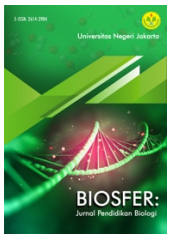
Biosfer: Jurnal Pendidikan Biologi

Beranda jurnal: http://journal.unj.ac.id/unj/index.php/biosfer



Academic procrastination, task values, and self-efficacy of pre-service biology teachers in online learning based on a gender perspective

Fuji Astutik [1*], Dian Tauhidah[1], Ndzani Latifatur Rofi'ah[1], Widi Cahya Adi[1], Muhammad Saefi[2]

[1] Biology Education, Faculty of Science and Technology, UIN Walisongo Semarang, Indonesia
[2] Biology Education, Faculty of Science and Technology, UIN Maulana Malik Ibrahim Malang, Indonesia

*Corresponding author: fujiastutik@walisongo.ac.id

ARTICLE INFO

Article history
Received: 24 January 2024
Revised: 16 October 2024
Accepted: 29 October 2024

Keywords:
Biology education student
Gender
Procrastination
Self-efficacy
Task value

ABSTRACT

Online learning can contribute to increased academic procrastination, often linked to low self-efficacy and perceived task value. This study investigates academic procrastination, self-efficacy, and task values from a gender perspective using a cross-sectional approach with students in their 1st, 3rd, 5th, and 7th semesters. An independent t-test assessed differences between male and female students. Findings showed no significant differences in academic procrastination across genders in any semester; however, notable differences in self-efficacy and task value emerged only in the 5th semester. The lack of significant differences in procrastination is attributed to similarities in environmental, psychological, and social factors, alongside common challenges in time management and distractions. Male and female students demonstrated comparable self-efficacy due to shared academic settings, social support, and media influences, while similar task values stemmed from common interests and experiences. The differences in the 5th semester likely arise from increased academic demands and evolving social dynamics, including gender stereotypes. Future research should employ qualitative methods, such as interviews or focus groups, to gain deeper insights into student experiences. Longitudinal studies could also track changes in self-efficacy and task value over time for a more comprehensive understanding. Targeted interventions to enhance self-efficacy and task value could be particularly beneficial in semesters with significant differences, thereby addressing academic procrastination more effectively.

INTRODUCTION

The development of science and technology is very rapid and occurs in a short time, and changes in student orientation and priorities, as well as how to handle their academic tasks (AlQudah et al., 2014). However, it turns out that many students do not succeed and experience academic failure (Goroshit, 2018; Vossensteyn et al., 2015). Academic failure is often associated with academic procrastination. According to Onwuegbuzie (2004), approximately 40% to 60% of students put off writing papers, preparing for tests, doing other academic work, and reading weekly assignments. According to Ghazal (2012)the study, the rate of procrastination among college students has risen to 25%. According to studies by and, 23-52% of students procrastinated Özer et al. (2009). 80–95% of students in higher education, or nearly half of them, exhibit procrastination, according to a meta-analysis (Kim & Seo, 2015). According to Steel's (2007) research, 50% of college students habitually procrastinate, with over 80% of them doing so. Due to changes in technology and the learning environment, procrastination in online learning requires particular attention (You, 2015).

Online learning cannot be separated from the use of gadgets and the internet. Procrastination is made more likely by a number of "temptations" including the tendency to open numerous "tabs" simultaneously when learning online, mobile games (Nordby et al., 2019), social networking sites (Meier et al., 2016; Muslikah et al., 2018), messaging applications (Steel, 2007). Because of its online and engaging applications, internet addiction is a major source of distraction (Nwosu et al., 2020).

Academic procrastination is described as delaying the commencement of or timely completion of assignments (Sepehrian, 2012) or delaying the preparation for exams (Beck et al., 2000). Senécal et al. (1995), Tice & Baumeister (1997), and Wolters (2003) all define academic procrastination as a continuous failure to complete academic work on time. Procrastinators would rather do other things than finish the assignment (Klingsieck, 2013). As stated by Akinsola et al. (2007), they frequently decide to allocate their spare time on other pursuits like media enjoyment or seeking out pleasure or excitement. In agreement with this assertion, Noran (2000) notes that some people choose to engage in leisure activities over mandatory ones, for example enjoying movies or hanging out with friends.

Procrastinators have an awareness of the expenses that will result from their actions (Steel, 2007). They understand what to do, know what to do, and how to do it, but still don't do it (Popoola, 2005) because they tend to procrastinate (He, 2017) and procrastinate (Gustavson & Miyake, 2017). Due to their inability to complete assignments to the best of their abilities while learning, students who procrastinate often end up failing (Kandemir, 2014).

Zeenath & Orcullo (2012) research found that academic procrastination in students is influenced by both internal and external factors such as the lecturers' teaching methods, time management challenges, a lack of enthusiasm, and social pressure. Abu and Saral (2016) state that several factors cause procrastination, including students who feel academic assignments are less interesting, fear failure, desire not to tire themselves out, and prefer encouraging activities, and social environment, to physical conditions. A study conducted by McGhie (2012) revealed that lack of planning and time management can cause students to procrastinate, turn in overdue or absent tasks, and fail to meet exam requirements. Another factor identified as a cause of procrastination is perfectionism (Rice et al., 2012).

Self-efficacy and task value are frequently linked to academic procrastination. The concept of "self-efficacy" is referring to a person's trust in his or her capacity to learn or perform a task, as well as their belief in their ability to set up and carry out a number of activities to achieve a certain objective (Kitsantas & Zimmerman, 2009). Someone's trust in their capability to succeed is sometimes used to define self-efficacy (Bandura, 2006). Understanding one's own thoughts, feelings, and behaviors is known as self-efficacy (AlQudah et al., 2014).

Confident people will be able to view difficult tasks as challenges and will feel assured in their capability to accomplish them. They avoid difficult tasks, in contrast to suspicious people. They perceive tough jobs as a danger and hence lack motivation to complete tasks. According to Baird et al., (2009), one aspect that affects students' ability to complete academic tasks and achieve their goals is their level of academic self-efficacy. Students with strong academic self-efficacy like and enjoy learning; they have the belief to excel in tests, do research, and effectively control their education. Meanwhile, academic failure is more likely to occur in students who lack self-efficacy (Elias, 2008).

Studying academic procrastination requires consideration of task importance on significant academic tasks (Dietz et al., 2007). Students that recognize the importance of a task (task value) will work hard to fulfill their learning objectives. Students who fail to understand the task value of a certain

academic assignment will engage in academic procrastination. (Senécal et al., 2003). Procrastinators frequently exhibit a lack of motivation and a diminished sense of the importance of their academic work in comparison to non-procrastinators (Schraw et al., 2007).

Lecturers may often find some students tend to turn in assignments close to the deadline. Even a deadline extension request was made. Some students tend to study systematically and consistently over time, whereas some students begin their study sessions just a couple of days before the exam. Observations and student and lecturer interviews, along with other findings, shows that students tend to procrastinate in completing assignments so that they pass the specified deadline, which has an impact on the low score of assignments obtained by students.

Students who experience procrastination produce low-quality assignments or are late for assignments, causing stress. Failing to complete assignments by the due date and postponing preparing for examinations, and receiving poor grades are all common occurrences (Beswick et al., 1988; Semb et al., 1979) that occurs among individuals with procrastination behavior. Procrastination also produces other negative consequences including low academic achievement, diminished self-esteem, and elevated emotions of dissatisfaction and anxiety in the offender as well as in those to whom they are related (Klingsieck, 2013). Low academic achievement is mainly caused by delays in starting assignments (Day et al., 2000). Mistakes in planning may be a factor in someone's procrastination of beginning an academic task. The propensity to predict the time needed to finish a specific activity with an excessively optimistic outlook is known as planning mistake (Buehler et al., 2010).

Research that investigates into biology education students' self-efficacy, task value, and procrastination in the classroom and during online learning based on gender and level is rarely done. The findings of various studies also show varying results. According to Steel (2007), procrastination is more common among males than females. In contrast, stated that females are more likely to experience procrastination than males. Contrarily, according to Haycock et al. (1998), procrastination is more common in females than in males. Other research, on the other hand, found no difference between males and females when it came to procrastinating (Beswick et al., 1988). The same thing was also found in the self-efficacy and task value variables. This inconsistent information makes researchers want to investigate further if the research is carried out at the higher education level during online learning. Based on gender, this study gives information about academic procrastination, self-efficacy, and task values. For lecturers, the study's findings provide an obvious picture, seeking an in-depth grasp of the scope of this phenomenon among parents and educational institutions, and allow developing programs to reduce the phenomenon of procrastination and increase task value and student self-efficacy.

METHODS

Research Design

This study uses a cross-sectional exploratory design with a quantitative approach that includes comparison analysis.

Population and Samples

The participants in this study were biology education students. The samples in this study were students in the 1st, 3rd, 5th, and 7th semesters, with a total of 381 students. A stratified random sampling procedure was used.

Instrument

The scale utilized in this study is based on Tuckman's (1991) scale, which was translated into Indonesian. Items totaled 16 statements, made up of 12 favorable and 4 unfavorable items. Measurements using a 4-point Likert scale are completely acceptable, acceptable, not acceptable, and completely unsuitable. Bashir (2019) This created the academic self-efficacy scale that was used in this study. The scale has 16 favorable items and 4 unfavorable items and was adapted into Indonesian which includes 4 aspects, namely Self Confidence, Efficacy Expectation, Positive Attitude, and Outcome Expectation. The scale is a 5-point Likert scale with the following options: strongly agree, agree, neutral, disagree, and strongly disagree. The task value scale used in this study is a questionnaire consisting of 47 statement items, modified and translated into Indonesian from Hagemeier and Murawski (2014) and Pintrich et al. (1991). Additional statement items that were modified to fit the four dimensions of task value. A total of 39 favorable and 8 unfavorable elements were employed in the study.

