

Relationships Between Student Peer Relationships, Time Management, Academic Performance and Dormitory Culture

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Abstract: The aim of this study is to investigate the relationship among dormitory culture, college students' learning motivation, time management tendencies, and peer relationships, and to examine the impact of roommate interactions on students' academic motivation. By conducting a comprehensive review of existing literature and field research, this paper aims to elucidate the specific influence mechanisms of dormitory culture on students' learning attitudes and behavioral patterns, and to propose corresponding optimization strategies. This endeavor not only contributes to enriching and refining current educational theory but also offers a scientific rationale for the management and instructional practice in college dormitories. Furthermore, this study explores the associations between learning motivation, peer relationships, and academic performance. The research seeks to foster a healthier and more positive learning environment for college students, thereby enhancing their academic success and personal development.

Keywords: Academic performance, peer relationships, learning motivation, time management, dormitory culture.

1. Introduction

With the widespread access to higher education and the expanding demographics of college student populations, dormitories, a vital component of campus life, are increasingly significant in terms of the impact of their internal interpersonal dynamics on the personal growth and development of college students. As the linchpin of dormitory interpersonal relationships, the quality of roommate interactions directly influences the psychological well-being, behavioral patterns, and proactive behavior of college students. Consequently, a thorough examination of the influence of dormitory roommate relationships on college student initiative holds immense importance for enhancing the overall quality of college students and fostering campus harmony.

However, not all dormitory cultures have a positive impact on learning. In some cases, negative interactions within the dormitory, such as excessive recreational activities and lack of a learning atmosphere, may weaken students' learning motivation. Therefore, how to create a dormitory culture that is conducive to learning has become an issue that college administrators and educators must face.

A complex and profound connection exists between dormitory culture and college students' learning motivation. By optimizing dormitory environments and fostering positive roommate interactions, researchers can effectively augment students' learning motivation and overall

educational outcomes. Future research must delve deeper into maximizing the educational potential of dormitory life through institutional design and cultural guidance, aiming to achieve the profound developmental goals of higher education. Learning initiative pertains to the internal drive and its function that motivates students to engage in active, autonomous, and sustained learning behaviors. Cultivating students' learning initiative should be a pivotal task in contemporary university education. The purpose of this paper is to examine the relationship among peer relationships, learning initiative, and academic achievements through a literature review.

2. College Student Peer Relationships

Roommate relationship is the foundation of many new adult social environments is also one of the most important learning environments for contemporary college students, and the interpersonal relationships of college students, including dormitory interpersonal relationships, affect the physical and mental health development of students and the harmonious condition of the campus [1]. Taking "interpersonal relationship in college students' dormitory" as the search term and "subject" as the search item, as of September 9, 2024, a total of 733 documents (including doctoral and master's theses and various journals) have been retrieved from China Knowledge Network (CNKI), and a number of researchers have carried out studies based on psychological counseling methods. Research on interpersonal relationships in college students' dormitories, and some researchers have explored the problems of interpersonal relationships in college students' dormitories based on major colleges and universities.

In the investigation of college students' peer relationships, the Latitudinal Upper Scale for College Student Housemate Relationships, specifically the "Questionnaire on the Status of Interpersonal Relationships in College Students' Dormitories" developed by Zhao Xiaohong and Zhu Nan in 2019, was utilized. This questionnaire comprises 53 questions divided into three dimensions: roommates' interpersonal cognition, emotions, and behaviors. These dimensions encompass roommate cognition in interpersonal communication, emotions with friends, and behavior with others. Specifically, roommates' interpersonal perceptions span self-perception, perceptions of others, and perceptions of interpersonal relationships; the exclusion of feelings with friends involves both positive and negative emotions. Interpersonal behaviors among housemates include five key factors: communication intentions and content, interaction quality, interaction ways, dormitory rules, and conflict resolution strategies. The questionnaire employs Likert's five-point scale, ranging from 1 ("not at all compatible") to 5 ("completely compatible"), with higher scores reflecting more harmonious dormitory interpersonal relationships. This study employed a questionnaire targeting college students. Reliability of the overall questionnaire, sub-questionnaires, and individual factors was assessed using two internal consistency indicators: the split-half reliability coefficient and Cronbach's α coefficient. The α coefficient for each subscale ranged from 0.75 to 0.95, while split-half reliabilities ranged from 0.73 to 0.90, indicating high internal consistency of the questionnaire.

