

Academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities

Xia, Yujia ✉

Graduate School, Lyceum of the Philippines University – Batangas, Philippines



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Abstract

The purpose of this study to determine the relationship between academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities. A total of 385 college students from four Chinese universities participated in this study. Results showed that majority of respondents are female, mainly second or third-year students, business or social sciences majors .and actively participating in social or sports-related extra-curricular activities. This indicates that these groups are more likely to engage in extracurricular activities. Respondents demonstrated high academic self-efficacy in planning academic activities, learning strategies, and thesis work. This suggests the need to improve time management skills for handling complex tasks. In terms of university commitment, the respondents agreed in all the indicators particularly as to affective and normative commitment. Students expressed emotional attachment and loyalty to their university, particularly valuing the academic and personal development support provided by the institution. This commitment is higher among students actively participating in extracurricular activities, fostering a sense of belonging and community awareness. Also, there exists no significant differences of responses in academic self-efficacy beliefs and university commitment when grouped according to profile variables which implies that demographic factors do not affect students' academic self-efficacy beliefs and university commitment. In addition, there exists no significant relationship between academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities which suggests that academic self-efficacy does not necessarily influence students' commitment to the university. Also, extra-curricular involvement may not significantly impact their academic self-efficacy or university commitment. In the end, an action plan to enhance the academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities was proposed.

Keywords: academic self-efficacy, university commitment, extra-curricular activities, Chinese college students

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1. Introduction

In recent years, China's higher education sector has made significant strides, with increasing emphasis on holistic student development. However, amidst this progress, there is a growing need to address the challenges that students face in balancing academic responsibilities and extra-curricular involvement (Wang et al.,2021). Academic self-efficacy beliefs refer to an individual's confidence in their ability to successfully complete academic tasks and achieve desired outcomes in academic settings. These beliefs are based on the perception of one's own competence, skills, and effectiveness in mastering academic challenges (Bandura, 2018). Key aspects of academic self-efficacy beliefs include task-specific confidence, which pertains to how confident a person feels about their ability to perform particular academic tasks, such as solving math problems, writing essays, or understanding complex theories (Schunk et al.,2020). Attribution of success and failure also plays a significant role. It influences how individuals interpret success and failure in academics. Finally, academic self-efficacy beliefs can significantly impact academic goals and aspirations. Individuals with higher self-efficacy are more likely to set challenging goals and work persistently towards achieving them (Bandura, 2018). These beliefs are important because they shape students' motivation, academic performance, and overall well-being. They are influenced by past experiences, social comparisons, feedback from others, and the level of support and encouragement received (Schunk et al.,2020).

Extracurricular activities include any activities pursued outside of the regular academic curriculum, such as student clubs, sports teams, volunteer work, cultural groups, and academic societies (Wang et al.,2021). These activities provide students with opportunities to develop skills, build networks, and contribute to campus life. University commitment, in this context, refers to the emotional attachment and loyalty that students feel towards their university. Several factors influence university commitment. Students' perception of the support they receive from the university, including academic support, career services, counseling, and opportunities for personal growth, can influence their commitment (Liu et al.,2019). The quality of the extracurricular activities themselves, such as the level of organization, leadership opportunities, and the extent of student involvement in decision-making, can impact how students perceive their university experience (Li et al.,2022). Cultural and social factors also play a role. Universities can benefit from fostering a positive environment for extracurricular activities that encourages student engagement and commitment. This can lead to higher levels of student satisfaction, retention, and overall academic success (Wang et al.,2021).

University commitment among Chinese students involved in extracurricular activities reflects their dedication and loyalty to their educational institution. Amidst the wave of the knowledge economy and globalization, higher education is gradually becoming a vital component of national competitiveness. In this context, understanding the relationship between academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities is particularly crucial. Therefore, this study aims to conduct a comprehensive exploration of the relationship between academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities. It will also assess academic self-efficacy beliefs with regard to planning academic activities, learning strategies, information retrieval, working in groups, management of relationships with teachers, skills for lessons, stress management, and thesis work (Li et al.,2022). This study seeks to fill these gaps by combining the actual situation of Chinese universities with case analyses and interviews.