Procedure

The survey approach was used to obtain data. Participants' data is kept private, and their involvement has no negative effects. Online questionnaires were distributed to participants and the total duration for completing all questionnaires was within 30 minutes.

Data Analysis Techniques

The t-test was used to compare academic procrastination, task value, and self-efficacy between male and female biology education students.

RESULTS AND DISCUSSION

Academic Procrastination of Pre-Service Biology Teachers Based on a Gender Perspective

An independent t-test can be used to compare academic procrastination between male and female students at each semester level. In the 1st, 3rd, 5th, and 7th semesters, male and female students did not demonstrate significantly different levels of academic procrastination, according to the analysis's findings ($p > 0.05$). However, based on the average, the highest procrastination was found in male students in 1st semester. The findings of the entire t-test study are displayed in Table 1.

Table 1

Differences in Academic Procrastination of Male and Female Students

Semester	Gender	N	Average ± SD	p
1st Semester	Male	22	2,35±0,274	0,694
	Female	147	2,32±0,337	
3rd Semester	Male	10	2,16±0,386	0,176
	Female	75	2,32±0,335	
5th Semester	Male	10	2,32±0,268	0,924
	Female	62	2,33±0,352	
7th Semester	Male	7	2,22±0,279	0,211
	Female	48	2,34±0,312	

Academic procrastination from a gender perspective is one of the most researched topics. Various studies were conducted and the results obtained were inconsistent. As showed in Table 1, the study's findings showed that there was no significant difference in academic procrastination between male and female students in the 1st, 3rd, 5th, and 7th semesters ($p > 0.05$). Several studies also stated the same thing, where there is no difference in academic procrastination by gender (Ferrari, 1991; Hess et al., 2000; Whatley, 2009; Şirin, 2011). Males, on the other hand, procrastinate more than females, according to Yong (2010).

Gender variations in academic procrastination, according to Steel (2007), are difficult to predict. Broadly speaking, there are three categories of academic procrastination research results based on gender. There is no significant difference in academic procrastination between male and female, according to a number of studies (Akinsola et al., 2007; Day et al., 2000; Demeter & Davis, 2013; Effert & Ferrari, 1989; Ferrari et al., 1995; Gafni & Geri, 2010; Howell & Watson, 2007; Joubert, 2015; Klassen & Kuzucu, 2009; Motie et al., 2012; Owens & Newbegin, 2000; Özer, 2011; Rothblum et al., 1986; Shahrizal & Malina, 2020; Solomon & Rothblum, 1984; Yun, 2019; Zarick & Stonebraker, 2009).

Academic procrastination between male and female students may not show significant differences due to several factors that influence this behavior in general. Some possible reasons include environmental similarity, psychological factors, time management strategies, social influences, and technology and distractions. The similarity of the academic environment contributes to academic procrastination between male and female students because they face similar challenges and pressures. First, both male and female students are often faced with the same workload, including assignments, exams, and projects that have tight deadlines. According to Steel (2007), procrastination can be triggered by feelings of anxiety and pressure that arise due to academic demands, regardless of gender. In addition, equal access to learning resources, such as technology (Afzal et al., 2023), libraries, and academic guidance, allows both groups of students to experience the same obstacles in managing time and their duties (Adams & Blair, 2019). Students are taught to prioritize learning in an academic environment. However, they often get caught up in distractions, especially with digital technology that

influences learning focus (McGarr, 2024; Pérez-Juárez et al., 2023). Peers also play an important role; peers who experience procrastination can spread to all group members, regardless of gender (Arfah et al., 2022). Thus, the combination of these factors creates a situation where academic procrastination can occur similarly among male and female students in the same context.

Psychological factors play an important role in academic procrastination, and research shows that the impact is similar between male and female students. One of the main factors is the anxiety that students often experience when facing academic assignments. According to Sirois (2023), individuals who experience anxiety may feel depressed so they tend to postpone tasks that make them uncomfortable. This anxiety can be felt by male and female students, resulting in the same pattern of procrastination. Perfectionism, which often influences motivation and self-confidence, is also a significant factor (Ashraf et al., 2023). Those who are perfectionists often feel trapped in a cycle of dissatisfaction with the results of their work, which in turn exacerbates procrastination (Sederlund et al., 2020). In this case, both male and female students can experience similar levels of perfectionism, causing them to fall into the trap of procrastination. Additionally, low intrinsic motivation, which also contributes to procrastination (Andraško et al., 2022) may affect students of both genders similarly. Low motivation can lead to task avoidance, which is not limited to one gender. Thus, the combination of anxiety, perfectionism, and low motivation contributes to similar academic procrastination behavior among male and female students.

Ineffective time management strategies contribute to academic procrastination among male and female students, because both often lack the skills to plan and manage time well. Research shows that students who do not have good time management strategies tend to postpone assignments more often, and this applies to all genders (Britton & Tesser, 1991). Additionally, relying on methods such as completing work at the last minute can increase stress and anxiety, which in turn exacerbates procrastination behavior (Steinert et al., 2021). Students are also often affected by distractions from the surrounding environment, both from technology and social interactions, which have a negative impact on their time management (Kolhar et al., 2021). Thus, similarities in time management skills and strategies used lead to similar academic procrastination between male and female students.

Social influences play a significant role in academic procrastination, which explains why this behavior is similar between male and female students. Students are often influenced by norms and expectations from peers, which can encourage them to postpone assignments, especially if the social environment considers procrastination to be normal (Svartdal et al., 2020). This is confirmed by Salguero-Pazos & Reyes-de-Cózar (2023), who show that the risk of academic procrastination is higher in social contexts. Intense social interactions, especially in collaborative or group work situations, can lead to procrastination if group members do not share the same motivation. This tendency is further exacerbated by the use of social media, where information and distractions can quickly divert students' attention from academic tasks, affecting male and female students in similar ways (Anwar et al., 2022). However, collaboration in groups can also reduce procrastination (Koppenborg et al., 2024) because group members depend on each other. This was also expressed by Klingsieck (2013), Koppenborg & Klingsieck (2022a), and Koppenborg & Klingsieck (2022b).

Research shows that college students of both genders can have similar levels of sensitivity to peer influence, which is influenced by a variety of social and psychological factors. First, students are often in similar environments, where the norms and expectations of their peer groups greatly influence their behavior (Filade et al., 2019). Additionally, the desire to be accepted and recognized by peers is a common phenomenon in educational institutions (Chakraborty, 2023) which can be a strong motivator to neglect academic responsibilities. For example, if classmates prefer having fun to studying, students tend to follow that pattern even though they realize the importance of studying. Apart from that, there are psychological aspects such as fear of loss or failure in social relationships (Filade et al., 2019) which can encourage students to postpone assignments. In this context, gender differences may not be significant, because both groups feel the same impact from their social environment. Therefore, similar social influences on decision making and study habits help explain the phenomenon of procrastination which does not differ between male and female students.

Other research shows that communication and interaction among peers can increase or decrease learning motivation (Eisenkopf, 2010). This opens up the opportunity to further discuss that students of both genders have similar levels of sensitivity to peer influence, and we can explore ways to support each other in creating a more productive environment. Discussions can include strategies for

encouraging good study habits, sharing motivation, and building positive norms among peers, regardless of gender. The goal is to increase focus on academic tasks and reduce procrastination behavior, so that all students can thrive in a mutually supportive atmosphere.

Technology and distractions contribute to similar academic procrastination among male and female students, as both have equal access to a variety of digital tools that can divert attention from academic tasks. Research shows that the use of social media, applications and online games can reduce focus, motivation and productivity (Abbas et al., 2019; Sun et al., 2023), which impacts all students regardless of gender (Zahedi et al., 2021). Additionally, research by Reinecke et al. (2018) show that dependence on the internet often encourages students to postpone assignments, especially when they are more interested in entertainment content available online. This situation is further exacerbated by the "FOMO" (fear of missing out) phenomenon, where students feel they have to stay connected with their friends in cyberspace, so they neglect their academic responsibilities which results in a decrease in GPA (Abel et al., 2016).

The use of digital devices often creates constant distractions, creating an environment that hinders student concentration. According to research by Sirois (2023), individuals who are exposed to this distraction experience difficulty in time management and completing tasks according to schedule, which in turn causes procrastination behavior. In addition, both male and female students show similar behavioral patterns in using technology, so the negative impacts are felt equally. Thus, reliance on technology and general distractions contribute to similar academic procrastination among male and female students.

The results of other studies reported that males have a greater risk of experiencing academic procrastination (van Eerde, 2003; Steel, 2007). This notion was further confirmed by Choi and Moran (2009), Klassen and Kuzucu (2009), and Özer et al. (2009). Many recent research has found that males tend more than females to procrastinate (Beutel et al., 2016; Pala et al., 2011; Steel & Ferrari, 2013). Senécal et al. (1995) and Özer et al. (2009). Balkis & Duru (2009) Khan et al. (2014) Zarick and Stonebraker (2009), although neither the test scores nor the quality of the papers significantly differed between male and female. Mandap (2016) revealed that male students showed higher procrastination scores because they had difficulty completing assignments. Senécal et al. (1995) stated in their research that when it comes to academic activities, the female generally reports being more intrinsically motivated than males. Another possible reason that can be used to express this idea can be related to self-control which is generally greater in females (Gibson et al., 2010). Strong self-control can reduce a person's risk of experiencing procrastination (Kim et al., 2017). Meanwhile, the results of research by Rodarte-Luna and Sherry (2008) discovered that male student procrastination was linked to a fear of looking for help, although Brownlow and Reasinger (2000) found that men's procrastination was linked to a lack of extrinsic motivation. Therefore, males prefer to procrastinate academic tasks more than females.