After the study, we discovered that, overall, interpersonal relationships in college students' dormitories are harmonious. Significant differences exist among varying genders, grades, and groups regarding these relationships. Specifically, female students exhibit superior interpersonal skills compared to male students. Freshmen and sophomores outperform juniors in this regard, and students with prior cadet experiences display better interpersonal relationships than those without. Additionally, college students from differing economic backgrounds demonstrate notable disparities in their roommates' perceptions of interpersonal interactions; affluent students significantly outperform those from less well-off backgrounds. This research indicates that college students should strive for self-improvement. From another perspective, families, higher education institutions, and society must collaborate to facilitate harmonious interpersonal interactions among college students in dormitories.

3. Relationship between Time Management Tendencies and Learning Initiative

In the realm of contemporary higher education, educational researchers have focused on the academic achievement and learning motivation of college students. The concept of "learning initiative" pertains to the internal motivation system and its role in prompting students to engage in learning behaviors actively, autonomously, and persistently. Under the influence of subject consciousness, students consciously and voluntarily participate in learning activities, exhibiting hidden attitudes and behavioral tendencies that are not forced, reluctant, or passive; rather, they are conscious, positive, and active. Nowadays, fostering students' initiative in learning ought to be a pivotal task in university education [2]. Notably, a significant difference exists solely in the factor of learning self-control among students of varying grades, with freshmen demonstrating superior self-control compared to sophomores and juniors. Regarding the total score, significant differences are evident among students of different grades, particularly between sophomores and juniors, where juniors exhibit higher initiative than sophomores [3].

Moreover, in the 2010 survey on academic performance of college students conducted by Yingjia, utilizing the "Self-assessment Scale of College Students' Learning Initiative" specifically targeting the learning initiative dimension, this questionnaire comprises a total of thirty items, divisible into seven factors, such as attribution of learning and learning awareness. Ultimately, the items were randomized, and the questionnaire was scored using a Likert 5-point scale, ranging from "fully compliant" (5 points) to "not at all compliant" (1 point), with 4 and 3 points in between. Higher scores indicate a closer alignment with the participant's actual situation (contrary to reverse scoring). Higher questionnaire scores signify greater learning motivation and stronger active learning willingness, whereas lower scores reflect lesser active learning inclination, not an absence of learning. Subsequently, this questionnaire was developed into the definitive college students' learning initiative questionnaire. Initially, reliability testing was conducted. The study emphasizes homogeneity and split-half reliability to assess questionnaire reliability. Homogeneity reliability, or internal consistency, assesses whether scales measure a singular construct, typically evaluated using Cronbach alpha coefficients: ≥ 0.90 indicates high reliability; ≥ 0.80 , good reliability; ≈ 0.70 , average reliability; < 0.60 , requires revision. For the pilot study of the Self-Assessment Scale of College Students' Learning Initiative, factor reliability coefficients ranged from 0.6 to 0.8, with the total scale exceeding 0.8, suggesting good reliability. Split-half reliability, another common test, measures item internal consistency. The five factors of the scale exhibited half-confidence coefficients of 0.60 to 0.78, with the total scale at 0.82, indicating good reliability. College students' learning initiative encompasses five aspects: learning attribution, sense of learning meaning, learning maintenance, learning adjustment, and sense of learning efficiency. These aspects include cognitive (sense of learning significance), motivational (learning attribution), behavioral (learning maintenance and adjustment), and metacognitive (sense of learning efficiency) components.