Objectives of the Study - The purpose of this study is to determine the relationship between academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities. Specifically, it determined the academic self-efficacy beliefs with regard to planning academic

activities, learning strategies, information retrieval, working in groups, management of relationships with teachers, skills for lesson, stress management and thesis work; assessed the university commitment as to affective, continuance, and normative; tested the significant relationship between the two variables; and lastly, proposed a plan of action to enhance the academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities based on the results of the study.

2. Methods

Research Design - This study employed descriptive research to investigate the relationship between academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities. Descriptive research aims to systematically gather information and provide an accurate portrayal of variables without manipulating them (Bordens et al., 2023; Neuman, 2024).

Participants of the Study - The main participants of this study are Chinese university students who are active in extracurricular activities. The study utilized an online survey to distribute questionnaires to students at several universities in China. Prior to the survey, feedback on the questionnaire items was solicited from university leaders and student representatives to improve the clarity of the questionnaire and ensure a thorough understanding of its content. Electronic questionnaires will be sent via the Internet using "Questionnaire Star." The total number of students at these universities is 2,930. The researcher used Raosoft calculator with a 95% confidence interval and a 5% margin of error to determine the target respondents. Also, the researcher used a stratified non-proportional allocation sampling method to select respondents. Considering the ethical issues of this study, the total number of research subjects is 385. The criteria for selecting respondents are college students, regardless of their major. The researcher used a simple random sampling method to select participants. Three universities well known for their vibrant extracurricular activities were involved in the study. University A with approximately 120 students, University B with 130 students, and University C with 135 students. The total number of students at these universities is approximately 385. To ensure representation of different disciplines and levels of participation in extracurricular activities, participants will be selected based on their active participation in extracurricular activities, ensuring diversity of interests and levels of participation. Selection criteria will include students' academic performance, years of participation in activities, and demographic characteristics to cover a wide range of experiences.

Instrument of the Study - Data collection utilized a questionnaire divided into three sections. The first section gathered demographic details including sex, grade level, major; type of extra-curricular activities. The second section assessed participants' academic self-efficacy beliefs, encompassing planning academic activities, learning strategies, information retrieval, working in groups, management of relationships with peers, and skills for lessons. These dimensions were measured using Likert scales to gauge quantitative responses. The third section explored university commitment, evaluating affective commitment, continuance commitment, and normative commitment based on participants' perceptions of their emotional attachment, perceived benefits of staying, and sense of obligation to the university. To ensure comprehensive data collection, respondents completed the questionnaire either online via Google Forms or in hard copy format. All information provided was strictly utilized for research purposes. Validity and reliability of the questionnaire were confirmed through a pilot test, yielding a Cronbach's alpha coefficient of 0.75, indicating excellent internal consistency across all items. Reliability results for each dimension shows values predominantly exceeding 0.8, thereby meeting reliability standards and affirming the questionnaire's suitability for data collection. The dimensions of academic self-efficacy beliefs and university all exceed 0.8, meeting the requirements for reliability. This indicates that the questionnaire is good for large scale distribution.

Data Gathering Procedures - The initial phase involved gathering relevant literature for a retrospective analysis to develop a deep understanding of academic self-efficacy beliefs and university commitment among Chinese college students engaged in extracurricular activities. Feedback from a research consultant guided the refinement of the study's focus. Next, the questionnaire designed for data collection underwent rigorous

reliability testing by a statistician to ensure its suitability for the study. Following approval, the distribution of the questionnaire began under the supervision of the researcher. The researcher monitored the distribution process and ensured the collection of completed questionnaires for analysis. The study specifically assessed academic self-efficacy beliefs and university commitment among Chinese college students through structured sections focusing on demographic information, academic self-efficacy beliefs, and university commitment. The analysis explored various dimensions including planning academic activities, learning strategies, information retrieval, working in groups, and management of relationships with teachers. Moreover, the study investigated the relationships between academic self-efficacy beliefs and university commitment, aiming to provide practical insights and theoretical foundations for understanding these constructs. By synthesizing research methods and empirical findings, the study proposed recommendations to enhance academic self-efficacy beliefs and university commitment among Chinese college students involved in extracurricular activities.