Studies on procrastination based on gender indicate that female students procrastinate more, while several studies prove otherwise where female students have lower academic procrastination tendencies (Prohaska et al., 2000). Paludi and Fankell-Hauser (1986) and Haycock et al. (1998). Female students stated that academic procrastination was brought on by a stronger sense of laziness and a fear of failure (Özer et al., 2009). Rothblum et al. (1986) stated that females might experience more anxiety than males, so they tend to experience procrastination. Perfectionism, dependence, difficulty in making decisions and lack of extrinsic motivation are also stated as factors that cause procrastination in females (Brownlow & Reasinger, 2000). Higher internet addiction among female college students (Yen et al., 2009) was also associated with procrastination behavior (Geng et al., 2018).

Research on academic procrastination from a gender perspective shows inconsistent results. When it comes to procrastination and gender, the important phrase is a cultural framework (Şirin, 2011). In a male-dominated culture, Şirin (2011), males will play the role of success, while females will be left behind. Furthermore, females tend to credit their success to chance events, whereas their failures are attributed to a lack of ability. Males, on the other hand, credit their achievements to their capabilities (Hackett & Campbell, 1987; Meyer, 2000). However, according to Vij (2016), there is no gender difference in the causes of academic procrastination. Gender has always been an interesting variable to study. As a result there has been much research on the relationship between gender and academic procrastination.

Self-efficacy of Pre-Service Biology Teachers Based on a Gender Perspective

Male and female students can be compared in terms of self-efficacy at every semester level using an independent t-test. In semester 5 of the study, there was a statistically significant difference in self-efficacy between male and female students (p 0.05). The self-efficacy of male and female students did not differ significantly in the 1st, 3rd, and 7th semesters (p > 0.05). The entire t-test analysis results are shown in Table 2.

Table 2
Student Self-Efficacy Differences between Male and Female

Semester	Gender	N	Average ± SD	p
1st Semester	Male	22	3,809±0,274	0,894
	Female	147	3,829±0,337	
3rd Semester	Male	10	3,845±0,445	0,900
	Female	75	3,863±0,428	
5th Semester	Male	10	3,455±0,341	0,013
	Female	62	3,822±0,434	
7th Semester	Male	7	3,750±0,522	0,711
	Female	48	3,822±0,470	

Regarding the study's findings, which found no statistically significant difference in the first, third, and seventh semesters between male and female students' levels of self-efficacy (p > 0.05), multiple other research found comparable results. This study's findings are consistent with those of Busch (1995), Uzun et al. (2010), Vuong et al. (2010), Sawari and Mansor (2013), Gökçek et al. (2013) who showed that self-efficacy by gender was not significantly different. There were no differences between males and females in terms of self-efficacy, according to Husain (2014) and Schnell et al. (2015).

The results of studies by Asakereh and Yousofi (2018) and Baji (2020), which discovered no appreciable variations in self-efficacy between males and females, support this. Regarding disparities in self-efficacy in mathematics between male and female students in British Columbia public schools, Lloyd et al. (2005) did a similar investigation. According to the study, there was no discernible gender difference in students' self-efficacy. Other research have shown no evidence of a substantial difference in self-efficacy of prospective teachers based on gender (Choi, 2005). According to Çimen et al. (2011), male and female students do not differ in their levels of self-efficacy., particularly among prospective biology teachers.

The same academic environment contributes to equal self-efficacy between male and female students because both experience similar challenges and opportunities in the educational context. In this environment, students of both genders gain equal access to resources, academic support, and learning experiences, which in turn increases their confidence in their academic abilities. Additionally, research shows that organizing group work to support collaborative discussions and help-seeking behavior among peers can be highly beneficial in increasing self-efficacy (Aikens & Kulacki, 2023) similarly among all college students. Increasing gender equality in education also means that female are increasingly encouraged to get involved in fields previously dominated by male, thereby increasing their self-efficacy (Lwamba et al., 2022). Therefore, equality in the academic environment provides a solid foundation for the development of equal self-efficacy between male and female students.

Social support plays a crucial role in building equal self-efficacy between male and female students, because both often get similar emotional and practical support from friends, family, and lecturers. Research shows that solid social support can increase individuals' confidence in their abilities to achieve academic goals (Cohen & Wills, 1985). Support from peers in study groups or collaborative projects also plays a role in building similar self-confidence (Richard et al., 2022), because students of both genders experience and face the same challenges. In addition, increasing awareness of the importance of inclusivity in the academic environment encourages the formation of stronger social bonds (Jardinez & Natividad, 2024), which has a positive impact on the self-efficacy of all students. Thus, equal social support contributes to the development of similar self-efficacy between male and female students.

Equal access to education contributes to similar self-efficacy between male and female students because both have the same opportunities to gain the knowledge and skills needed to achieve academic success. With the increasing participation of females in higher education, they now also have equal

access to academic resources, mentorship programs, and skills training (Elsayed & Shirshikova, 2023). Research shows that when females receive an education equal to that of male, they tend to develop the same beliefs in their abilities to achieve academic goals (Brussino & McBrien, 2022). In addition, support from institutions that encourage gender equality in education further strengthens the self-confidence of students of both genders (Global Partnership in Education, 2019; Munawar et al., 2024), thereby creating a conducive environment for the development of self-efficacy. Thus, equal educational access contributes to the development of similar self-efficacy between male and female students.

A balanced learning experience plays a role in creating similar self-efficacy between male and female students, because both are often involved in the same learning methods, such as group discussions, collaborative projects, and problem-based learning. Research shows that positive interactions in study groups can strengthen students' confidence in their academic abilities (Aikens & Kulacki, 2023), regardless of gender. In addition, success in academic activities helps increase individual and group self-efficacy (Achterkamp et al., 2015). Therefore, students of both genders tend to develop similar self-confidence when they face similar difficulties and succeed in similar situations. Therefore, a balanced learning experience is very important to create the same self-efficacy for male and female students.

Similar self-perceptions contribute to equal self-efficacy between male and female students, as both often have similar views of their abilities in academic contexts. Research shows that individuals' confidence in their abilities, regardless of gender, is influenced by successful experiences and feedback received (Achterkamp et al., 2015). When students of both genders face similar difficulties and succeed, they tend to develop positive self-perceptions, which help them feel better about their own abilities. Additionally, things like social support and inclusive academic norms help shape equal views among male and female students, reducing differences in self-beliefs. Therefore, similar self-perception plays an important role in enhancing self-efficacy.

The influence of media and role models contributes to similar self-efficacy between male and female students, as both are exposed to positive and supportive representations on various platforms. Media that displays successful figures from both genders helps students recognize figures from the same background, thereby increasing their confidence in their abilities. Research shows that when students see positive examples of individuals who are successful in academics, they tend to develop higher self-efficacy (Schunk & DiBenedetto, 2023), regardless of gender. In addition, the existence of diverse role models in the media, especially female figures, can encourage female students to believe that they can be successful in fields previously dominated by male. Role models can provide encouragement and increase self-efficacy, especially for individuals who feel connected to them (Shin et al., 2016). They can also motivate students by showing that desired goals can be achieved (Tal et al., 2024). Thus, the equal influence of media and role models contributes to the development of similar self-efficacy between male and female students.

Additionally, the study's findings showed that there was significant variation in self-efficacy among students in the fifth semester between genders (p 0.05), with female students having greater self-efficacy (X = 3.822) than male students (X = 3.455). Self-efficacy levels have been found to differ significantly by gender in previous studies (Kumar & Lal, 2006; Usher & Pajares, 2006). The findings of studies by Opare (2008) and Telef and Karaca (2013) confirm this conclusion and found similar things. To further support the research findings, according to the findings of Sachitra and Bandara (2017), self-efficacy differed significantly by gender, with the female having higher self-efficacy. Self-efficacy is higher among female students, which explains why they are more confident than male students (Pajares, 2002). The reason for higher self-efficacy in female students is possible because of their desire to have an equal position with males in terms of education, as well as the high individual awareness that education is very important for them. The encouragement and expectations from parents to have educated and intelligent daughters are also assumed to support the high self-efficacy of female students.

These differences also may be caused by various factors working together during their academic journey. In the initial semester, students of both genders typically enter a fairly similar new environment where they receive the same orientation and introduction to the material, which results in similar self-efficacy. However, students begin to face more complex and specialized academic challenges during the fifth semester, such as more difficult courses and greater assignment demands. Some of them are Biology Education Statistics, Plant Physiology and its Practicum, Genetics and its Practicum, and Microbiology and its Practicum. Research shows that increased academic pressure can negatively

impact self-efficacy, differently for male and female students (Zhao et al., 2023). Female may be more vulnerable to stress and anxiety when facing these challenges (Bahrami & Yousefi, 2011). Additionally, students often experience a stronger influence of gender stereotypes during this period, especially in fields such as technology and science, where male are often perceived as having higher abilities than female. This is also supported by research by (Riegle-Crumb & Peng, 2021) which shows that female may doubt their abilities in mathematics because of the general perception that this field is controlled by male. These stereotypes can reduce female's self-confidence in their ability to compete in these fields.

Social dynamics also play an important role; in semester 5, students may experience changes in their peer group or loss of previously existing social support, which may impact their self-confidence. If female feel less supported or isolated in study groups or projects, this can lead to decreased self-efficacy. In addition, practical experiences that occur this semester, such as fieldwork courses, can be an additional challenge for female who may feel less prepared or less confident than male. Therefore, the combination of increased academic demands, the influence of gender stereotypes, changes in social support, and practical demands in semester 5 explains the differences in self-efficacy between male and female students at that time.

Males have more self-efficacy than females, according to other studies (Spence et al., 2010; Pratibha & Sokhi, 2017). Among American undergraduate engineering students, Raelin et al. (2014) looked into the relationship between gender and self-efficacy. The study's results showed that male students exhibited higher academic self-efficacy. Vogt et al. (2007), Fallan and Opstad (2016), and Nartgün et al. (2019) reported similar results. They discovered that male students had stronger self-efficacy than female students. The results of different research findings are explained by Tenaw (2013) who states that individual differences in self-efficacy exist, and even within the same person, it can change depending on the task. Students with high self-efficacy will give their best effort in completing academic tasks so that they will produce better academic achievements.

