). *Fast learners* were characterized by high homework effort (i.e., high homework compliance and persistence and low seasonal effort) as well as low amounts of time spent on homework. *High-effort learners* were characterized by high levels of both effort and time. *Average students* were characterized by medium levels of homework effort and low levels of homework time. *Struggling learners* were shown to have low levels of homework effort (i.e., low homework compliance, low homework persistence, and high seasonal effort) and high levels of homework time. *Minimalists* were characterized by low levels of both homework effort and time.

To test the meaningfulness of the learning types (e.g., Morin, Morizot, Boudrias, & Madore, 2010), longitudinal analyses (latent transition analyses) were applied, and associations with external variables (i.e., additional aspects of homework engagement and academic achievement) were examined. Latent transition analyses revealed that the majority of students were consistently classified as the same learning type over time. The *fast* and *high-effort learners* showed higher levels in agentic engagement and lower levels in emotional engagement (assessed as homework anxiety) than the *struggling learners* and the *minimalists*. When controlling for students' prior achievement, track level, and gender, *fast learners* were shown to have higher French grades and French test scores than students classified as *average students*, *struggling learners*, and *min-*

Download English Version:

<https://daneshyari.com/en/article/4937919>

Download Persian Version:

<https://daneshyari.com/article/4937919>

[Daneshyari.com](https://daneshyari.com)