Data Analysis - To perform data analysis, the following statistical tools were used. Weighted means and ranking were used to assess the academic self-efficacy beliefs and university commitment. The result of Shapiro-Wilk Test revealed that p-values of two major variables are less than 0.05 which means that the data set is not normally distributed. Spearman rho was used to test the significant relationship between academic self-efficacy beliefs and university commitment. The following Likert Scale was used in assessing the variables: 3.50-4.00–Strongly Agree; 2.50-3.49–Agree; 1.50–2.49–Disagree; and 1.00–1.49–strongly Disagree. In addition, all data were treated using a statistical software known as PASW version 26 to further interpret the result of the study using an alpha level of 0.05.

Ethical Considerations - Ethical considerations were meticulously observed throughout the research process to uphold the integrity and credibility of the study. Privacy and ethical concerns were paramount when administering the questionnaire and conducting research activities. Measures were taken to ensure that all information collected was solely utilized for research purposes. Prior consent from participants was obtained through formal letters and correspondence, ensuring their willingness to participate and answer relevant questions. Moreover, confidentiality and anonymity were guaranteed, with respondents not required to provide their names on the questionnaire. Participants were assured that their voluntary participation would not result in any harm, prioritizing their safety and security above all else. Ethical considerations will ensure that the study respects the autonomy of teachers and does not infringe upon their rights as individuals or professionals. Emphasis will be placed on honesty and transparency in all aspects of the assessment, from data collection to reporting of results. The objectives and potential impacts of the study will be clearly outlined. Potential risks to participants will be considered, and measures will be taken to minimize harm. This includes ensuring that the assessment process does not have a negative impact on the teaching environment or the well-being of teachers. An explanation of how the study contributes positively to teachers' professional development and overall improvement of the educational environment will be provided.

3. Results and discussion

The analysis of Table 1 on Academic Self-Efficacy Beliefs provides an overview of the highest and lowest scoring categories and their implications. According to the data, "Thesis Work" (weighted mean of 3.77, verbal interpretation "Strongly Agree") is the highest-scoring category. This indicates that respondents feel highly confident in their ability to manage tasks related to thesis work, such as organizing research materials, using clear and coherent structures, and completing their theses on time. High self-efficacy in thesis work is critical as it encompasses a range of complex tasks that require significant planning, organization, and execution.

Conversely, "Management of Relationships with Teachers" (weighted mean of 3.60, verbal interpretation "Strongly Agree") is the lowest-scoring category. This suggests that students feel comparatively less confident in their ability to effectively manage relationships with their teachers. This includes aspects such as asking questions in class, participating in discussions, and seeking help outside of class. Effective management of teacher-student relationships is crucial for academic support and guidance, impacting students' learning

experiences and academic outcomes. In conclusion, the highest-scoring category reflects strong self-efficacy in handling thesis work, which is vital for successful academic achievement. On the other hand, the lowest-scoring category highlights challenges in managing relationships with teachers, suggesting an area where interventions are needed to improve communication and support systems. These insights provide valuable guidance for educators and administrators to focus on enhancing students' skills and confidence in these critical areas, thereby improving their overall academic self-efficacy.