Task Values of Pre-Service Biology Teachers Based on a Gender Perspective

Task value data is obtained based on different subjects, adjusted for semester level, namely General Biology for 1st-semester students, Biology Learning Methodology for 3rd-semester students, Statistics of Biology Education for 5th-semester students, and elective courses for 7th-semester students. options vary according to student interests. At each semester level, a male-versus-female t-test was conducted to look into any differences in task values. A substantial difference in task value between male and female students was found in semester 5 students, according to the research (p 0.05). A significant difference in task values between male and female students was not found in the first, third, or seventh semesters ($p > 0.05$). The overall t-test analysis's findings are shown in Table 3.

Table 3
Differences in the Task Values of Male and Female Students

Semester	Gender	N	Average ± SD	p
1st Semester	Male	22	3,841±0,312	0,408
	Female	147	3,914±0,394	
3rd Semester	Male	10	3,838±0,346	0,776
	Female	75	3,875±0,381	
5th Semester	Male	10	3,419±0,376	0,001
	Female	62	3,856±0,361	
7th Semester	Male	7	3,702±0,296	0,528
	Female	48	3,795±0,367	

The study's findings, showed that in the fifth semester, there was a significant difference in task value between male and female students (p 0.05), it could be explained as follows. Male and female students taking the same course may have different assessments of academic assignments in that course. The individual's perceived value in the course, task value, has been suggested as a significant source of learning motivation (Eccles et al., 1998).

The same interests between male and female students contribute to equal task value, namely the value they give to academic assignments. When students are engaged in learning or activities that they find interesting, both male and female students tend to view the tasks as important and useful. Findings from research by Mappadang et al. (2022) show that high academic interest encourages

students to maximize their learning process in order to achieve better results. On the other hand, research by Rusillo & Arias (2004) shows that there are no gender differences in terms of intrinsic motivation. Interest is an important factor in motivating students to learn, and this influences their engagement and academic achievement (Renninger & Hidi, 2020), resulting in similar task values between the two genders. Interest and enjoyment in activity can increase intrinsic motivation by creating a prolonged state of focus and satisfaction when engaged in tasks that can develop individual skills (Nakamura & Csikszentmihalyi, 2009). In addition, a supportive and inclusive academic environment also plays a role in fostering shared interests because students of different genders have equal access to resources. Thus, the similarity of interests in an academic context creates the basis for the development of task values that do not differ between male and female students.

Equal experiences in an academic context play a role in creating equal task values between male and female students because both experience similar learning situations and receive the same feedback from these experiences. When students are involved in group projects, class discussions, or similar assignments, they have the opportunity to develop interests and appreciate the value of the tasks they are working on. A positive attitude toward learning tasks can encourage students to use the feedback received to overcome performance differences and plan strategies to improve future work outcomes (Gibbs & Simpson, 2004), regardless of gender. Additionally, students of both genders can experience equal success in an inclusive and supportive environment. Equal experience strengthens their understanding of task values so that male and female students can develop the same task values.

Equal social support contributes to equal task values between male and female students because both receive equal encouragement and reinforcement from peers, lecturers, and family. Research shows that emotional and practical support can increase motivation and academic engagement, thereby increasing the value given to assignments (Ryan & Deci, 2000). When students feel supported and appreciated, both male and female students tend to find the assignments more meaningful and relevant (Xu et al., 2021). In addition, an inclusive academic environment that encourages collaboration and positive interactions allows students of both genders to share experiences and learn from each other, which further strengthens their perception of task value. This is supported by research by Achdiyah et al. (2023), who show that social support is critical for students' cognitive engagement and academic performance. Thus, equal social support creates the basis for the development of similar task values between male and female students.

The insignificant difference in 1st, 3rd, and 7th semester students revealed that they felt the same benefits in studying certain subjects. Students of all genders share the same perception of the importance of assignments for each individual. They also state that the material learned in certain courses can be used in other courses or everyday life. In addition, they also view that academic assignments received from certain courses will be useful for them in achieving a goal both now and in the future, distinguishing themselves from others, developing potential, as well as a form of self-actualization to show abilities in others. They feel that nothing is in vain when completing college assignments, despite the many assignments and burdens to complete them. They don't worry when they have to devote time, energy, and thought to complete assignments, even if the grades they get are not commensurate with the coursework.

In semester 5, their task values are very different. This can be caused by a number of variables that influence academic and social development in the semester. New students usually experience an adaptation phase during the first semester. At this point, they have high expectations and share the same interest in the material being studied. Positive experiences in facing initial challenges can increase task value, creating balance in task value. Students face more complex and specific challenges in the fifth semester, such as more difficult courses and increased academic demands. In addition, differences in practical experience and social support also began to emerge. During the semester, students are often expected to participate in more complex group projects. This can influence their views about task value depending on the social interactions they have experienced previously (Ryan & Deci, 2000). After semester 5, by semester 7, students have generally overcome these challenges and become more confident in their abilities, especially after receiving positive feedback from previous experiences. Redirecting attention to broader academic goals can help restore perceptions of task value. Thus, differences in task scores between male and female students in semester 5 can be explained by a combination of increased academic demands and changing social dynamics, all of which create unique challenges not faced in other semesters.

Depending on how task values are measured, findings about gender disparities in task values in mathematics and science vary. When task value was calculated as a combination of perceived task relevance and interest, there were no gender differences (Jacobs et al., 2002). When task worth was examined just in terms of the task's importance to individuals, however, it was discovered that males had a larger personal interest in mathematics than females (Updegraff et al., 1996).

Task value is composed of four fundamental elements (Eccles et al., 1998): utility value, achievement value, intrinsic value or interest, and perceived cost. Utility value is the belief that a task will help accomplish a goal or generating short- or long-term rewards Achieving success is valued by people when they believe it is important, and this value is closely related to how important they believe the work is to their identity. Intrinsic value is the anticipated pleasure experienced during and after completing a task. A task's perceived cost, which also includes people's willingness to sacrifice their time and energy, is the final factor to consider.

CONCLUSION

Academic Procrastination Study: No significant gender differences in procrastination were found among pre-service biology teachers ($p > 0.05$). Both genders faced similar psychological factors and challenges, suggesting that gender does not inherently predict procrastination. Self-Efficacy Study: Significant differences in self-efficacy were observed in the 5th semester, with females scoring higher ($p < 0.05$). No differences were noted in other semesters. Increased pressures and gender stereotypes this semester indicate a need for targeted support for female students. Task Value Study: Significant differences in task value were found in the 5th semester ($p < 0.05$), linked to higher academic pressures. Generally, task values were similar across other semesters, but unique challenges in the 5th semester required tailored support to boost motivation, especially for female students. Future research should explore these dynamics further.

This research offers valuable insights into the academic experiences of pre-service biology teachers regarding procrastination, self-efficacy, and task value. It reveals that both genders face similar challenges like anxiety and time management, challenging stereotypes about procrastination. The 5th semester emerges as critical, with female students showing higher self-efficacy under pressure, indicating a need for targeted support. Additionally, significant differences in task value during this semester suggest that academic demands influence how students perceive task importance. Overall, the findings emphasize the need for tailored support strategies to enhance motivation and engagement for all students, particularly in high-pressure situations. Future research should further investigate these dynamics to inform educational practices.

This research has several limitations that impact its findings. Focusing solely on pre-service biology teachers may not generalize to other disciplines. The reliance on self-reported measures could introduce bias, as students may not accurately reflect their behaviors. While the study highlights the 5th semester, it may overlook broader trends across other semesters and the cumulative impact of prior experiences. Finally, the evolving nature of academic challenges necessitates ongoing research to capture these dynamics effectively.

ACKNOWLEDGMENT

We would like to express our gratitude to the Indonesian Ministry of Religion for funding the BOPTN research.

REFERENCES

Abbas, J., Aman, J., Nurunnabi, M., & Bano, S. (2019). The Impact of Social Media on Learning Behavior for Sustainable Education: Evidence of Students from Selected Universities in Pakistan. *Sustainability*, *11*(6), 1683. https://doi.org/10.3390/su11061683

Abel, J. P., Buff, C. L., & Burr, S. A. (2016). Social Media and the Fear of Missing Out: Scale Development and Assessment. *Journal of Business & Economics Research (JBER)*, *14*(1), 33–44. https://doi.org/10.19030/jber.v14i1.9554

Abu, N. K., & Saral, D. G. (2016). The Reasons of Academic Procrastination Tendencies of Education Faculty Students. *The Online Journal of New Horizons in Education*, *6*(1), 165–169. https://www.tojdel.net/journals/tojned/volumes/tojned-volume06-i01.pdf#page=173

