

## Exploring the Relationship between Future Time Perspective and Academic Procrastination: The Mediating Role of Positive Emotions

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**Abstract:** Future time perspective is now increasingly catching attention in educational psychology field. There is evidence that students' future time perspective negatively affected students' academic procrastination. Although the relationship between future time perspective and academic procrastination is stable. There are research gaps to be filled. On the one hand, most attention was paid to older students such as undergraduates rather than primary students. On the other hand, we still know little about the mechanism of their relationship. This study aimed to explore the mediating role of students' positive emotion between their future time perspective and academic procrastination. A total of 185(92 are boys and 93 are girls) primary students completed measures self-report in the study. Correlational results showed that future time perspective positively correlated positive emotion, negatively associated with academic procrastination, and positive emotion negatively linked to academic procrastination. Bootstrapped mediation results showed positive emotion partially mediated the relationship between future time perspective and academic procrastination. Theoretical and practical implications are discussed.

**Key Words:** Future Time Perspective, Academic Procrastination, Positive Emotion, Mediation

**Citation:** Sun, Y. (2022). Exploring the Relationship between Future Time Perspective and Academic Procrastination: The Mediating Role of Positive Emotions. In M. Shelley, V. Akerson, & I. Sahin (Eds.), *Proceedings of IConSES 2022-- International Conference on Social and Education Sciences* (pp. 209-217), Austin, TX, USA. ISTES Organization.

### Introduction

Procrastination occurs at any time in peoples' lives. This kind of phenomenon becomes even more apparent in the academic settings (Strunk & Spencer, 2012). Over 70% of undergraduate students show the tendency of procrastination on a regular basis (Klingsieck, 2013 et al) and Pychyl and Haghbin reported in 2012 that there is a great deal of research that demonstrated the negative consequences of this performance. Students who got lower grades were found procrastinated in learning context. (e.g., Fritzsche, Young, et al; Klassen et al., 2008). Especially, the grade relates work that are required to be finished during the course (Morris & Fritz, 2015). Procrastination could lead to people emotion problem, include sadness, pressure, guilt, anxiety, anger, shame, dissatisfaction (Grunschel et al., 2013).

Procrastinations are found damage their daily life, like loss of money, absence of social relationship and terrible reaction to others. Postponing the time of completing the work lead people experience negative emotion, and ultimately doing them poorly (Vallerand et al., 1992). According prior researches (e.g., Grunschel, Patrzek, & Fries, 2013; Steel, Brothen, & Wambach, 2001, Diener, Oishi, & Lucas, 2003). The two significant part of subjective well-being that was related to academic procrastination were affective (emotions and moods) and cognitive (evaluations of life or different life domains) well-being. Many researchers have explored how individual differences lead to procrastinating tendency. Individuals' different level of time perspective have indicated that the factors of a person's time perspective can act as a protector against procrastination (Zabelia, Chestyunina, Trushina, & Vedeneyeva, 2018).

Although the relationship between future time perspective and academic procrastination is stable. There are research gaps to be filled. Firstly, most attention was paid to older students such as undergraduates rather than primary students even though the latter group was as strongly influenced, if not more, as the former group by the blooming of mass media and exhibited procrastination at school. Secondly, even though there is consistent evidence pointing to the negative relation between future time perspective and procrastination, the mechanism of such link remained under explored. It is possible that students tend to experience more positive emotion, which in turn reduce the tendency of procrastination.

The current study aims to fill these two gaps. Exploring their mechanism would be beneficial for latter intervention in reducing procrastination. Such intervention would be more effective than older students considering primary student are in rapid physical and psychological development stage. Besides, this study would deepen the understanding of the impact of future time perspective on primary school students' procrastination academic settings. And this study would deepen our understanding of the individual factors of procrastination and inspire educators in the primary stage to better help students improve their performance at school.

## **Review**

### **Future Time Perspective & Procrastination**

Academic procrastination means students tend to put off or delay tasks related to one's studies thereby they are either not able to fully complete before deadline or have no choice but to finish hastily (Soloman & Rothblum, 1994). The future time perspective can be defined as "the mental representation of the future constructed by individuals at certain points in their lives and reflecting personal and social contextual influences" (Leonardi, 2007, p. 17) or as "the present anticipation of future goals" (Simons, Vansteenkiste, Lens, & Lacante, 2004, p. 122). Recent studies showed that lack of orientation to the future as factors predicted a high level of procrastination. Individuals with high procrastination rates were less focused on future plans, goals, and prospects, and are convinced that their future is doomed and can not to be changed by ones' endeavor (Zabelina, 2018).

## **The Potential Mediation Role of Positive Emotion**

Watson and Tellegen in 1988 pointed out that positive emotion is refer to the extent to which a single person perceived alert, enthusiastic, and active. It was found that high positive emotion has been defined as involving high levels of energy, concentration, and pleasurable engagement in activities (Watson et al., 1988). Study found that Future time perspective correlated with subjective well-being (SWB), which play a momentous role in the positive emotion. (Coudin and Lima 2011), and students who experience positive emotions less likely to delay (Balkis & Duru, 2016; Rahimi, 2019; Zhou & Kam, 2016). For example, students with hope while doing their academic tasks reported that they feel confident that they believe they have the ability to be well versed in study, and depleting procrastination simultaneously (Rahimi, 2019). The above literature actually points to a mediation path between future time perspective and procrastination through positive emotion. However, such an indirect path has not been tested.