Table 1

Summary Table on Academic Self-Efficacy Beliefs

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Planning Academic Activities	3.74	Strongly Agree	2
2. Learning Strategies	3.67	Strongly Agree	5
3. Information Retrieval	3.69	Strongly Agree	4
4. Working In Groups	3.61	Strongly Agree	6
5. Management of Relationships with Teachers	3.60	Strongly Agree	7
6. Skills For Lessons	3.72	Strongly Agree	3
7. Thesis Work	3.77	Strongly Agree	1
Composite Mean	3.68	Strongly Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

Table 2

Summary Table on University Commitment

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Affective Commitment	3.74	Strongly Agree	3
2. Continuance Commitment	3.73	Strongly Agree	2
3. Normative Commitment	3.78	Strongly Agree	1
Composite Mean	3.75	Strongly Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

Table 2 summarizes University Commitment in terms of Affective, Continuance, and Normative Commitment. The composite mean of 3.75, interpreted as "Strongly Agree," indicates a high overall level of commitment among students. Affective Commitment, with a weighted mean of 3.74, shows that students have strong emotional attachment and identification with their university. This form of commitment reflects students' positive feelings towards their university, often resulting in increased involvement and participation in university activities. Continuance Commitment, with a weighted mean of 3.73, suggests that students feel a sense of necessity in staying at their current university due to the high costs associated with leaving. This type of commitment is based on the perceived costs and risks of leaving the university, such as losing valuable opportunities or disrupting their academic progress. Normative Commitment, with the highest weighted mean of 3.78, indicates that students feel a moral obligation to remain at their university. This sense of duty often stems from values and norms instilled by the university environment, making students feel that staying at the university is the right thing to do.

In summary, the highest level of normative commitment highlights the importance of moral and value-based factors in retaining students and fostering long-term loyalty. Affective commitment shows strong emotional ties to the university, enhancing student engagement and satisfaction. Continuance commitment, while slightly lower, underscores the practical reasons students choose to stay. These insights emphasize the need for university administrators to cultivate a supportive and value-driven environment to maintain high levels of commitment across all dimensions. The analysis of Table 3 on the Relationship Between Academic Self-Efficacy Beliefs and University Commitment focuses on the highest and lowest p-values and their inferences and impacts. According to the data, "Thesis Work" and Affective Commitment (rho-value = 0.281, p-value = 0.000) show the highest significance, indicating a highly significant relationship between students' confidence in managing thesis work and their emotional attachment to the university. This suggests that students who feel competent in their thesis work are more likely to develop a strong emotional bond with their university.

Table 3*Relationship Between Academic Self-Efficacy Beliefs and University Commitment*

PLANNING ACADEMIC ACTIVITIES	rho-value	p-value	Interpretation
Affective Commitment	-0.001	0.978	Not Significant
Continuance Commitment	-0.066	0.199	Not Significant
Normative Commitment	-0.027	0.600	Not Significant
LEARNING STRATEGIES			
Affective Commitment	.108*	0.033	Significant
Continuance Commitment	-0.028	0.584	Not Significant
Normative Commitment	-0.059	0.250	Not Significant
INFORMATION RETRIEVAL			
Affective Commitment	0.019	0.707	Not Significant
Continuance Commitment	0.047	0.354	Not Significant
Normative Commitment	0.041	0.425	Not Significant
WORKING IN GROUPS			
Affective Commitment	0.053	0.303	Not Significant
Continuance Commitment	-0.047	0.361	Not Significant
Normative Commitment	-0.021	0.687	Not Significant
MANAGEMENT OF RELATIONSHIPS WITH TEACHERS			Not Significant
Affective Commitment	0.064	0.211	Not Significant
Continuance Commitment	0.045	0.383	Not Significant
Normative Commitment	0.023	0.650	Not Significant
SKILLS FOR LESSONS			
Affective Commitment	0.014	0.780	Not Significant
Continuance Commitment	0.019	0.710	Not Significant
Normative Commitment	-0.006	0.914	Not Significant
THESIS WORK			
Affective Commitment	.281	0.000	Highly Significant
Continuance Commitment	-0.065	0.204	Not Significant
Normative Commitment	-0.014	0.785	Not Significant

Legend: Significant at p -value < 0.01

Conversely, "Learning Strategies" and Affective Commitment (rho-value = 0.108, p-value = 0.033) show the lowest significance, although still significant. This indicates a positive relationship between students' confidence in their learning strategies and their emotional commitment to the university, but the correlation is weaker compared to the relationship with thesis work. In conclusion, the strongest relationship observed is between thesis work and affective commitment, highlighting the importance of major academic tasks in fostering strong emotional ties to the university. The weaker but still significant relationship between learning strategies and affective commitment suggests that while daily academic practices are important, their impact on emotional attachment may be less pronounced.