Achdiyah, H. N., Latipun, L., & Yuniardi, M. S. (2023). The influence of social support on academic

performance: The mediating role of cognitive engagement. *Jurnal Ilmiah Psikologi Terapan*, *11*(2), 85–90. https://doi.org/10.22219/jipt.v11i2.22651
Achterkamp, R., Hermens, H. J., & Vollenbroek-Hutten, M. M. R. (2015). The influence of success experience on self-efficacy when providing feedback through technology. *Computers in Human Behavior*, *52*, 419–423. https://doi.org/10.1016/j.chb.2015.06.029
Adams, R. V., & Blair, E. (2019). Impact of Time Management Behaviors on Undergraduate Engineering Students' Performance. *Sage Open*, *9*(1). https://doi.org/10.1177/2158244018824506
Afzal, A., Khan, S., Daud, S., Ahmad, Z., & Butt, A. (2023). Addressing the Digital Divide: Access and Use of Technology in Education. *Journal of Social Sciences Review*, *3*(2), 883–895. https://doi.org/10.54183/jssr.v3i2.326
Aikens, M. L., & Kulacki, A. R. (2023). Identifying Group Work Experiences That Increase Students' Self-Efficacy for Quantitative Biology Tasks. *CBE—Life Sciences Education*, *22*(2). https://doi.org/10.1187/cbe.22-04-0076
Akinsola, M. K., Tella, A., & Tella, A. (2007). Correlates of Academic Procrastination and Mathematics Achievement of University Undergraduate Students. *Eurasia Journal of Mathematics, Science & Technology Education*, *3*(4), 363–370. https://www.ejmste.com/download/correlates-of-academic-procrastinationand-mathematics-achievement-ofuniversity-undergraduate-4083.pdf
AlQudah, M. F., Alsubhien, A. M., & AL Heilat, M. Q. (2014). The Relationship between the Academic Procrastination and Self-Efficacy among Sample of King Saud University Students. *Journal of Education and Practice*, *5*(16), 101–112. https://core.ac.uk/download/pdf/234635824.pdf
Andraško, A., Baranová, N., Bičkošová, P., Husivargová, K., Janigová, K., & Mihok, M. (2022). Procrastination of University Students in the context of Personality and Academic Motivation. *Človek a Spoločnosť*, *25*(4). https://doi.org/10.31577/cas.2022.04.610
Anwar, M., Anwar, A., & Marwan, A. H. (2022). Impact of Social Media Usage on Academic Procrastination. *Global Educational Studies Review*, *VII*(II), 251–262. https://doi.org/10.31703/gesr.2022(VII-II).24
Arfah, T., Tamar, M., & Norhafizah. (2022). Contribution of Peer Conformity to Student's Academic Procrastination. *Proceedings of the Interdisciplinary Conference of Psychology, Health, and Social Science (ICPHS 2021)*, *639*(Icphs 2021), 18–23. https://doi.org/10.2991/assehr.k.220203.004
Asakereh, A., & Yousofi, N. (2018). Reflective Thinking, Self-Efficacy, Self-Esteem and Academic Achievement of Iranian EFL Students in Higher Education: Is there a Relationship? *International Journal of Educational Psychology*, *7*(1), 68. https://doi.org/10.17583/ijep.2018.2896
Ashraf, M. A., Sahar, N., Kamran, M., & Alam, J. (2023). Impact of Self-Efficacy and Perfectionism on Academic Procrastination among University Students in Pakistan. *Behavioral Sciences*, *13*(7), 537. https://doi.org/10.3390/bs13070537
Bahrami, F., & Yousefi, N. (2011). Females Are More Anxious Than Males: a Metacognitive Perspective. *Iran J Psychiatry Behav Sci*, *5*(2), 83–90. https://pmc.ncbi.nlm.nih.gov/articles/PMC3939970/
Baird, G. L., Scott, W. D., Dearing, E., & Hamill, S. K. (2009). Cognitive Self-Regulation in Youth With and Without Learning Disabilities: Academic Self-Efficacy, Theories of Intelligence, Learning vs. Performance Goal Preferences, and Effort Attributions. *Journal of Social and Clinical Psychology*, *28*(7), 881–908. https://doi.org/10.1521/jscp.2009.28.7.881
Baji, M. I. (2020). Analysis of Gender Difference in Academic Self-Efficacy and Achievements Among Senior Secondary School Students in Niger State, Nigeria. *PEOPLE: International Journal of Social Sciences*, *5*(3), 659–675. https://doi.org/10.20319/pijss.2020.53.659675
Balkis, M., & Duru, E. (2009). Prevalence of academic procrastination behavior among pre-service teachers, and its relationship with demographics and individual preferences. *Journal of Theory and Practice in Education*, *5*(1), 18–32. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=d9433fab4dffdd391ff6f9ea7f64200d1303f759
Bandura, A. (2006). Guide for Constructing Self-efficacy Scales. In F. Pajares & T. Urdan (Eds.). *Self-Efficacy Beliefs of Adolescents*, *5*, 307–337.
Bashir, L. (2019). Social Networking Usage, Academic Procrastination and Performance Among University Students: Role of Self Efficacy and Metacognitive Beliefs. In *Unpublished PhD* (Issue 11512050). Lovely Professional University.
Beck, B. L., Koons, S. R., & Milgrim, D. L. (2000). Correlates and Consequences of Behavioral

Procrastination: The Effects of Academic Procrastination, Selfconsciousness, Self-Esteem and Self-Handicapping [Special Issue]. *Journal of Social Behavior & Personality*, *15*(5), 3–13. https://www.proquest.com/openview/8486f2240d3fb230c16e89b309993850/1?pq-origsite=gscholar&cbl=1819046

Beswick, G., Rothblum, E. D., & Mann, L. (1988). Psychological antecedents of student procrastination. *Australian Psychologist*, *23*(2), 207–217. https://doi.org/10.1080/00050068808255605

Beutel, M. E., Klein, E. M., Aufenanger, S., Brähler, E., Dreier, M., Müller, K. W., Quiring, O., Reinecke, L., Schmutzer, G., Stark, B., & Wölfling, K. (2016). Procrastination, Distress and Life Satisfaction across the Age Range – A German Representative Community Study. *PLOS ONE*, *11*(2), e0148054. https://doi.org/10.1371/journal.pone.0148054

Britton, B. K., & Tesser, A. (1991). Effects of time-management practices on college grades. *Journal of Educational Psychology*, *83*(3), 405–410. https://doi.org/10.1037/0022-0663.83.3.405

Brownlow, S., & Reasinger, R. D. (2000). Putting off until Tomorrow what is Better Done Today: Academic Procrastination as a Function of Motivation Toward College Work. *Journal of Social Behavior and Personality*, *15*(5), 15–34.

Brussino, O., & McBrien, J. (2022). *Gender stereotypes in education: Policies and practices to address gender stereotyping across OECD education systems* (OECD Education Working Papers, Vol. 271). https://doi.org/10.1787/a46ae056-en

Buehler, R., Griffin, D., & Peetz, J. (2010). The Planning Fallacy. *Advances in Experimental Social Psychology*, *43*, 1–62. https://doi.org/10.1016/S0065-2601(10)43001-4

Busch, T. (1995). Gender Differences in Self-Efficacy and Attitudes toward Computers. *Journal of Educational Computing Research*, *12*(2), 147–158. https://doi.org/10.2190/H7E1-XMM7-GU9B-3HWR

Çapan, B. E. (2010). Relationship among Perfectionism, Academic Procrastination and Life Satisfaction of University Students. *Procedia - Social and Behavioral Sciences*, *5*, 1665–1671. https://doi.org/10.1016/j.sbspro.2010.07.342

Chakraborty, A. (2023). Social Conformity among Peer Groups in Educational Institutions. *International Journal of Multidisciplinary Innovative Research*, *3*(3), 17–29. https://ijmir.org/doc/Vol-3-No-3-2023/3_IJMIR_Vol%203%20No%203_July%202023.pdf

Choi, J. N., & Moran, S. V. (2009). Why Not Procrastinate? Development and Validation of a New Active Procrastination Scale. *The Journal of Social Psychology*, *149*(2), 195–212. https://doi.org/10.3200/SOCP.149.2.195-212

Choi, N. (2005). Self-efficacy and Self-Concept as Predictors of College Students' Academic Performance. *Psychology in the Schools*, *42*(2), 197–205. https://doi.org/10.1002/pits.20048

Çimen, O., Gökmen, A., Altunsoy, S., Ekici, G., & Yılmaz, M. (2011). Analysis of Biology Candidate Teachers' Self-efficacy Beliefs on Environmental Education. *Procedia - Social and Behavioral Sciences*, *15*(69), 2549–2553. https://doi.org/10.1016/j.sbspro.2011.04.143

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310–357. https://doi.org/10.1037/0033-2909.98.2.310

Day, V., Mensink, D., & O'Sullivan, M. (2000). Patterns of Academic Procrastination. *Journal of College Reading and Learning*, *30*(2), 120–134. https://doi.org/10.1080/10790195.2000.10850090

Demeter, D. V., & Davis, S. E. (2013). Procrastination as a Tool: Exploring Unconventional Components of Academic Success. *Creative Education*, *04*(07), 144–149. https://doi.org/10.4236/ce.2013.47A2018

Dietz, F., Hofer, M., & Fries, S. (2007). Individual values, learning routines and academic procrastination. *British Journal of Educational Psychology*, *77*(4), 893–906. https://doi.org/10.1348/000709906X169076

Eccles, J. S., Wigfield, A., & Schiefele, U. (1998). *Motivation to Succeed. In W. Damon & N. Eisenberg (Ed.), Handbook of Child Psychology: Social, Emotional, and Personality Development*. John Wiley & Sons, Inc.

Education, G. P. for. (2019). *Achieving Gender Equality in and Through Education, a Knowledge and Innovation Exchange (KIX) Discussion Paper*.

