Motivational beliefs and self-regulated learning strategies among Chinese college students

Nana Fu[1]*, Jose Ma W. Gopez[2]
[1, 2] Graduate School, Angeles University Foundation, Angeles City, Philippines
*Corresponding Author email: *fu.nana@auf.edu.ph*

Abstract

Aim: This study aimed to explore the relationship between the motivational beliefs and self-regulated learning strategies in a selected university in Jiangsu, China.

Methodology: Descriptive-correlational quantitative research design was utilized in the study to describe the variables and their relationships. A random sampling was employed to determine the sample size. 617 Chinese college students participated in the study. All collected data were analyzed using Spearman's rho for correlation.

Results: The results of the study revealed the Chinese college students' motivational beliefs were positively correlated with their self-regulated learning strategies.

Conclusion: The significant relationship between motivational beliefs and self-regulated learning strategies among college students in China highlighted the importance of understanding motivational factors in shaping students' learning behaviors and academic outcomes.

Keywords: motivational beliefs, self-regulated learning strategies, Chinese college students

INTRODUCTION

Motivational beliefs and self-regulated learning (SRL) strategies are the key factors affecting learning. Exploring the connection between these factors in the learning environment can impact their academic achievement. In the era of knowledge economy, the explosive growth of knowledge makes the change of knowledge faster, and the traditional teaching mode based on knowledge transmission may not be effective in meeting the needs of the era of talent development (Tong et al., 2022). Therefore, learning motivational beliefs affect students' commitment and effort in learning (Amihan & Sanchez, 2023; Dizon & Sanchez, 2020). In the current society, the formation of students' learning motivation and belief is often faced with the balance of external pressure and internal demand.

Higher education should empower the students to develop their individual abilities and help them achieve personalized growth (Salendab & Sanchez, 2023; Sanchez, 2023; Sanchez & Sarmiento, 2020). The biggest disadvantage of this model is that students' autonomy is difficult to play and display. Later, with the popularization of the learner-centered model, the subjectivity of college students in classroom teaching began to attract people's attention, and the status of the subject began to appear. This change undoubtedly lays a foundation for the improvement of college students' SRL ability. Consciousness is the pioneer of action, and self-learning consciousness is the premise of students' learning behavior. Under the guidance of self-learning awareness, college students can continue to take the initiative to learn in the rapidly changing society, maintain their competitive advantage through learning and meet the social needs of lifelong learning.

With the advent of the scientific and technological revolution in the 21st century, offline teaching methods have been widely used in class and have had a profound impact on students' learning (Sanchez, et al., 2022). In this case, college students must have some degree of autonomy. Learning ability actively excavates network learning resources, learning to use them for themselves to be eliminated by society. On the other hand, some students may be more enthusiastic about their internal needs, and they may be passionate about the professional field and pursue the satisfaction of the knowledge. This inner learning motivation belief also helps students understand knowledge deeper and engage in learning more persistently.

SRL allows individuals to cultivate clear goals, prioritize quality of life, and grow through SRL. This type of learning requires effective self-management, planning, awareness, and self-actualization. SRL abilities are important standards to measure whether an individual has learned to learn, and it is also the core quality to judge whether an individual has real development potential. It has a profound influence in the process of talent training. At the same time, the level of SRL ability also indicates the possibility of individual development.

De Silva (2020) believes that the improvement of SRL ability is conducive to improving the learning skills level of college students and realizing comprehensive development. However, there are various challenges in the classrooms for the students. The pressure of examination education gives students full freedom after the college entrance examination. Freed from the structure of school and facing the pressure of uncertain futures, many college students find it difficult to adjust to the absence of daily teacher supervision and peer comparisons, hindering their transition to SRL. Therefore, the teaching force of schools should pay more attention to stimulating students' motivation to encourage students to actively explore and discover their own interests and realize their own development and progress. In addition, the cultivation of SRL ability is also conducive to realizing the educational goal of professional ethics training.