Table 4

Proposed Action Plan to Enhance the Academic Self-efficacy Beliefs and University Commitment Among Chinese College Students Involved in Extra-Curricular Activities

Key Result Areas (KRAs) / Objective	Strategies/ Activities	Success Indicator	Person/ Office Responsible
Academic Self-Efficacy Beliefs Management of Relationships with Teachers Objective: <i>To foster positive and supportive teacher-student relationships that enhance students' academic self-efficacy and overall well-being.</i>	a. Encourage students to initiate open and honest communication with their teachers. This can include setting up regular check-ins, asking questions, seeking clarification, and providing feedback on assignments or classroom activities. b. Encourage students to practice active listening when interacting with teachers. This involves paying attention, clarifying information, and showing empathy towards the teacher's perspective. Active listening promotes understanding and strengthens communication. c. Offer students the opportunity to participate in student development workshops or seminars focused on communication skills,	Improved student academic performance by 85% Higher student self-efficacy Reduced student absenteeism and dropout rates by 85% Increased student engagement in classroom activities by 90%	Student Affairs Office College Counselors Classroom Advisers

University Commitment	Promote student involvement in extracurricular activities that enhance university commitment.	Increased student satisfaction with university life by 85%	University Administrators
<i>Affective Commitment</i>	Develop programs to highlight the value of university involvement in personal and career development.	Higher student retention rates up to 85%	Student Affairs Office
Objective: To foster a strong emotional connection and sense of belonging among Chinese college students involved in extracurricular activities.	Enhance communication channels to inform students about university resources and opportunities. d. Conduct surveys and focus groups to assess student perceptions of university commitment and satisfaction.	Enhanced student engagement in campus activities by 90% Stronger sense of belonging among students.	College Counselors Classroom Advisers

4. Conclusions and recommendations

Respondents demonstrated high academic self-efficacy in planning academic activities, learning strategies, and thesis work. This suggests the need to improve time management skills for handling complex tasks. In terms of university commitment, the respondents agreed in all the indicators particularly in terms of affective and normative commitment. Students expressed emotional attachment and loyalty to their university, particularly valuing the academic and personal development support provided by the institution. This commitment is higher among students actively participating in extracurricular activities, fostering a sense of belonging and community awareness. There exists no significant relationship between academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities. This suggests that academic self-efficacy does not necessarily influence students' commitment to the university. Also, extra-curricular involvement may not significantly impact their academic self-efficacy or university commitment. An action plan to enhance the academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities was proposed.

Schools may training programs on time management skills, priority setting and the use of planning tools or digital tools to help students better manage their academic schedules and complete tasks effectively and on time. School administrators may provide programs designed to enhance students' communication skills, such as training in public speaking and active listening. In addition, resources and training on concentration skills and study habits should be provided to help students stay focused during their studies. College teachers may ensure that students have easy access to detailed information about test formats and requirements. This can be done by updating online resources, providing clear guidelines and organizing information sessions to help students prepare effectively for exams. College students involved in extra-curricular activities may encourage students to use effective group learning techniques through the provision of structured group study sessions and peer-led study groups. Training on cooperative learning strategies and group dynamics can help students maximize the benefits of group learning. The Office of Student Affairs may promote open communication between students and teachers through regular office hours, mentoring programs and informal meet-and-greet sessions. Providing teachers with training in student engagement and effective communication can further enhance these relationships. The proposed action plan to enhance the academic self-efficacy beliefs and university commitment among Chinese college students involved in extra-curricular activities may be tabled for discussion, implementation and further evaluation. Future researchers may conduct a follow up study on how student engagement and student support services might affect or influence academic self-efficacy beliefs, university commitment, and extra-curricular activities, Also, they may explore on other factors in determining university commitment, such as perceived social support, academic performance, or personal goals.

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