Effert, B. R., & Ferrari, J. R. (1989). Decisional Procrastination: Examining Personality Correlates. *Journal of Social Behavior and Personality*, *4*(1), 151–156. https://psycnet.apa.org/record/1989-36466-001

Eisenkopf, G. (2010). Peer effects, motivation, and learning. *Economics of Education Review*, *29*(3), 364–374. https://doi.org/10.1016/j.econedurev.2009.08.005
Elias, R. Z. (2008). Anti-Intellectual Attitudes and Academic Self-Efficacy Among Business Students. *Journal of Education for Business*, *84*(2), 110–117. https://doi.org/10.3200/JOEB.84.2.110-117
Elsayed, A., & Shirshikova, A. (2023). The women-empowering effect of higher education. *Journal of Development Economics*, *163*, 103101. https://doi.org/10.1016/j.jdeveco.2023.103101
Fallan, L., & Opstad, L. (2016). Student Self-Efficacy and Gender-Personality Interactions. *International Journal of Higher Education*, *5*(3), 32–44. https://doi.org/10.5430/ijhe.v5n3p32
Ferrari, J. R. (1991). Compulsive Procrastination: Some Self-Reported Characteristics. *Psychological Reports*, *68*(2), 455–458. https://doi.org/10.2466/pr0.1991.68.2.455
Ferrari, J. R., Johnson, J. L., & McCown, W. G. (1995). *Procrastination and Task Avoidance: Theory Research, and Treatment*. Plenum Press.
Filade, B. A., Bello, A. A., Uwaoma, C. O., Anwanane, B. B., & Nwangburuka, K. (2019). Peer group influence on academic performance of undergraduate students in Babcock University, Ogun State. *African Educational Research Journal*, *7*(2), 81–87. https://doi.org/10.30918/AERJ.72.19.010
Gafni, R., & Geri, N. (2010). Time Management: Procrastination Tendency in Individual and Collaborative Tasks. *Interdisciplinary Journal of Information, Knowledge, and Management*, *5*, 115–125. https://doi.org/10.28945/1127
Geng, J., Han, L., Gao, F., Jou, M., & Huang, C. C. (2018). Internet Addiction and Procrastination among Chinese Young Adults: A Moderated Mediation Model. *Computers in Human Behavior*, *84*, 320–333. https://doi.org/10.1016/j.chb.2018.03.013
Ghazal, M. A. (2012). Academic Procrastination: Its Prevalence and Causes from the Perspective of University Students. *Jordanian Journal of Educational Sciences, Amman*, *8*(2), 131–150.
Gibbs, G., & Simpson, C. (2004). Does your assessment support your students' learning? *Learn. Teach. High. Educ.*, *1*, 3–31. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=7d82b319e61ef4a1c876b4bf3d9b0cbed4eac54f
Gibson, C. L., Ward, J. T., Wright, J. P., Beaver, K. M., & Delisi, M. (2010). Where Does Gender Fit in the Measurement of Self-Control? *Criminal Justice and Behavior*, *37*(8), 883–903. https://doi.org/10.1177/0093854810369082
Gökçek, T., Güneş, G., & Gençtürk, E. (2013). Evaluation of Primary School Teachers' Technological Self-efficacy. *International Online Journal of Educational Sciences*, *5*(1), 42–51. https://iojes.net/?mod=makale_tr_ozet&makale_id=41148
Goroshit, M. (2018). Academic procrastination and academic performance: An initial basis for intervention. *Journal of Prevention & Intervention in the Community*, *46*(2), 131–142. https://doi.org/10.1080/10852352.2016.1198157
Gustavson, D. E., & Miyake, A. (2017). Academic procrastination and goal accomplishment: A combined experimental and individual differences investigation. *Learning and Individual Differences*, *54*, 160–172. https://doi.org/10.1016/j.lindif.2017.01.010
Hackett, G., & Campbell, N. K. (1987). Task Self-Efficacy and Task Interest as a Function of Performance on a Gender-Neutral Task. *Journal of Vocational Behavior*, *30*(2), 203–215. https://doi.org/10.1016/0001-8791(87)90019-4
Hagemeier, N. E., & Murawski, M. M. (2014). An Instrument to Assess Subjective Task Value Beliefs Regarding the Decision to Pursue Postgraduate Training. *American Journal of Pharmaceutical Education*, *78*(1), 11. https://doi.org/10.5688/ajpe78111
Haycock, L. A., McCarthy, P., & Skay, C. L. (1998). Procrastination in College Students: The Role of Self-Efficacy and Anxiety. *Journal of Counseling & Development*, *76*(3), 317–324. https://doi.org/10.1002/j.1556-6676.1998.tb02548.x
He, S. (2017). A Multivariate Investigation into Academic Procrastination of University Students. *Open Journal of Social Sciences*, *05*(10), 12–24. https://doi.org/10.4236/jss.2017.510002
Hess, B., Sherman, M. F., & Goodman, M. (2000). Eveningness Predicts Academic Procrastination: the Mediating Role of Neuroticism. *Journal of Social Behavior & Personality*, *15*(5), 61–74. https://psycnet.apa.org/record/2002-10572-005
Howell, A. J., & Watson, D. C. (2007). Procrastination: Associations with Achievement Goal Orientation and Learning Strategies. *Personality and Individual Differences*, *43*(1), 167–178.

https://doi.org/10.1016/j.paid.2006.11.017
Husain, U. K. (2014). Relationship between Self-Efficacy and Academic Motivation. *International Conference on Economics, Education and Humanities (ICEEH'14) Dec. 10-11, 2014 Bali (Indonesia)*, 35–39. https://doi.org/10.15242/ICEHM.ED1214132
Jacobs, J. E., Lanza, S., Osgood, D. W., Eccles, J. S., & Wigfield, A. (2002). Changes in Children's Self-Competence and Values: Gender and Domain Differences across Grades One through Twelve. *Child Development*, *73*(2), 509–527. https://doi.org/10.1111/1467-8624.00421
Jardinez, M. J., & Natividad, L. R. (2024). The The Advantages and Challenges of Inclusive Education: Striving for Equity in the Classroom. *Shanlax International Journal of Education*, *12*(2), 57–65. https://doi.org/10.34293/education.v12i2.7182
Joubert, C. P. (2015). *The Relationship Between Procrastination and Academic Achievement of High School Learners in North West Province, South Africa*. University of South Africa.
Kandemir, M. (2014). Reasons of Academic Procrastination: Self-regulation, Academic Self-efficacy, Life Satisfaction and Demographics Variables. *Procedia - Social and Behavioral Sciences*, *152*, 188–193. https://doi.org/10.1016/j.sbspro.2014.09.179
Khan, M. J., Arif, H., Noor, S. S., & Muneer, S. (2014). Academic Procrastination among Male and Female University and College Students. *FWU Journal of Social Sciences*, *8*(2), 65–70.
Kim, J., Hong, H., Lee, J., & Hyun, M. H. (2017). Effects of time perspective and self-control on procrastination and Internet addiction. *Journal of Behavioral Addictions*, *6*(2), 229–236. https://doi.org/10.1556/2006.6.2017.017
Kim, K. R., & Seo, E. H. (2015). The relationship between procrastination and academic performance: A meta-analysis. *Personality and Individual Differences*, *82*, 26–33. https://doi.org/10.1016/j.paid.2015.02.038
Kitsantas, A., & Zimmerman, B. J. (2009). College students' homework and academic achievement: The mediating role of self-regulatory beliefs. *Metacognition and Learning*, *4*(2), 97–110. https://doi.org/10.1007/s11409-008-9028-y
Klassen, R. M., & Kuzucu, E. (2009). Academic Procrastination and Motivation of Adolescents in Turkey. *Educational Psychology*, *29*(1), 69–81. https://doi.org/10.1080/01443410802478622
Klingsieck, K. B. (2013). Procrastination. *European Psychologist*, *18*(1), 24–34. https://doi.org/10.1027/1016-9040/a000138
Kolhar, M., Kazi, R. N. A., & Alameen, A. (2021). Effect of social media use on learning, social interactions, and sleep duration among university students. *Saudi Journal of Biological Sciences*, *28*(4), 2216–2222. https://doi.org/10.1016/j.sjbs.2021.01.010
Koppenborg, M., & Klingsieck, K. B. (2022a). Group work and student procrastination. *Learning and Individual Differences*, *94*, 102117. https://doi.org/10.1016/j.lindif.2022.102117
Koppenborg, M., & Klingsieck, K. B. (2022b). Social factors of procrastination: group work can reduce procrastination among students. *Social Psychology of Education*, *25*(1), 249–274. https://doi.org/10.1007/s11218-021-09682-3
Koppenborg, M., Klingsieck, K. B., & Hüffmeier, J. (2024). Conjunctive and additive group work reduce academic procrastination: insights from a vignette study. *Current Psychology*, *43*(2), 997–1010. https://doi.org/10.1007/s12144-023-04294-w
Kumar, R., & Lal, R. (2006). The Role of Self-efficacy and Gender Difference Among the Adolescents. *Journal of the Indian Academy of Applied Psychology*, *32*(3), 249–254. https://jiaap.in/wp-content/uploads/2024/08/35-251-256.pdf
Lloyd, J. E. V., Walsh, J., & Yailagh, M. S. (2005). Sex Differences in Performance Attributions, Self-Efficacy, and Achievement in Mathematics: If I'm so Smart, Why Don't I Know It? *Canadian Journal of Education / Revue Canadienne de l'éducation*, *28*(3), 384–408. https://doi.org/10.2307/4126476
Lwamba, E., Shisler, S., Ridlehoover, W., Kupfer, M., Tshabalala, N., Nduku, P., Langer, L., Grant, S., Sonnenfeld, A., Anda, D., Eyers, J., & Snilstveit, B. (2022). Strengthening women's empowerment and gender equality in fragile contexts towards peaceful and inclusive societies: A systematic review and meta-analysis. *Campbell Systematic Reviews*, *18*(1). https://doi.org/10.1002/cl2.1214
Mandap, C. M. (2016). Examining the Differences in Procrastination Tendencies among University Students. *International Journal of Education and Research*, *4*(4), 431–436. https://www.ijern.com/journal/2016/April-2016/35.pdf
Mappadang, A., Khusaini, K., Sinaga, M., & Elizabeth, E. (2022). Academic interest determines the