College students' scores on learning initiative and its five factors resided at the average level, exhibiting relatively elevated scores on learning attribution and sense of learning significance, while the factor of learning maintenance garnered the lowest scores. Significant differences were observed among students in the high and low groupings of learning initiative, except for the factor of learning maintenance, which showed no significant variance. Notable disparities emerged between students of different genders in terms of learning initiative, learning maintenance, and learning adjustment factors, with female students outperforming male students. Moreover, significant differences were evident between students of various disciplines in learning maintenance factors, specifically with science and engineering students scoring significantly higher than those in literature and history. Students who served as school (college) level cadres demonstrated significantly higher scores than those who never held such positions in learning initiative, learning attribution, sense of meaning, and

learning adjustment factors. Conversely, students without cadre experience scored significantly higher in learning adjustment factors alone, whereas those without cadre experience scored significantly higher in learning initiative, learning attribution, and sense of meaning. School (college) level cadres scored notably higher than non-cadres and also significantly outperformed class cadres in the factor of study adjustment. Students who received provincial and ministerial level awards or higher scored significantly higher on study maintenance and sense of study efficiency compared to those who received school-level awards or no awards.

College students' scores on time management tendency and its component factors all lie within the average range. Specifically, the ranking of these factors, based on scores from highest to lowest, is as follows: the sense of time value, the sense of time efficacy, and the perspective of time monitoring. Notably, a significant discrepancy in scores on the sense of time value is observed among students of varying disciplines. Students pursuing majors in literature and history (including management and art) exhibit notably higher scores on the sense of time value compared to those in science and technology fields. Additionally, students in literature and history have two factors—the perspective of time monitoring and the sense of time efficacy—that enter the regression equation pertinent to the survival and development of time in both individual and societal contexts. Regression Analysis of College Students' Motivation to Pursue Success on Learning Initiative and Time Management Tendency In the regression analysis examining the impact of college students' motivation to pursue success on their learning initiative, motivation to pursue success demonstrates a significant predictive effect on learning initiative and its five constituent factors. Likewise, in the regression analysis assessing the influence of motivation to pursue success on time management tendency, it exhibits a significant predictive effect on time management tendency and its three dimensions. Conversely, in the regression analysis exploring the effect of time management tendency on motivation to pursue success, two factors—the perspective of monitoring and control of time and the sense of time efficacy—enter the regression equation (b).

The significance of the mediating effect of time management tendency between success-seeking motivation and learning initiative was established. Linear structural relationship tests and maximum likelihood estimation path analysis revealed that success-seeking motivation not only directly and significantly positively influences learning initiative, but time management tendencies also mediate this relationship.

The results of the current research on learning initiative are mainly from the qualitative analysis to ensure the quality of teaching, improve the quality of students, etc., and are more concerned about how teachers set the classroom procedures, and what kind of teaching strategies are used to stimulate students to actively construct knowledge. From qualitative to quantitative is the development trend of China's learning initiative research in recent years, some scholars have explored the initiative of secondary school students in mathematics learning through self-administered questionnaires, the initiative of junior high school students in learning and the status and characteristics of active learning of college students, but the existing empirical research results are relatively thin, and the research tools are rarely with scientific measurement indicators. Therefore, this study intends to develop a measurement tool with reasonable reliability and validity on the basis of exploring the structure of college students' learning initiative.

In addition, the correlation between time management tendency—defined as individuals' psychological and behavioral characteristics in perceiving time's function and value and their approach to time utilization—and its associations with academic performance and learning attitude has garnered substantial attention from global scholars in recent years. Analysis of research findings reveals a notable positive correlation between academic performance and time management tendency; factors including motivation and learning attitude also exhibit a positive correlation with time management tendency. Motivational factors predominantly influence academic performance,

whereas time management tendency impacts academic achievement via motivation, attitude, and other variables. Most existing studies have individually examined the correlations between these factors, posing challenges in synthesizing conclusions. Moreover, there is a significant dearth of research on the relationship among learning initiative, time management tendency, and achievement motivation, as well as the underlying mechanisms of their interactions. Thus, this study will comprehensively evaluate the relationship among learning initiative, time management tendency, and achievement motivation at the individual level, which is pivotal for understanding the internal influence mechanism of individual learning initiative. Consequently, this investigation possesses substantial theoretical and practical significance for gaining insights into the internal mechanisms of individual learning initiative and subsequently adopting effective measures to augment it.

