

The Impact of Class Leader Experience on the Academic Psychology of Upper Primary School Students: A Study Based on Self-Efficacy, Self-Control, and Academic Procrastination

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ABSTRACT

This study explores the impact of class leader experience on academic psychology in upper primary school students, focusing on self-efficacy, self-control, and academic procrastination. A survey of 312 students, divided into class leader (181) and non-leader (131) groups, shows that class leader experience is positively correlated with self-efficacy and self-control, while negatively correlated with procrastination. Regression analysis indicates that class leader experience predicts higher self-efficacy and self-control, and lower procrastination. Structural equation modeling reveals that the effect on procrastination is direct, rather than mediated by self-efficacy or self-control. These findings suggest that class leader experience influences academic psychology through external responsibility and supervision mechanisms, aligning with social cognitive theory.

KEYWORDS

class leader experience; academic self-efficacy; self-control; academic procrastination; primary education

1 Introduction

The class leader system is an important component of the Chinese primary education system. Class leaders not only take on daily class management duties but may also be influenced in terms of academic and personal development. Traditionally, class leaders are assigned responsibilities such as organizing classroom discipline, assisting teachers in managing class affairs, and leading classmates in group activities.

The fulfillment of these responsibilities may impact the psychological and behavioral patterns of class leaders. However, there is still a lack of empirical research on how the class leader role influences students' academic psychology, such as self-efficacy, self-control, and academic procrastination.

Academic psychology is an important factor affecting students' learning behaviors and academic performance, with self-efficacy, self-control, and academic procrastination being three core variables. Self-efficacy refers to an individual's assessment of their confidence and ability to complete a task (Bandura, 1997)^[1]. Students with high self-efficacy typically exhibit stronger learning motivation and higher academic achievement^[2]. In the academic domain, higher self-efficacy enables students to approach learning tasks with more initiative, thereby improving academic performance.

Self-control refers to an individual's ability to regulate their emotions, behaviors, and desires, especially when faced with external temptations and pressures^[3]. In an academic context, high levels of self-control help students plan their time effectively and avoid distractions, thereby improving learning efficiency and academic performance. Academic procrastination refers to students delaying academic tasks, even when they know procrastination will affect their academic achievement. Academic procrastination is typically associated with lower academic performance, low learning motivation, and poor self-regulation^[4].

Existing research primarily explores how student leadership roles enhance management skills, social abilities, and leadership qualities. However, studies on the impact of class leader roles on academic psychology, especially the interactions between self-efficacy, self-control, and academic procrastination, are limited.

Anderson and Lu studied how student leadership promotes management and learning skills, but did not focus on academic psychology^[5]. Kuhn and Weinberger investigated the link between leadership skills and wages, which, while relevant to class leader roles, did not address academic outcomes^[6]. Komives and Johnson (2009) examined how high school leadership experiences prepare students for future leadership roles, but did not explore their effect on academic psychology^[7]. On the other hand, Deng et al. (2020) found that student leadership positively influences academic performance, but their research centered more on academic outcomes rather than psychological factors^[8]. Thus, while leadership roles are shown to improve various skills, there is a gap in understanding how class leader roles affect academic psychology and the underlying psychological mechanisms.

Role theory posits that individuals form self-identities based on the roles they assume in the social environment and adjust their behavior accordingly^[9]. The class leader identity may lead to stronger responsibility, self-discipline, and confidence in academic performance through role internalization. For example, class leaders may feel the need to set an

example for their peers, thus becoming more proactive in managing learning tasks and reducing procrastination. Moreover, this study hypothesizes that the class leader role may influence academic psychology not only through role identification but also through external factors such as responsibility pressure, teacher supervision, and peer expectations, which may directly affect academic behaviors. Firstly, class leaders are responsible for class management, and this sense of responsibility may motivate them to take more initiative in planning academic tasks, enhancing academic self-efficacy and self-control. Secondly, class leaders often have additional academic tasks and are subject to teacher supervision and evaluation, which may encourage them to work harder and reduce procrastination. Lastly, as class leaders, students may feel the expectations of their peers, motivating them to work harder academically to maintain their image^[10].

Based on this, the present study aims to investigate whether class leader experience affects the academic self-efficacy, self-control, and academic procrastination of upper-grade primary school students, and further explore the mechanisms involved. Specifically, this study will examine whether class leader experience enhances academic self-efficacy and self-control while reducing academic procrastination. Furthermore, does the impact of class leader experience on academic procrastination operate directly, or is it mediated by self-efficacy and self-control?