academic performance of undergraduate accounting students: Multinomial logit evidence. *Cogent Business & Management*, *9*(1). https://doi.org/10.1080/23311975.2022.2101326
McGarr, O. (2024). Teacher educators' views and responses to digital distraction in pre-service teacher education. *Teaching and Teacher Education*, *148*, 104701. https://doi.org/10.1016/j.tate.2024.104701
McGhie, V. F. (2012). *Factors Impacting on First-Year Student's Academic Progress at a South African University.* Stellenbosch University.
Meier, A., Reinecke, L., & Meltzer, C. E. (2016). "Facebocrastination"? Predictors of using Facebook for procrastination and its effects on students' well-being. *Computers in Human Behavior*, *64*, 65–76. https://doi.org/10.1016/j.chb.2016.06.011
Meyer, C. L. (2000). Academic Procrastination and Self-Handicapping: Gender Differences in Response to Noncontingent Feedback. *Journal of Social Behavior & Personality*, *15*(5), 87–102.
Motie, H., Heidari, M., & Sadeghi, M. A. (2012). Predicting Academic Procrastination during Self-Regulated Learning in Iranian first Grade High School Students. *Procedia - Social and Behavioral Sciences*, *69*, 2299–2308. https://doi.org/10.1016/j.sbspro.2013.02.023
Munawar, U., Khalid, F., & Noreen, S. (2024). Role of Institutional Environment in Enhancing Confidence among Female Students at University Level. *Qlantic Journal of Social Sciences*, *5*(1), 158–165. https://doi.org/10.55737/qjss.690147328
Muslikah, Mulawarman, & Andriyani, A. (2018). Social Media User Students' Academic Procrastination. *Jurnal Bimbingan Dan Konseling*, *8*(2), 53–57. https://doi.org/10.12928/psikopedagogia.v7i2.12934
Nakamura, J., & Csikszentmihalyi, M. (2009). Flow theory and research. In Lopez S. J. & Snyder C. R. (Eds.). In *The Oxford handbook of positive psychology* (pp. 195–206). Oxford University Press Inc.
Nartgün, Ş. S., Kahraman, Z. Y., & Coşkun, A. (2019). The Relationship Between Self-Efficacy and Self-determination Based on English as a Foreign Language Learners' Perceptions. *I-Manager's Journal on Educational Psychology*, *12*(4), 1. https://doi.org/10.26634/jpsy.12.4.15548
Noran, F. Y. (2000). *Procrastination Among Students In Institutes of Higher Learning: Challenges For K-Economy.*
Nordby, K., Løkken, R. A., & Pfuhl, G. (2019). Playing a Video Game is more than Mere Procrastination. *BMC Psychology*, *7*(1), 33. https://doi.org/10.1186/s40359-019-0309-9
Nwosu, K. C., Ikwuka, O. I., Ugorji, O. M., & Unachukwu, G. C. (2020). Does the Association of Social Media Use with Problematic Internet Behaviours Predict Undergraduate Students Academic Procrastination? *Canadian Journal of Learning and Technology / La Revue Canadienne de l'apprentissage et de La Technologie*, *46*(1). https://doi.org/10.21432/cjlt27890
Onwuegbuzie, A. J. (2004). Academic procrastination and statistics anxiety. *Assessment & Evaluation in Higher Education*, *29*(1), 3–19. https://doi.org/10.1080/0260293042000160384
Opare, J. O. (2008). Gender Differences In Academic Self-Efficacy Beliefs And Perception Of The Internal Dynamics Of The Collaborative Learning Context. *Gender and Behaviour*, *6*(1). https://doi.org/10.4314/gab.v6i1.23408
Owens, A. M., & Newbegin, I. (2000). Academic Procrastination of Adolescents in English and Mathematics: Gender and Personality Variations. *Journal of Science Behaviour and Personality*, *15*(5), 111–124. https://psycnet.apa.org/record/2002-10572-009
Özer, B. U. (2011). A Cross Sectional Study on Procrastination: Who Procrastinate More? *International Proceedings of Economics Development & Research*, *18*, 34–37. https://bilgeuzun.com/wp-content/uploads/2017/10/Procrastination_Cross-sectional.pdf
Özer, B. U., Demir, A., & Ferrari, J. R. (2009). Exploring Academic Procrastination Among Turkish Students: Possible Gender Differences in Prevalence and Reasons. *The Journal of Social Psychology*, *149*(2), 241–257. https://doi.org/10.3200/SOCP.149.2.241-257
Pajares. (2002). *Overview of Social Cognitive Theory and of Self-Efficacy*. https://www.uky.edu/~eushe2/Pajares/eff.html.
Pala, A., Akyıldız, M., & Bağcı, C. (2011). Academic Procrastination Behaviour of Pre-service Teachers' of Celal Bayar University. *Procedia - Social and Behavioral Sciences*, *29*(2), 1418–1425. https://doi.org/10.1016/j.sbspro.2011.11.381
Paludi, M. A., & Fankell-Hauser, J. (1986). An Idiographic Approach to The Study Of Women's Achievement Striving. *Psychology of Women Quarterly*, *10*(1), 89–100.

https://doi.org/10.1111/j.1471-6402.1986.tb00738.x
Pérez-Juárez, M. Á., González-Ortega, D., & Aguiar-Pérez, J. M. (2023). Digital Distractions from the Point of View of Higher Education Students. *Sustainability*, *15*(7), 6044. https://doi.org/10.3390/su15076044
Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). Motivated Strategies for Learning Questionnaire (MSLQ). *Mediterranean Journal of Social Sciences*, *6*(1), 156–164. https://files.eric.ed.gov/fulltext/ED338122.pdf
Popoola, B. I. (2005). A Study of Procrastinatory Behaviour and Academic Performance of Undergraduate Students in South Western Nigeria. *Journal of Social Sciences*, *11*(3), 215–218. https://doi.org/10.1080/09718923.2005.11892516
Pratibha, & Sokhi, R. K. (2017). Gender Based Comparative Analysis of Psychological Capital in R & D Organizations. *International Journal of Education and Psychological Research (IJEPR)*, *6*(4), 15–18.
Prohaska, V., Morrill, P., Atiles, I., & Perez, A. (2000). Academic Procrastination by Nontraditional Students. *Journal of Social Behavior & Personality*, *15*(5), 125–134. https://psycnet.apa.org/record/2002-10572-010
Raelin, J. A., Bailey, M. B., Hamann, J., Pendleton, L. K., Reisberg, R., & Whitman, D. L. (2014). The Gendered Effect of Cooperative Education, Contextual Support, and Self-Efficacy on Undergraduate Retention. *Journal of Engineering Education*, *103*(4), 599–624. https://doi.org/10.1002/jee.20060
Reinecke, L., Meier, A., Beutel, M. E., Schemer, C., Stark, B., Wölfling, K., & Müller, K. W. (2018). The Relationship Between Trait Procrastination, Internet Use, and Psychological Functioning: Results From a Community Sample of German Adolescents. *Frontiers in Psychology*, *9*. https://doi.org/10.3389/fpsyg.2018.00913
Renninger, K. A., & Hidi, S. E. (2020). To Level the Playing Field, Develop Interest. *Policy Insights from the Behavioral and Brain Sciences*, *7*(1), 10–18. https://doi.org/10.1177/2372732219864705
Rice, K. G., Richardson, C. M. E., & Clark, D. (2012). Perfectionism, procrastination, and psychological distress. *Journal of Counseling Psychology*, *59*(2), 288–302. https://doi.org/10.1037/a0026643
Richard, J., Rebinsky, R., Suresh, R., Kubic, S., Carter, A., Cunningham, J. E. A., Ker, A., Williams, K., & Sorin, M. (2022). Scoping review to evaluate the effects of peer support on the mental health of young adults. *BMJ Open*, *12*(8), e061336. https://doi.org/10.1136/bmjopen-2022-061336
Riegle-Crumb, C., & Peng, M. (2021). Examining High School Students' Gendered Beliefs about Math: Predictors and Implications for Choice of STEM College Majors. *Sociology of Education*, *94*(3), 227–248. https://doi.org/10.1177/00380407211014777
Rodarte-Luna, B., & Sherry, A. (2008). Sex Differences in the Relation Between Statistics Anxiety and Cognitive/Learning Strategies. *Contemporary Educational Psychology*, *33*(2), 327–344. https://doi.org/10.1016/j.cedpsych.2007.03.002
Rothblum, E. D., Solomon, L. J., & Murakami, J. (1986). Affective, Cognitive, and Behavioral Differences Between High and Low Procrastinators. *Journal of Counseling Psychology*, *33*(4), 387–394. https://doi.org/10.1037/0022-0167.33.4.387
Rusillo, M. T. C., & Arias, P. F. C. (2004). Gender differences in academic motivation of secondary school students. *Electronic Journal of Research in Educational Psychology*.
Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. https://doi.org/10.1037110003-066X.55.1.68
Sachitra, V., & Bandara, U. (2017). Measuring the Academic Self-efficacy of Undergraduates: The Role of Gender and Academic Year Experience. World Academy of Science, Engineering and Technology, International. *Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, *11*(11), 2443–2448. https://doi.org/doi.org/10.5281/zenodo.1132491
Salguero-Pazos, M. R., & Reyes-de-Cózar, S. (2023). Interventions to reduce academic procrastination: A systematic review. *International Journal of Educational Research*, *121*, 102228. https://doi.org/10.1016/j.ijer.2023.102228
Sawari, S. S., & Mansor, N. B. (2013). A Study of Student's General Self-efficacy Related to Gender Differences. *International Journal of Informative and Futuristic Research (IJIFR)*, *1*(4), 62–67.
Schnell, K., Ringeisen, T., Raufelder, D., & Rohrmann, S. (2015). The Impact of Adolescents' Self-Efficacy and Self-Regulated Goal Attainment Processes on School Performance — Do Gender and Test Anxiety Matter? *Learning and Individual Differences*, *38*, 90–98.

