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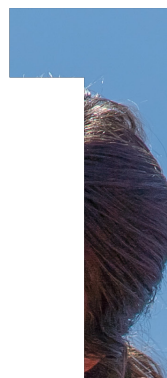
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Introduction

1.1 Research theme

This dissertation is about academic procrastination among first-year student teachers. Students with academic procrastination experience problems with study tasks, for example with starting on time with preparing for exams or they find it hard to stay focused on their study tasks and to persevere. Instead of starting on time with preparing for exams or studying the intended time, they sleep, watch television, visit Facebook or socialize with friends or family members (Pychyl, Lee, Thibodeau, & Blunt, 2000). They do these activities, although they know that the conditions for succeeding the task become unfavorable and difficult and their procrastination behavior might lead to not finishing their assignment on time or not passing their exams (Schouwenburg & Groenewoud, 2001).

In this study, we use the following definition of procrastination: *the voluntary delay of an intended and necessary and/or (personally) important activity, despite expecting potential negative consequences that outweigh the positive consequences of the delay* (Klingsieck, 2013, p. 26; Steel, 2007).

For many students in higher education academic procrastination is a recognizable phenomenon. Eighty to 90% of students experience academic procrastination in some form (O'Brien, 2002; Steel, 2007) and about 20 to 50% of the university students procrastinate frequently (Özer, Demir, & Ferrari, 2009; Schouwenburg, 1992; Zarick & Stonebraker, 2009).

To understand the phenomenon of academic procrastination, it is important to know what consequences academic procrastinating has for students, what factors influence students' academic procrastination, and how students can be supported to overcome their academic procrastination. In the following sections these three issues will be elaborated.

Consequences of academic procrastination

Most students who procrastinate experience negative consequences which can be detrimental to personal health and well-being (Van Eerde & Klingsieck, 2018). Students' academic procrastination can, for example, lead to feelings of stress or even illness (Tice & Baumeister, 1997) or psychological problems. When students experience psychological problems they have, for example, feelings of anxiety (Carden, Bryant, & Moss, 2004; Wang & Englander, 2010), feelings of shame (Fee & Tangney,

2000), fear of failure (Schouwenburg, 1992), and/or feelings of depression (Saddler & Sacks, 1993).

Academic procrastination may have negative consequences for students' academic achievements (Kim & Seo, 2015). Students who experience academic procrastination are at risk of under-performance and low grades on tests and final exams (Steel, Brothen, & Wambach, 2001).

When students postpone study activities, they have little time remaining to finish them. The experienced shortage of time and experiencing stress, may lead to requests to extend deadlines. Sometimes procrastinators do this by giving fraudulent excuses (Patrzek, Sattler, Van Veen, Grunschel, & Fries, 2015). Other examples of academic misconduct affected by academic procrastination are carrying and using forbidden means in exams, copying protocols or homework from other students, and fabricating or falsifying data (Patrzek et al., 2015).

Academic procrastination can make students lag in their degree program. In the worst case scenario, students have to stop their degree programs prematurely (Wesley, 1994). Drop out often means a personal tragedy for students. In addition, there are often financial consequences. They have to pay extra financial costs for tuition fees because of a lengthened study course and they possibly create a study debt they have to pay back (e.g. Grunschel, Patrzek, & Fries, 2012).

Besides consequences of academic procrastination for procrastinating students themselves, academic procrastination also has negative consequences for educational institutions. Students who procrastinate are at risk of insufficient study results, which is undesirable for institutions because they invest a lot of time and money in their programs. As mentioned before, academic procrastination affects academic misconduct. From the perspective of institutions, academic misconduct violates scientific principles and study and examination regulations (Patrzek et al., 2015).

Academic procrastination also has negative consequences for the society. Procrastinating students are at risk of problems with personal health and well-being (Van Eerde & Klingsieck, 2018). This may lead to costs for society if students use the healthcare system. When students stop, there are also consequences for students' chances on the labor market. For society as a whole it is important that a certain part of the population is highly-educated. It can lead to problems if too many students drop-out from higher education institutions.

The consequences of academic procrastination are particularly problematic for students attending the study program that this dissertation is about, namely elementary teacher education students enrolled at an elementary teacher education program. Similar to the situation in many other countries, in the Netherlands there is an increasing shortage of good and qualified teachers. Hence, in the specific context of teacher education, procrastination is a severe problem because it is important that student teachers attain optimal academic achievements and do not dropout but graduate as highly qualified teachers.