## **The Current Study**

The present research so far has highlighted the links between: (1) student future time perspective and positive emotion; (2) positive emotion and procrastination; and (3) student future time perspective and procrastination. To fill the above mentioned research gaps, the present study aims to address the following two research questions: 1. Future time perspective, positive emotion and academic procrastination correlate. 2. Positive emotion is a mediator between future time perspective and academic procrastination.

Thus, we hypothesize that. Hypothesis 1:H1. future time perspective, positive emotion and academic procrastination are correlated respectively. Hypothesis 2: positive emotion partially mediates the relation between future time perspective and academic procrastination.

## **Methodology**

### **Participants**

Through convenient sampling method, we approached teachers in a private primary school in China, six of who agreed with the study. The students in their classes were invited to complete an online questionnaire.

A total of 185 students initially took part in the research. We delete one of the responses, because one's answer time was more than 2 standard deviations shorter than the average, and after checking his answer in detail, we found his answer is arbitrary, thus the final sampling size is 184 (91 are boys and 93 are girls) Their mean age was 11.8 ( $SD = 0.64$ ). Thirty-five students are from grade five, and the rest are from grade six.

### **Data Collection**

Participation was voluntary for this study, and informed consent forms were signed and collected from both the

students and their guardian. The study was explained to them before they filled out the questionnaire. The questionnaire was administered during class hours. The psychological teacher read the instruction before students answered the question.

The questionnaire was uploaded to an online survey tool [www.wjx.cn](http://www.wjx.cn) and its QR code was generated (which is very popular in China). A correlational cross-sectional method was adopted in the study. The participants reported their demographic information, future time perspective, positive emotion and procrastination study.

### Instruments

Demographic information includes students' age, gender and academic level (a=good, b=average, c=bad) others scales were responded to on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

a *Time Perspective*: To measure students' future time perspective, Chinese version of ZTPI (Wang, 2016) was used, which was based of Zimbardo Time Perspective Inventory. it comprises 25 items, assessing past negative, present impulse, future, past positive, present fatalistic. Future time perspective was used in this study, sample question: *ex. when I want to do something, I will set a goal and find a way to achieve it.* High score indicated high level of future time perspective. Five items that relates to FTP was analyzed. Internal consistency was satisfactory (Cronbach's Alpha = .530).

b *Positive Achievement Emotion*: The short version of Achievement Emotion (AEQ-S, Maik et al., 2021) was used in the current study to evaluate students' positive emotion in general learning. It includes three positive emotions namely enjoyment (*ex: I enjoy the challenge of learning the material*), hope (*ex: I feel confident when studying*), and pride (*I am proud of myself*). Internal consistency was high (Cronbach's Alpha = .873).

c *Academic Procrastination*: Lay's (1986) Procrastination Scale-For students' population was used. It consists of 20 items. *ex I realize I always do the job I should already done.* high score indicated high level of academic procrastination. Internal consistency was satisfactory (Cronbach's Alpha = .787).

The time perspective scale and academic procrastination scale were administrated in Chinese. Positive emotion scales were originally in English and were translated into Chinese for present study by English postgraduate students. Back translation was used to increase the accuracy of the translation. Discrepancy was solved through discussion between the researcher and one proficient English teacher in the approached primary school. The research protocol was approved by the Ethics Committee of the Ethics Committee of Hunan Normal University.

### Data Analysis

The data were originally screened and processed in terms of missing values, outliers, reliability, descriptive statistics, and normality tests. To answer the Research question 1, a series of Pearson correlation analyses were

conducted using SPSS 26. Later on, bootstrapped mediation analyses were conducted to test the proposed mediating model.

More specifically, (1) future time perspective, positive emotion and academic procrastination are correlated respectively.(2) positive emotion partially mediates the relation between future time perspective and academic procrastination .After the PROCESS v2.16.3 (Model 4) developed by Hayes (see <http://www.afhayes.com>) was further used to examine the relationship among these variables collectively, calculating the total indirect/mediating effect size, comparing specific indirect effects of future time perspective, positive emotion, and academic procrastination offering corresponding bootstrap confidence intervals automatically.

Future time perspective is defined as independent variable, Academic procrastination is defined as Dependent variable, Positive emotion is defined as Mediator. the mediating effect as well as the corresponding bootstrap confidence intervals was provided via further analysis using PROCESS v2.16.3 (Model 4). If 95% confidence interval does not include zero, so we can conclude with 95% confidence that positive emotion mediated the future time perspective and academic procrastination.