https://doi.org/10.1016/j.lindif.2014.12.008
Schraw, G., Wadkins, T., & Olafson, L. (2007). Doing the things we do: A grounded theory of academic procrastination. *Journal of Educational Psychology*, *99*(1), 12–25. https://doi.org/10.1037/0022-0663.99.1.12
Schunk, D. H., & DiBenedetto, M. K. (2023). Learning from a social cognitive theory perspective. In *International Encyclopedia of Education(Fourth Edition)* (pp. 22–35). Elsevier. https://doi.org/10.1016/B978-0-12-818630-5.14004-7
Sederlund, A. P., Burns, L. R., & Rogers, W. (2020). Multidimensional Models of Perfectionism and Procrastination: Seeking Determinants of Both. *International Journal of Environmental Research and Public Health*, *17*(14), 5099. https://doi.org/10.3390/ijerph17145099
Semb, G., Glick, D. M., & Spencer, R. E. (1979). Student Withdrawals and Delayed Work Patterns in Self-Paced Psychology Courses. *Teaching of Psychology*, *6*(1), 23–25. https://doi.org/10.1207/s15328023top0601_8
Senécal, C., Julien, E., & Guay, F. (2003). Role conflict and academic procrastination: A self-determination perspective. *European Journal of Social Psychology*, *33*(1), 135–145. https://doi.org/10.1002/ejsp.144
Senécal, C., Koestner, R., & Vallerand, J. (1995). Self-Regulation and Academic Procrastination. *The Journal of Social Psychology*, *135*(5), 607–619. https://doi.org/10.1080/00224545.1995.9712234
Sepehrian, F. (2012). Academic Procrastination and Its Predictive Factors. *Journal of Psychological Studies*, *7*(4), 9–26. https://doi.org/10.22051/psy.2011.1533
Shahrizal, A., & Malina. (2020). Index Developing and Modelling the Factors of Academic Procrastination among University Students. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, *5*(9), 63–75. https://doi.org/10.47405/mjssh.v5i9.482
Shin, J. E. L., Levy, S. R., & London, B. (2016). Effects of role model exposure on STEM and non-STEM student engagement. *Journal of Applied Social Psychology*, *46*(7), 410–427. https://doi.org/10.1111/jasp.12371
Şirin, E. F. (2011). Academic Procrastination Among Undergraduates Attending School of Physical Education and Sports: Role of General Procrastination, Academic Motivation and Academic Self-efficacy. *Educational Research and Reviews*, *6*(5), 447–455. https://www.semanticscholar.org/paper/Academic-Procrastination-among-Undergraduates-of-of-%C5%9Eirin/70c60ca026582b79fa98379998e9f2ae830de3d6
Sirois, F. M. (2023). Procrastination and Stress: A Conceptual Review of Why Context Matters. *International Journal of Environmental Research and Public Health*, *20*(6), 5031. https://doi.org/10.3390/ijerph20065031
Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology*, *31*(4), 503–509. https://doi.org/10.1037/0022-0167.31.4.503
Spence, J. C., Blanchard, C. M., Clark, M., Plotnikoff, R. C., Storey, K. E., & McCargar, L. (2010). The Role of Self-Efficacy in Explaining Gender Differences in Physical Activity Among Adolescents: A Multilevel Analysis. *Journal of Physical Activity and Health*, *7*(2), 176–183. https://doi.org/10.1123/jpah.7.2.176
Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, *133*(1), 65–94. https://doi.org/10.1037/0033-2909.133.1.65
Steel, P., & Ferrari, J. (2013). Sex, Education and Procrastination: An Epidemiological Study of Procrastinators' Characteristics from A Global Sample. *European Journal of Personality*, *27*(1), 51–58. https://doi.org/10.1002/per.1851
Steinert, C., Heim, N., & Leichsenring, F. (2021). Procrastination, Perfectionism, and Other Work-Related Mental Problems: Prevalence, Types, Assessment, and Treatment—A Scoping Review. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.736776
Sun, R.-Q., Sun, G.-F., & Ye, J.-H. (2023). The effects of online game addiction on reduced academic achievement motivation among Chinese college students: the mediating role of learning engagement. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1185353
Svartdal, F., Dahl, T. I., Gamst-Klaussen, T., Koppenborg, M., & Klingsieck, K. B. (2020). How Study Environments Foster Academic Procrastination: Overview and Recommendations. *Frontiers in*

Psychology, *11*. https://doi.org/10.3389/fpsyg.2020.540910
Tal, M., Lavi, R., Reiss, S., & Dori, Y. J. (2024). Gender Perspectives on Role Models: Insights from STEM Students and Professionals. *Journal of Science Education and Technology*, *33*(5), 699–717. https://doi.org/10.1007/s10956-024-10114-y
Telef, B., & Karaca, R. (2013). Ergenlerin Öz-Yeterliklerinin Ve Psikolojik Semptomlarının İncelenmesi/Adolescents' Self-efficacy And Psychological Symptoms' Investigation. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *8*(16), 499–518. https://dergipark.org.tr/en/download/article-file/183040
Tenaw, Y. A. (2013). Relationship between Self-efficacy, Academic Achievement and Gender in Analytical Chemistry at Debre Markos College of Teacher Education. *African Journal of Chemical Education (AJCE)*, *3*(1), 3–28. https://www.ajol.info/index.php/ajce/article/view/84850
Tice, D. M., & Baumeister, R. F. (1997). Longitudinal Study of Procrastination, Performance, Stress, and Health: The Costs and Benefits of Dawdling. *Psychological Science*, *8*(6), 454–458. https://doi.org/10.1111/j.1467-9280.1997.tb00460.x
Tuckman, B. (1991). The Development and Concurrent Validity of the Procrastination Scale. *Educational and Psychological Measurement*, *51*(2), 473–480. https://doi.org/10.1177/0013164491512022
Updegraff, K. A., Eccles, J. S., Barber, B. L., & O'brien, K. M. (1996). Course Enrollment as Self-Regulatory Behavior: Who Takes Optional High School Math Courses? *Learning and Individual Differences*, *8*(3), 239–259. https://doi.org/10.1016/S1041-6080(96)90016-3
Usher, E. L., & Pajares, F. (2006). Inviting Confidence in School: Invitations as a Critical Source of the Academic Self-Efficacy Beliefs of Entering Middle School Students. *Journal of Invitational Theory and Practice*, *12*, 7–16. https://eric.ed.gov/?id=EJ766998
Uzun, A., Özkılıç, R., & Şentürk, A. (2010). A Case Study: Analysis of Teacher Self-efficacy of Teacher Candidates. *Procedia - Social and Behavioral Sciences*, *2*(2), 5018–5021. https://doi.org/10.1016/j.sbspro.2010.03.813
van Eerde, W. (2003). A Meta-analytically Derived Nomological Network of Procrastination. *Personality and Individual Differences*, *35*(6), 1401–1418. https://doi.org/10.1016/S0191-8869(02)00358-6
Vij, J. (2016). Gender Does Not Influence Delaying Excuses: An Exploratory Study of the Reasons of Academic Procrastination among College Students. *International Journal of Indian Psychology*, *3*(3), 144–154. https://doi.org/10.25215/0303.016
Vogt, C. M., Hocevar, D., & Hagedorn, L. S. (2007). A Social Cognitive Construct Validation: Determining Women's and Men's Success in Engineering Programs. *The Journal of Higher Education*, *78*(3), 337–364. https://doi.org/10.1080/00221546.2007.11772319
Vossensteyn, H., Kottmann, A., Jongbloed, B., Kaiser, F., Cremonini, L., Stensaker, B., Hovdhaugen, E. Wollscheid, S., Thomas, L., & Unger, M. (2015). Dropout and Completion in Higher Education in Europe: Main Report. *Publications Office of The European Union*. https://doi.org/https://doi.org/10.2766/826962
Vuong, M., Brown-Welty, S., & Tracz, S. (2010). The Effects of Self-Efficacy on Academic Success of First-Generation College Sophomore Students. *Journal of College Student Development*, *51*(1), 50–64. https://doi.org/10.1353/csd.0.0109
Whatley, M. A. (2009). Never Do Today What You Can Do Later: The Effect of Participant Sex And Gender Classification. *Race, Gender & Class*, *16*(1), 218–227. https://www.jstor.org/stable/41658869
Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology*, *95*(1), 179–187. https://doi.org/10.1037/0022-0663.95.1.179
Xu, J., Du, J., Cunha, J., & Rosário, P. (2021). Student perceptions of homework quality, autonomy support, effort, and math achievement: Testing models of reciprocal effects. *Teaching and Teacher Education*, *108*, 103508. https://doi.org/10.1016/j.tate.2021.103508
Yen, J. Y., Yen, C. F., Chen, C. S., Tang, T. C., & Ko, C. H. (2009). The Association between Adult ADHD Symptoms and Internet Addiction among College Students: The Gender Difference. *CyberPsychology & Behavior*, *12*(2), 187–191. https://doi.org/10.1089/cpb.2008.0113
Yong, F. L. (2010). A Study on the Assertiveness and Academic Procrastination of English and Communication Students at a Private University. *American Journal of Scientific Research*, *9*, 62–72.
You, J. W. (2015). Examining the Effect of Academic Procrastination on Achievement Using LMS Data in E-Learning. *Educational Technology & Society*, *18*(3), 64–74. https://www.jstor.org/stable/jeductechsoci.18.3.64

Yun, L. J. (2019). *The Relationship between Academic Motivation and Academic Procrastination among University Students.* Tunku Abdul Rahman University College.

Zahedi, L., Batten, J., Ross, M., Potvin, G., Damas, S., Clarke, P., & Davis, D. (2021). Gamification in education: a mixed-methods study of gender on computer science students' academic performance and identity development. *Journal of Computing in Higher Education*, *33*(2), 441–474. https://doi.org/10.1007/s12528-021-09271-5

Zarick, L. M., & Stonebraker, R. (2009). I'll do it Tomorrow: The Logic of Procrastination. *College Teaching*, *57*(4), 211–215. https://doi.org/10.1080/87567550903218687

Zeenath, S., & Orcullo, D. J. C. (2012). Exploring Academic Procrastination Among Undergraduates. *International Proceedings of Economics Development & Research*, *47*, 42–46. https://doi.org/10.7763/IPEDR.V47.9.

Zhao, C., Li, J., & Kim, S.-Y. (2023). The Structural Relationships among Academic Pressure, Independent Learning Ability, and Academic Self-Efficacy. *Iranian Journal of Public Health*. https://doi.org/10.18502/ijph.v52i5.12719