Factors influencing academic procrastination

In this section we describe some factors influencing academic procrastination known from previous research. Factors influencing procrastination can work differently among students with different levels of academic procrastination (Nordby, Klingsieck, & Svartdal, 2017). Part of this dissertation deals with the development of a training approach for remediating procrastination. Therefore it is important to know more about influencing factors, how they interplay with each other, and how these factors work out in students and influence their procrastination in practice. Meanwhile much is known about how individual factors in isolation affect procrastination. When students procrastinate, their procrastination can be influenced by various factors (Klingsieck, 2013; Rozental & Carlbring, 2014; Steel, 2007; Steel & Klingsieck, 2016; Van Eerde, 2003) which can be located outside the student or within the student.

Looking at influencing factors located *outside* students, we see that teaching behavior of teachers is an important factor. It is easier for students to organize, structure, and plan their work if teachers are well organized and provide clear instructions for assignments (Ackerman & Gross, 2005; Corkin, Yu, Wolters, & Wiesner, 2014). Teachers who are unorganized and lax, expect less of their students, are willing to negotiate deadlines, and are more flexible in their grading, promote students' academic procrastination. (Grunschel et al., 2012; Schraw, Wadkins, & Olafson, 2007).

Also tasks students have to perform can influence students' academic procrastination (Nordby et al., 2017): when students perceive a task as boring, unpleasant, and/or uninteresting (Blunt & Pychyl, 2000; Steel, 2007) there is a high risk of academic procrastination. If students perceive a task as interesting or the task requires students to use a variety of skills,

and if students perceive social norms and rewards for starting promptly, students procrastinate less (Ackerman et al., 2005). Task difficulty is optimal when a task is sufficiently challenging but also achievable (Steel, 2007; Van Eerde, 2003).

Looking at influencing factors located *within* students, we see that students have a higher risk of academic procrastination when they feel depressed (Uzun Özer, O’Callaghan, Bokszczanin, Ederer, & Essau, 2014), feel anxious (Spada, Hiou, & Nikcevic, 2006), or experience fear of failure (Ferrari, 2004). Other factors which increase students’ risk of academic procrastinations are, for example, lack of self-control (Steel, 2007), diminished conscientiousness (Van Eerde, 2004), and lower levels of self-efficacy (Ferrari, 2004).

Interventions to overcome academic procrastination

To help students overcome their academic procrastination tendency, several interventions have been developed (e.g. Rozental et al., 2018; Van Eerde & Klingsieck, 2018). These interventions reflect a broad range of underlying change models and approaches. Approaches that focus on influencing factors outside students let, for example, students work in peer groups, so they are subject to social influence and to control mechanisms that monitor their progression and remind students’ tasks (e.g. Tuckman & Schouwenburg, 2004). Another example of an approach focusing on factors outside students, is to teach students to set so-called SMART goals (Gustavson & Miyake, 2017).

Examples of approaches that focus on influencing factors located within students, teach students how to recognize their irrational beliefs (Uzun Özer, Demir, & Ferrari, 2013), to regulate their emotions (Eckert, Ebert, Lehr, Sieland, & Berking, 2016), or how to view their painful thoughts and emotions as natural, transient responses that can be observed and allowed instead of self-defining experiences that necessarily direct behavior (Glick & Orsillo, 2015; Scent & Boes, 2014). Rozental et al. (2018) recently showed the benefits of several psychological treatments for procrastination. In this meta-analysis, the overall effect of psychological treatments for procrastination was significant, but small. Interventions based on elements of cognitive behavioral therapy (CBT) seem to have the best results. This conclusion is in line with Van Eerde and Klingsieck (2018) who also showed that interventions based on CBT had the most promising results for overcoming procrastination.

Most of the conducted interventions to overcome academic procrastination (Rozental et al., 2018; Van Eerde & Klingsieck, 2018), including the ones based on CBT, are based on insights of traditional psychology. In traditional psychology the emphasis is on a person's problems and what should be improved. Since the year 2000 there has been a new direction within psychology, called positive psychology. According to the founders of positive psychology, Seligman and Csikszentmihalyi (2000), "treatment is not just fixing what is broken; it is nurturing what is best" (p. 9).

In the positive psychological approach, the main emphasis in the treatment of persons experiencing problems is their potential. A way to focus on people's human potential is to focus on their character strengths. Character strengths can be defined as positive traits reflected in thoughts, feelings, and behaviors (Park, Peterson, & Seligman, 2004) and are considered an important aspect of people's *psychological capital* (Luthans, Youssef, & Avolio, 2007). Some examples of character strengths are curiosity, perseverance, willpower, judgement, wisdom, zest, self-control, enthusiasm, hope, and determination. According to Frederickson's (2003, 2009) *broaden-and-build theory*, when people focus on their positive emotions, for example those elicited by character strengths, their repertoires of thoughts and actions expands (Fredrickson & Branigan, 2005). Focusing on positive emotions also make that people experience more creativity (Rowe, Hirsch, & Anderson, 2007) and become more open to new experiences (Kahn & Isen, 1993). A focus on character strengths is also important for developing resilience and resilience-related factors, such as self-efficacy, positive affect, and self-esteem (Martínez-Martí & Ruch, 2017). In addition, research shows that enhancing people's awareness of their character strengths and promoting them to use these character strengths in a conscious manner has a positive effect on people's optimism (Luthans, et al., 2007) and well-being (Seligman, Steen, Park, & Petersen, 2005). The before-mentioned resilience-related factors are important if we look at students who experience problems with academic procrastination, because these factors showed to influence students levels of academic procrastination (Steel, 2007). Hence an interesting question is whether enhancing students' awareness of their character strengths and promoting them to use these character strengths in a conscious manner, has a positive effect on students' levels of academic procrastination.