Based on existing theories and related literature, the following hypotheses are proposed:

H1a: Class leader experience positively predicts academic self-efficacy;

H1b: Class leader experience positively predicts self-control;

H1c: Class leader experience negatively predicts academic procrastination.

H2: Academic self-efficacy and self-control jointly affect academic procrastination through mediation.

2 Methods

2.1 Participants

This study selected 312 fifth and sixth-grade students from an elementary school in China using stratified random sampling. Of these, 181 were in the class leader group and 131 in the non-class leader group. The sample included 158 males (50.6%) and 154 females (49.4%).

2.2 Measures

2.2.1 Class Leadership Experience

Class leadership experience was measured using demographic questions in the survey, categorized as a binary variable (1 = has class leader experience, 0 = does not have class leader experience).

2.2.2 Academic Procrastination Scale

The academic procrastination scale, adapted from Zuo Yanmei^[11], consists of 17 items across four dimensions: execution delay, planning delay, remediation delay, and summarization delay. It uses a 5-point Likert scale, with higher scores indicating lower procrastination. Cronbach's alpha was 0.967, indicating high reliability.

2.2.3 Academic Self-Efficacy Scale

The academic self-efficacy scale, developed by the Insight Group at Peking University, was adapted from the Academic Efficacy subscale of the Patterns of Adaptive Learning Scales (PALS) by Midgley et al.^[12]. It contains 12 items measuring students' confidence in their general academic abilities, using a 5-point Likert scale. Cronbach's alpha was 0.957.

2.2.4 Self-Control Scale

The self-control scale, originally developed by Tangney et al.^[13], was revised for Chinese students by Unger et al.^[14]. It consists of 13 items measuring impulse control and self-discipline, using a 5-point Likert scale, with higher scores indicating stronger self-control abilities. The Cronbach's alpha for the scale was 0.949.

2.3 Data Analysis

Data analysis was conducted using SPSS 29.0 and Amos 29.0. Descriptive statistics, independent t-tests, multiple regression, and structural equation modeling (SEM) were employed to examine the relationships between class leader experience, academic self-efficacy, self-control, and procrastination.

3 Results

3.1 Descriptive Statistics and Correlations Between Variables

This study calculated the mean, standard deviation, and Pearson correlation coefficients for all variables (see Table 1). The results showed that class leadership experience was significantly positively correlated with academic self-efficacy ($r = 0.32$, $p < 0.001$) and self-control ($r = 0.28$, $p < 0.01$), and significantly negatively correlated with academic procrastination ($r = -0.24$, $p < 0.01$). Additionally, academic self-efficacy was significantly positively correlated with self-control ($r = 0.41$, $p < 0.001$), and self-control was significantly negatively correlated with academic procrastination ($r = -0.47$, $p < 0.001$).

Table 1 Descriptive Statistics and Correlation Analysis of Class Leadership Experience, Academic Self-Efficacy, Self-Control, and Academic Procrastination

Variable	Mean (M)	Standard Deviation (SD)	1	2	3	4
Class Leadership Experience	0.58	0.49	1	0.32*	0.28	-0.24*
Academic Self-Efficacy	3.85	0.76	0.32*	1	0.41*	-0.35
Self-Control	3.72	0.68	0.28	0.41*	1	-0.47*
Academic Procrastination	2.91	0.81	-0.24*	-0.35	-0.47*	1

Note: * $p < .05$; ** $p < .01$

3.2 Direct Effects of Class Leadership Experience on Academic Self-Efficacy, Self-Control, and Academic Procrastination

Multiple regression analysis was conducted to examine the direct effects of class leadership experience on academic psychological variables (see Table 2). After controlling for gender, grade and academic achievement, the results showed that class leadership experience significantly predicted academic self-efficacy ($\beta = 0.18$, $p < 0.001$), self-control ($\beta = 0.15$, $p < 0.01$), and negatively predicted academic procrastination ($\beta = -0.12$, $p < 0.05$). These findings support Hypothesis 1, suggesting that class leadership experience positively influences academic self-efficacy and self-control, while reducing academic procrastination.

