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Academic Procrastination among First-year Student Teachers

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Conclusions and discussion

5.1 Introduction

The central theme of this dissertation was academic procrastination. The first aim of our research was to *identify and deeper understand the interplay of factors influencing academic procrastination and to understand how procrastination and these factors influence students' learning*. Our second aim was to *use the results of this investigation to develop, implement and evaluate a training program for students in which they learn to handle their academic procrastination*.

In this final chapter we will first summarize the aims and main findings of the three studies described in this dissertation. After the main findings are presented, we will give the general conclusion, critically reflect on the studies and the findings, and present recommendations for further research. Finally, we will describe the practical relevance of the findings of our research.

5.2 Main findings from the three studies

The first study

In the first study described in this dissertation, we looked at students' intrapersonal factors which in previous studies have been shown to play an important role in the process of self-regulation and/or academic procrastination, and academic achievements. For this purpose we chose the factors academic attributional style, dispositional optimism, self-efficacy, and self-esteem. By choosing these intrapersonal factors and academic procrastination, we covered the three phases of the self-regulation process (Pintrich & Zusho, 2002; Schunk & Ertmer, 2000): the forethought and planning phase (dispositional optimism, self-efficacy, and self-esteem), the monitoring performance and motivation phase (academic procrastination seen as the combination of fear of failure, lack of motivation, and dilatory study behavior), and the phase after completing the study activity in which students reflect on their academic performance (academic attributional style). The research question of this first study was: *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?*

In this quantitative study 238 first-year student teachers completed questionnaires for measuring (the sub-variables of) students' academic procrastination and the intrapersonal factors of academic attribution, dispositional optimism, self-efficacy, and self-esteem. This was done three times during the first two periods of the first-year.

The first finding from study 1 is that academic procrastination plays an important role by directly influencing elementary teacher education students' academic achievements throughout the year.

The second finding of study 1 is that students' academic attributional style only influenced their achievements via their academic procrastination. Students' self-efficacy and self-esteem both indirectly influenced their academic procrastination, as well as directly influenced their achievements. All in all, the direct effect of procrastination on achievement proved to be much larger than the direct effect of self-efficacy and self-esteem on achievements. This has two implications. The first implication is that procrastination is an important mediator, which should be taken into account when studying the influence of intrapersonal factors on academic achievement. The second implication is that interventions aimed at increasing academic achievement do not need to necessarily focus on changing the intrapersonal factors, but could aim at addressing procrastination directly and in ways unrelated to the intrapersonal factors.

The third finding from study 1 is that the influence of students' self-esteem was different from our expectation. Based on previous literature (Ferrari, 1994; Van Eerde, 2003) our expectation, was that students with a negative self-esteem would put less effort into performing study activities and would be more inclined to give up. However, the results from study 1 indicated that students who perceived themselves more positively, had a higher risk of academic procrastination and of lower academic achievements.

Finally, the fourth finding is that the influence of students' intrapersonal factors and academic procrastination on their academic achievements becomes visible to its full extent only after a period of time. The results of study 1 showed that in the first period of the academic year, the intrapersonal factors and academic procrastination have the least influence on students' academic achievements. In this first period factors other than intrapersonal factors and procrastination may play a more important role, most likely because students have to get used to their

new degree course and the state of affairs in the program. Over time the influence of students' intrapersonal factors and academic procrastination on their academic achievements seems to double, with students' academic procrastination, self-efficacy, and self-esteem becoming decisive for their academic achievements.

The second study

The first study of this dissertation showed that various factors influence students' academic procrastination. Previous studies (e.g. Nordby, Klingsieck, & Svartdal, 2017) showed that factors influencing procrastination can work differently among students from different academic disciplines and among students with different procrastination levels. In the second study we therefore wanted to investigate the processes behind differences in academic procrastination of teacher education students and understand how they deal with factors that might influence their learning. The research question of study 2 was: *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?*

The first-year elementary teacher education students ($N = 22$) who participated in this qualitative interview study were divided over three groups of students. This selection was based on students' measured level of academic procrastination (low procrastination, $n = 8$; average procrastination, $n = 8$; high procrastination, $n = 6$). In the interviews, students were asked general questions about their experiences with preparing for assignments and exams. Also questions were asked to better understand students' procrastinating processes and to understand how students dealt with factors that might influence their learning.