4. The Impact of College Students' Peer Relationships on College Students' Academic Performance

With the rapid advancement of information technology and widespread adoption of network environments, notable transformations have occurred in the learning paradigms and living conditions of college students [4]. Specifically, the evolution of dormitory culture has profoundly influenced college students' academic motivation. The dormitory is not only the primary locale for students' daily routines but also a crucial setting for their academic and emotional exchanges. Thus, investigating the correlation between dormitory culture and academic motivation is of significant theoretical and practical importance for enhancing college students' academic achievement and fostering their holistic development.

College Years: The Golden Age for Accumulating Knowledge and Critical Life Stage Development. As a crucial indicator of student learning quality [5], learning initiative demonstrates robust correlations with students' persistence, academic satisfaction, achievement, and completion [5]. It exerts a positive influence on university students' academic performance and long-term future outcomes [6], encompassing higher education aspirations, consistent learning behaviors, improved employment prospects, positive self-awareness and well-being, and mitigated depressive symptoms [7]. Recent studies have shown that a favorable dormitory culture can significantly enhance students' motivation.

In this cultural atmosphere, active interaction among housemates not only promotes the sharing of knowledge, but also stimulates each other's interest and enthusiasm in learning. For example, when housemates discuss academic issues, such exchanges often lead to in-depth thinking, which in turn improves the efficiency and quality of learning. In addition, study groups formed among housemates can supervise each other and set study goals together, thus effectively improving the durability and systematization of learning [8]. However, not all dormitory cultures have a positive impact on learning. In some cases, negative interactions within the dormitory, such as excessive recreational activities and lack of a learning atmosphere, may weaken students' motivation to learn. Therefore, how to create a dormitory culture that is conducive to learning has become a problem that college administrators and educators must face.

The current research findings on learning initiative primarily derive from qualitative analysis, aiming to ensure teaching quality, enhance student quality, etc., with a particular focus on teachers' classroom procedure settings and the teaching strategies employed to stimulate students' active knowledge construction. The recent trend in China's learning initiative research has shifted from qualitative to quantitative approaches. Some scholars have utilized self-administered questionnaires targeting middle school students' mathematics learning initiative to explore the active learning statuses and characteristics of junior high school and college students. However, empirical research results are currently scant, and research tools infrequently incorporate scientific measurement indicators.

When analyzed in detail, the data revealed significant differences in class climate, peer relationships, and academic achievement across grade levels. Further post hoc analyses indicated that freshmen scored significantly higher than sophomores, juniors, and seniors on class climate; significantly higher than juniors and seniors on academic achievement; and significantly higher than seniors on peer relationships. These three variables exhibited consistent trends across grade levels, supporting the mediation effect model. As the primary vehicle of college students' academic life, class atmosphere not only offers a conducive environment but also provides psychological support. In cases of peer conflict or negative emotions, class support facilitates the overcoming of such emotions and the restoration of positive peer relationships.

5. Conclusion

Peer relationships exhibited a significant positive correlation with class climate and academic achievement; class climate significantly and positively predicted peer relationships, while peer relationships, in turn, significantly and positively predicted academic achievement. Peer relationships fully mediated the relationship between class climate and academic achievement. Class climate, peer relationships, and academic achievement were significantly different by grade level, and all three variables varied in the same direction by grade level, supporting the mediated effects model. In the existing literature, there are relatively few studies that directly explore the effects of dormitory roommate relationships on college students' learning motivation. Many current scholarly articles have examined the significance of roommate relationships among college students and their correct management from diverse perspectives, yet they remain unconnected to learning initiative. Most studies have concentrated either on analyzing the present status of dormitory relationships or on the influencing factors of learning initiative, without integrating the two. Regarding the mechanism of action, it remains unclear how dormitory roommate relationships influence college students' learning motivation. For instance, does dormitory relationship tension result in decreased study motivation? Does a positive dormitory atmosphere foster students' learning initiative? These inquiries necessitate further exploration. In terms of interventions, there is a scarcity of specific measures and strategies to improve dormitory relationships in order to enhance college students' learning motivation. This research endeavors to investigate the impact of dormitory relationships on college students' learning motivation and its underlying mechanism, thereby providing a theoretical foundation and developing effective interventions.

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