Research gaps aims and research questions

Based on the review of literature described above, it becomes clear what gaps still exist in the knowledge about academic procrastination. This has led to the following three studies described in this dissertation.

Study 1 (Chapter 2)

Although there has been extensive research on academic procrastination, which shows how various factors influence academic procrastination (Steel, 2007; Van Eerde, 2003), we still do not fully understand how influencing factors interplay with each other and influence students' academic procrastination.

In study 1 the aim was to get insight into the interplay of influencing factors. In a quantitative study among 238 first-year student teachers we therefore examined the influence of a combination of four intrapersonal factors on academic procrastination and how academic procrastination throughout the year influenced students' academic achievements. The following research question guided the first study of this dissertation:

How are the academic achievements of first-year elementary teacher education students influenced by the intrapersonal factors of academic attributional style, dispositional optimism, self-efficacy and self-esteem, and what is the mediating role of academic procrastination in this?

Study 2 (Chapter 3)

Previous research shows that factors influencing procrastination can work differently among students with different levels of academic procrastination (Nordby et al., 2017). Differences in academic procrastination can, for example, be caused by how students deal with environmental factors that might provoke procrastination behavior (Nordby et al., 2017). Although we know that there can be differences in the working of influencing factors, we still do not know how the process behind these differences can be explained and how students handle factors that might influence their learning.

In study 2 we therefore conducted a qualitative study in which first-year elementary teacher education students ($N = 22$) with different levels of academic procrastination were interviewed. The aim of the interviews was to gain deeper understanding in how factors influence students' learning and what creates these differences in procrastination behavior

between students with different levels of academic procrastination. Moreover, we wanted to know how first year student teachers with different procrastination levels deal with various factors that might influence their learning process, and how this works out in practice. The following research question guided the second study of this dissertation:

What are differences between students with low, average, and high levels of academic procrastination in learning characteristics and in factors that might influence students' learning?

Study 3 (Chapter 4)

Previous studies (Van Eerde & Klingsieck, 2018; Rozental et al., 2018), show that students can be supported to handle their procrastination tendency. These studies show a broad range in approaches, based on traditional psychology, which can be used to support students to overcome their academic procrastination. Studies in the field of positive psychology show promising approaches which positively affect factors related to academic procrastination, such as depression (Fredrickson, 2003), self-efficacy, positive affect, self-esteem (Martínez-Martí & Ruch, 2017), optimism (Luthans et al., 2007), and well-being (Seligman et al., 2005). These promising results from positive psychology have not been applied yet to interventions for overcoming academic procrastination. Therefore the final research gap we wanted to fill is whether an intervention with elements from positive psychology could be beneficial for students to overcome academic procrastination.

In study 3 we conducted a field experimental design in which we examined the effects of a newly developed strengths-based training approach to help students overcoming their academic procrastination. This strengths-based training approach was based on the principles of core reflection (Korthagen, 2013, 2014). This is an approach based on two central points, namely 1). making students aware of their inner potential that can be found in character strengths and ideals and 2). making students aware of internal obstacles that prevent the enactment of the inner potential. This means that students learn how to take control over themselves by consciously using their inner potential and effectively dealing with inner obstacles. In this study first-year elementary teacher education students with high levels of academic procrastination were

included ($N = 54$). The following research question guided the third study of this dissertation:

What is the effect of a strengths-based training to overcome academic procrastination on the students' level of academic procrastination?

All three studies in this dissertation are published as separate articles in peer-reviewed journals in the field of educational psychology. As a consequence there is some overlap between the introductory sections of the various chapters.

1

1.2 Relevance for research

As indicated before, all three studies are intended to fill existing gaps in the literature about academic procrastination. In study 1 this is the gap of the interplay of the combination of influencing interpersonal factors on academic procrastination and academic achievement. In study 2 this is the gap of the understanding of differences in learning characteristics of students with different levels of academic procrastination. Study 3 fills the gap of the effect of strengths-based approaches to overcome academic procrastination and connects the research field of positive psychology with the research field of academic procrastination.

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