This first finding of study 2 is that intrinsic motivation to become a teacher has a strong influence on procrastination and can influence procrastination in different ways. Students with low and average procrastination have the clear goal of becoming a teacher. This goal works as a strong intrinsically motivational drive to work on study activities and finish them, without setting preconditions to start or continue study tasks. On the contrary, students with high procrastination lack the intrinsic motivation to become an elementary education teacher. As a result of their low intrinsic motivation, they set preconditions for tasks which

work as an external motivation for them to start study activities and/or to continue these activities.

The second finding of study 2 is that, within the three groups of procrastinators, students' engagement during study activities is determined by different factors. Students with low procrastination are most engaged because they are intrinsically motivated for study tasks and are eager to further their knowledge. For the engagement of average procrastinators, the relevance of the task for the profession is very important. The engagement of students with high procrastination is determined by the utility and usefulness of study activities, and the pleasure the performance of tasks brings. If these conditions are not met, students consider the activity as boring and/or stupid. They cannot regulate themselves and increase their level of engagement. As a result they then procrastinate, turning to more appealing non-school activities.

The third finding of study 2 is that cognitive awareness and control of mental thoughts play an important role in handling negative study situations. All groups of procrastinators experience moments of failure while working on study activities. However, there are clear differences between the three groups in how students react to failure and how failure impacts their learning. In moments of failure, low procrastinators rely on their capacity and encourage themselves to keep going. Average procrastinators experience a sense of failure, think they are wasting their time, and do less. These negative thoughts and feelings can make them procrastinate for a while, but despite these feelings, they remain hopeful that they will manage the task and will complete the task in the end. High procrastinators seem unable to regulate negative feelings in moments of failure. They then judge themselves negatively and give up and procrastinate.

The last finding of study 2 is that there are differences between the three groups of students in how valuable they experience themselves as a person in general. In other words, they vary in their self-esteem. It is noteworthy that students with low and average procrastination both have a positive self-esteem but differ in their confidence about passing of failing exams and differ in experiencing nerves about exams.

Although students with low and high procrastination are fairly equally confident about their study results and do not experience fear or nerves about exams, they differ in their self-esteem. High procrastinators have

frequent moments of negative self-esteem, whereas low procrastinators have a positive self-esteem.

The third study

Study 1 and 2 showed how intrapersonal factors can influence students' academic procrastination. The aim of the third study was to explore whether a strengths-based training to overcome procrastination (abbreviated as STOP) based on Cognitive Behavioral Therapy (CBT) and specifically on the core reflection approach (Korthagen, 2013, 2014), could help students to handle personal factors that influence their procrastination and could thus be beneficial for overcoming academic procrastination. The core reflection approach consists of two central points: 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 the STOP training students learned to become aware of their ideals and their core qualities and of their tendency to follow obstructive patterns. We have elaborated on the issue of taking control by making the students aware of the difference between their control-self and their procrastination-self, which represent different states of being. This requires that they are fully present in the here and now and are aware of their actual state of being. Therefore being present in the here and now was a central focus in the STOP training.

The research question of the third study was: *What is the effect of a strengths-based training to overcome academic procrastination on the students' level of academic procrastination?*

With a pretest-posttest randomized control group design (two experimental groups: $n = 31$, control group: $n = 23$) the effect of the strengths-based training on academic procrastination was studied. To determine the effect quantitatively, students completed questionnaires to measure their academic procrastination. They did so before the intervention started and 1, 11, and 24 weeks after the intervention ended.

Students in the intervention group followed four three-hour group meetings, spread over a period of six weeks. During these training sessions students explored what maintained their tendency to procrastinate and what internal and/or external factors played a role. They were helped to

become aware of the tension between their core qualities and ideals at the one hand, and their limiting beliefs on the other hand. Additionally they learned to deal with and overcome such inner obstacles.

Factors influencing students' procrastination can be different for every student. Therefore students were supported to choose their own set of core qualities, counterbalancing inner obstacles that influenced their procrastination.