## Results

### Descriptive Results

From Table 1, we could observe the descriptive statistics. The means showed that most participants perceived they have high future time perspective, they are positive and low level of academic procrastination. Skewness and Kurtosis was conducted and represented that the variables under discussion were normally distributed, allowing subsequent parametric analyses. According to the benchmarks proposed by Plonsky and Oswald (2014) in the field of ISLA research,

Table1. Descriptive Statistics of All Variables

Variables	Range	M	Sd	Skewness	Kurtosis
FTP	8-25	18.9	3.46	-.327(.179)	.168(.356)
PE	10-60	45.9	10.19	-.768(.179)	.657(.356)
AP	23-72	40.32	10.5	.752(.179)	.163(.356)

### Correlation Analysis

Table 2 reveals different sizes for the correlations between students' future time perspective, positive emotion and academic procrastination (Bonferroni corrected). Future time perspective was positively linked to positive emotion, and negatively to academic procrastination. Positive emotion was negatively linked to academic procrastination. In other words, students who has high future time perspective tend to experience more positive emotion and less procrastinated.

Table 2. Correlation Matrix of All Variables

Variables	Ftp	Pe	Ap
FTP	-	-	-
PE	.593**	-	-
AP	-.603**	-.572**	-

Notes.  $n = 184$ . \*\*  $p < .01$ .

### Mediation Analysis

The mediator model is depicted as Figure 1. Mediating effect size and comparison between the mediating effects of enjoyment and boredom are presented in Figure 2. As was shown in figure2, the effect sizes of future time perspective on academic procrastination, positive emotion on academic procrastination and future time perspective on positive emotion, were -1.23, .34 and 1.74 respectively, and the 95% confidence interval (from -1.65 to -.820, from -.483, -.200, from 1.398, 2.092) indicated that all of them reached a significant level. The 95% confidence interval didn't include zero (from -.916 to -.2873), so we can conclude with 95% confidence that positive emotion mediated the relationship of future time perspective and academic procrastination. And the total mediating/indirect effect size was -.596.

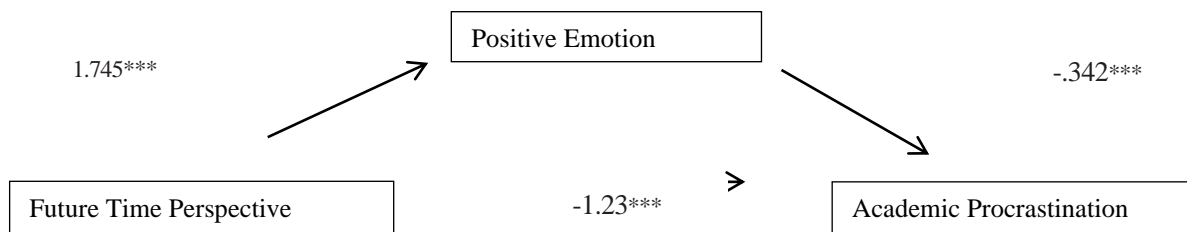


Figure 1. The Statistical Diagram Mediation

Pathway	Effect Size	SE	BCa 95% CI
Future time perspective--academic procrastination	-1.23	.2111	[-1.65,-.820]
Positive emotion -academic procrastination	-.342	.0717	[-.483,-.200]
Future time perspective--positive emotion	1.745	.1758	[1.398,2.092]
Total indirect effect	-.597	.2111	[-.916,-.287]

Figure 2. Analysis of the Mediation Model

## Discussion

The first research question highlights the relation between students' perceptions of future time perspective, positive emotion and academic procrastination. Future time perspective was shown to have a positive relationship with positive emotions, and a negative correlation were found between future time perspective and academic procrastination and between positive emotion and academic procrastination respectively. Thus, it seems that future oriented students are more likely to experience positive emotions (e. g. enjoyment, hope, pride) and acted less put off in learning.

The following research question revealed a mediating model that the student positive emotions mediated the relationship between future time perspective and academic procrastination. People in high level of future time perspective may be optimistic and energetic and this led to them complete tasks immediately. To set a specific goal and have a plan may be useful for reduce students' procrastination and help students perform well in studying. Through this research, we come to the results that future time perspective could predict whether individual postpone in learning context, which confirm and expand Zabelina (2018) typology.

This study moves forward the understanding of the impact of future time perspective on primary school students' academic procrastination in China culture background. In addition, the mediating of positive emotion in the present study suggests that students who has strong future time perspective would be positive, which mitigating their academic procrastination finally. In the real practical situation. Elementary educator could understand more about the mechanism of students' academic procrastination, so they are supposed to help students prepare for the future.

## Limitation and future direction

This study is subject to certain limitations. First, it employed a cross-sectional design. The following empirical research could involve in longitudinal survey design to collect data over a period of time. Second, all the participants were from one school, and this kid are from high SES family, which might undermine the generalizability of the research findings. Moreover, the way we collect data was only self-report, more parents and teachers' evaluation could be included in the future.

## Conclusion

This study explores the relationships between future time perspective and academic procrastination and the mediation role of positive emotion between the two. The results indicate that students who think future more tended to procrastinate less. Moreover, students who felt confident, proud and pride rarer procrastinate than their peers.

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