Table 2 Multiple Regression Analysis of the Direct Effects of Class Leadership Experience on Academic Self-Efficacy, Self-Control, and Academic Procrastination

Dependent Variable	Independent Variable	t	SE	t	p	R ²
Academic Self-Efficacy	Class Leadership Experience	0.18	0.05	3.6	<0.001	0.12
Self-Control	Class Leadership Experience	0.15	0.06	2.5	<0.01	0.1
Academic Procrastination	Class Leadership Experience	-0.12	0.05	-2.4	<0.05	0.09

3.3 Structural Equation Modeling Analysis: The Path and Mechanism of the Effect of Class Leadership Experience on Academic Procrastination

To further examine the mediating roles of self-efficacy and self-control, a structural equation model was constructed using AMOS 24.0 (see Figure 1). The model fit indices indicated a good fit ($\chi^2 = 95.21$, $df = 48$, $CFI = 0.95$, $TLI = 0.94$, $RMSEA = 0.04$). However, the mediation analysis showed that the influence of class leadership experience on academic procrastination was primarily direct, not mediated by self-efficacy or self-control (indirect effect $\beta = -0.05$, $p = 0.18$, 95% CI [-0.11, 0.02]). These indirect effects were not statistically significant ($p > 0.05$), indicating that class leadership experience influences academic procrastination more through external responsibility and supervision mechanisms than through internal self-regulation processes.

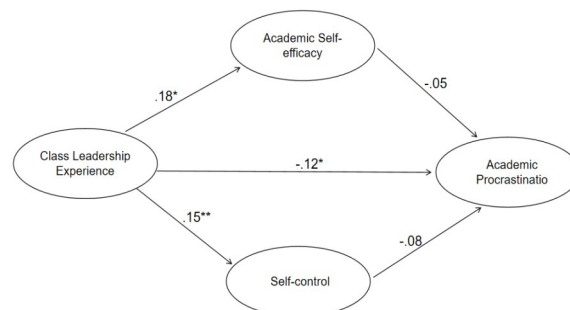


Figure 1 Structural Equation Model Analysis of Class Leadership Experience, Academic Self-Efficacy, Self-Control, and Academic Procrastination

Note: * $p < .05$ ** $p < .01$

4 Discussion

This study explored the impact of class leadership experience on academic self-efficacy, self-control, and academic procrastination in fifth and sixth-grade students. The results showed that class leadership experience significantly enhanced academic self-efficacy and self-control, while reducing academic procrastination. Importantly, the influence on academic procrastination was direct, not mediated by self-efficacy or self-control.

4.1 Direct Effects of Class Leadership Experience on Academic Psychology

The study found that class leadership experience significantly enhanced academic self-efficacy and self-control while reducing academic procrastination. These findings support Social Cognitive Theory^[1], which posits that behavior is shaped not only by individual cognition and motivation but also by external factors like social roles and feedback. In this case, the responsibilities tied to class leadership likely promoted academic behaviors.

Consistent with Deng et al.^[8], external factors such as teacher supervision and class responsibilities had a more significant impact on students' academic behaviors, particularly when self-regulation abilities are still developing. This finding suggests that class leadership encourages students to focus on their academic tasks while fulfilling social responsibilities, leading to better self-management. However, this study did not find self-efficacy or self-control to mediate the relationship between class leadership and academic procrastination, differing from Zimmerman's theory on self-regulated learning, which emphasizes internal mechanisms like self-efficacy^[2].

4.2 Mechanism of Class Leadership Experience's Influence on Academic Procrastination

The results showed that the influence of class leadership experience on academic procrastination was primarily direct, rather than mediated by self-efficacy or self-control. This could be attributed to developmental factors, as Blakemore & Robbins pointed out that upper elementary students' self-control abilities are still maturing. At this stage, students often rely more on external supervision^[15]. This finding aligns with Wang et.al., which emphasized that social responsibility and teacher supervision help reduce procrastination, especially when peers have high expectations^[16].

This study offers new perspectives on the role of class leadership experience in reducing academic procrastination. While previous research often focuses on social development, few have examined how leadership roles influence academic psychology.

4.3 Implications and Future Directions

This study has practical implications for optimizing class leadership systems in schools. The findings suggest that class leadership can promote academic self-efficacy and self-control. However, schools should consider rotating leadership roles to prevent overburdening students and reduce potential anxiety. This rotation system would allow more students to participate, fostering a supportive environment.

Additionally, teachers can combine external supervision with strategies for cultivating self-regulation, such as goal setting and time management. However, given that the influence of leadership roles may be short-term, future research should examine the long-term effects of class leadership experience on academic behavior and consider how these responsibilities impact students' self-control abilities over time. This research could be complemented by neurodevelopmental studies to understand how leadership roles shape self-regulation in younger students.

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