An important condition to recognize and overcome moments of procrastination appeared to be that students are present in the *here-and-now* and aware of their thoughts, feeling and behavior, as well as of choices they can make to regulate themselves and take control over the (study) situation. Students learned that they have two selves, the *academic procrastination self* and the *control self* and experienced how awareness of their thinking, feeling, and wanting could be used to switch from a modus in which the academic procrastination self is in charge to a modus in which the control self takes the lead.

The main finding of study 3 is that an intervention based on the core reflection approach, proved to be helpful for students to handle personal factors influencing their procrastination, and as a result diminished students' academic procrastination. It is notable that this significant result was only visible in the short term (one week after the intervention). However, in the long term (after 11 and 24 weeks) the students in the control group seemed to improve their academic procrastination tendency. Their procrastination scores decreased over time and the mean test scores of the experimental group and the control group no longer showed a significant difference.

5.3 Discussion

Academic contribution

Summarizing the main findings, we conclude that the studies described in this dissertation, have filled in important gaps in the literature on academic procrastination.

Study 1 provides insight into four important intrapersonal factors influencing academic achievements and into the interactions between these factors. This study shows the mediating role of academic procrastination between these intrapersonal factors and students'

academic achievement. Previous meta-analytic reviews (Steel, 2007; Van Eerde, 2003) showed many intrapersonal factors influencing academic procrastination, but did not consider academic procrastination as a mediating variable between influencing factors and academic achievement. Therefore, when researching the influence of intrapersonal factors on academic procrastination, the functioning of mediating factors should be taken into account and the interaction between factors should receive attention.

Previous research into the influence of academic procrastination on academic achievement showed a small to medium negative association between academic procrastination and academic achievement (e.g. $r = -.16$, Kim & Seo, 2015; $r = -.22$, Richardson, Abraham, & Bond, 2012; $r = -.19$, Steel, 2007). Study 1 shows the importance of looking at the influence of academic procrastination on students achievements during the academic year. At the beginning of the academic year, there was an almost medium influence of academic procrastination on achievements ($r = -.26$). The influence of academic procrastination on achievements was substantially higher in the following periods (between $r = -.36$ and $-.42$). This study thus found higher correlations between procrastination and academic achievement than had been found in previous literature, and it showed that the influence of procrastination on achievements in one study cohort at one university increased during the first study year, most likely because the influence of other factors diminished.

Study 2 contributes to the understanding of the academic procrastination problem. This contribution is important because the understanding of why and how students procrastinate was less clear in previous studies (Katz, Eilat, & Nevo, 2014; Klingsieck, Grund, Schmid, & Fries, 2013; Steel, 2007). The importance of study 2 for the research field of academic procrastination is that it shows the different processes which are going on in students with low, average, and high levels of academic procrastination. The three groups differ in their intrinsic motivation, their self-esteem, their level of engagement, and their ability to control negative thoughts and handle failure. These different processes lead to differences in whether or how factors influencing procrastination play out in practice, and whether or how this influences student learning.

If we compare the outcomes of study 1 and study 2, we see that in study 1 self-esteem is positively associated ($r = .13$) with academic procrastination. This indicates that students with a positive self-esteem,

meaning that that they accept and respect themselves and perceive themselves as valuable, procrastinate more. The results of study 2 on the other hand, indicate that the high procrastination students who were interviewed, experienced moments of not being satisfied with themselves and reported frequent moments of negative self-esteem.

The results of study 1 and study 2 show an interesting discrepancy regarding the impact of self-esteem on students' procrastination. Such opposite outcomes were also found in previous research (see Lupien, Seery, & Almonte, 2010 for a positive correlation and Ferrari, 1994; Steel, 2007 for a negative correlation). Regarding this issue we have to note that in study 1 and 2 self-esteem was measured in different ways. In study 1 self-esteem was measured with a questionnaire. In study 2 the results regarding self-esteem among students with high procrastination levels, were based on quotes which indicated that these high procrastinators frequently experienced moments of not being satisfied with themselves. The results of study 2 reflect momentary experiences. Hence, the construct of self-esteem has been measured differently in the two studies. This might be the methodological explanation for the discrepancy we found between study 1 and study 2.

The discrepancy regarding the results of self-esteem in study 1 and study 2 might also be explained by the period of the academic year in which self-esteem was measured. In study 1 self-esteem was measured at the start of the academic year. At that moment students did not have any experience with assignments or exams, and did not yet have any study results. In study 3 students were interviewed at the time they had already been in their degree program for about eight months. In these eight months high procrastination students may have had various negative study experiences that possibly influenced their self-esteem in a negative way.

Study 3 shows that the strengths-based core reflection approach is a promising approach in diminishing students' academic procrastination, and is a meaningful addition to existing approaches to overcome academic procrastination (e.g. the approaches discussed in Van Eerde & Klingsieck, 2018). Many previous intervention studies (Dryden & Sabelus, 2012; Gieselman & Pietrowsky, 2016; Glick & Orsillo, 2015) targeting academic procrastination showed positive results on the short term. In our intervention study we also measured the effects in the long term (after 11 and 24 weeks). This long term measurement indicated that the

mean test scores of the experimental group remained almost the same, but the difference with the control group was no longer significant. This was caused by a decrease of the procrastination scores of the students in the control group.

The importance of study 3 for the research field of academic procrastination is that it is the first randomized controlled experiment examining the effectiveness of a strengths-based approach to overcome academic procrastination in which elements of positive psychology are deliberately and successfully applied in a training program for students. This study therefore also is the first study that shows that the research field of academic procrastination can be fruitfully connected to the research field of positive psychology.

Limitations and further research

Beside the limitations mentioned in the separate studies described in this dissertation, we will now mention some overall limitations and will do suggestions for future research.

An overall limitation is that the three studies described in this dissertation were conducted among first-year elementary teacher education students in the Netherlands, of whom most were women. Therefore possibly the results cannot be generalized to students in other degree courses and/or other years of study. Although the conducted studies yielded many concrete insights and implications, follow-up research among students taking other degree courses in higher education and/or among students in other years of study than the freshmen participating in our studies, seems important.

The research described in this dissertation has shown new possibilities and directions for further research. Because academic procrastination is not only a problem in higher education, future research could also focus on the question of whether the strengths-based core reflection approach can be effective in preventing academic procrastination of elementary school pupils and high school students.

Implications for practice

The practical relevance of this dissertation for the field of higher education is manifold. This dissertation is relevant for teaching staff, leaders and policy makers in higher education. Academic procrastination and the risk of educational drop-out in higher education are important

issues, considering the high costs and time involved in obtaining a degree and the impact of student drop-out for students themselves as well for institutions. If educational institutions want to influence students' academic procrastination, an early approach aimed at diminishing students' academic procrastination is important.

Study 1 showed how students' academic procrastination is influenced by an interplay of intrapersonal factors and how these factors in combination influence students procrastination and academic achievements. Most importantly, Study 1 showed that academic procrastination is a mediator between these intrapersonal factors and students' academic achievement. This implies that interventions could be directly targeted at overcoming procrastination instead of being targeted at intrapersonal factors. With these insights educational institutions can develop their educational policy to diminishing academic procrastination and support students with procrastination.

Study 2 showed that students' intrinsic motivation is an important factor in dealing with their procrastination behavior. Especially for average procrastinators it makes sense when study activities are practice-oriented. When students recognize the relevance and practical foundation of study activities they have to do, they better understand why the study activity is important to them.

Finally, study 3 showed how the core reflection approach, which is a practical elaboration of elements from positive psychology, can successfully support students in dealing with their procrastination. This study showed that this can be done within a rather brief period of time.

The STOP training we developed, offers students practical guidelines for dealing with their tendency to procrastinate. The first practical guideline is to train student to become aware of their *state of presence* (Scharmer & Senge, 2008) and become aware of their core qualities, ideals, and limiting beliefs. When students know how to become aware of their core qualities and ideals, they can be supported in how they can stay in touch with these core qualities and ideals in situations in which they usually tend to procrastinate. As a result they then become more focused and persevered to reach their ideals and not give up. Another practical guideline is to teach students that they can be in control of their own learning instead of being dependent on uncontrollable factors and waiting for the 'good' moment to start. Students' control self can deliberately take control by being aware of the students' core qualities and ideals. These aforementioned

guidelines could be implemented in the curriculum of universities and be practiced during meetings.

We believe that our research contributes to developing new ways and opportunities to address the difficult problem of academic procrastination, which is in the interest of students and organizations.

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