By cultivating students' motivational beliefs and SRL strategies, they can become active agents of progress in a constantly evolving world. Various studies focused on predictors of students' motivation and self-regulation. Thus, the aim of this study was to examine the relationship between the motivational beliefs and SRL strategies of Chinese students in their learning process.

Objectives

The aim of the study was to examine the relationship between the motivational beliefs and SRL strategies among college students in a selected university in Jiangsu, China.

a. To describe the profile of the respondents in terms of:
1. age;
2. gender;
3. socioeconomic background;
4. school/college.
b. To determine the motivational beliefs of the respondents in terms of:
1. self-efficacy;
2. intrinsic value;
3. test anxiety.
c. To determine the self-regulated learning strategies of the respondents in terms of:
1. cognitive strategy use;
2. self-regulation.
d. To identify whether a significant relationship exists between the respondents' motivational beliefs and self-regulated learning strategies.

Review of Related Literature

Key concepts such as self-efficacy and intrinsic value have emerged as driving forces behind students' engagement and academic performance. While high self-efficacy fosters resilience and goal-setting, intrinsic value fuels students' internal motivation. However, challenges like test anxiety and the lingering influence of exam-oriented education in China necessitate a holistic approach to cultivate SRL abilities. Addressing these complexities requires educators to empower students with effective cognitive strategies and self-regulation skills, fostering a learning environment conducive to lifelong growth and success.

Motivational Beliefs

Learning motivation and SRL ability have always been the critical issues in the field of education. Since entering modern society, with the spread of western humanism, the teacher-led teaching in a traditional classroom has been criticized. Scholars have emphasized the subjectivity of students in teaching. Therefore, the related studies on self-directed learning began to gradually increase. Self-directed learning motivation beliefs are an intrinsic driving force for students' participation in learning activities, covering confidence in learning tasks, and intrinsic values about learning goals. Research in this area has focused on the two key concepts- self-efficacy and intrinsic value. Self-efficacy is an individual's sense of confidence in successfully completing a specific task. It is closely related to student

Thank you for embracing the culture of research with us!

academic performance, subject selection, and continuous effort. The study by Hayat et al. (2020) indicates that student self-efficacy has a significant impact on academic performance, and that students with high self-efficacy were more likely to set positive learning goals and better cope with learning problems.

1. Self-Efficacy

Studies have shown that students with high self-efficacy are more likely to overcome difficulties in learning and are more willing to set specific, achievable learning goals. They are also more positive when facing learning challenges. Thus, there is a significant positive correlation between students' confidence in their success on a specific task and their academic performance. Students with high self-efficacy are more likely to achieve better academic performance. Students with high self-efficacy tended to set positive learning goals. They are more likely to set challenging but achievable goals because they believe in their ability to overcome difficulties. Students with high self-efficacy are more likely to adopt active and effective strategies to cope with problems when faced with difficulties or challenges. They are better able to deal with learning problems and remain motivated to learn.

These findings highlight the importance of self-efficacy in shaping students' learning behavior and academic performance. High self-efficacy was associated not only with better academic performance, but also with active learning goal setting and the ability to cope with learning difficulties. Thus, educators and educational policy makers can promote a positive learning experience and better academic achievement by enhancing student self-efficacy.

2. Intrinsic Value

Self-determination theory says that when students see what they learn as relevant to their interests, needs, and values, their motivation to learn becomes more internal and driven by those very desires. This means their own values directly fuel their enthusiasm for learning. Secondly, values are linked to academic motivation because the value and attractiveness of a discipline depend not only on cognitive factors (such as the importance of knowledge) but also on emotional factors (such as interest and fun), which is a combination of cognitive and emotional factors. In their self-determination theory (1985), Edward Deci and Richard Ryan emphasized the role of inner values in stimulating students' inner motivation. Moreover, the study of Filgona et al. (2020) further supported this theory, emphasized that stimulating students' interest in the subject impacts long-term enthusiasm for learning. Cultivating subject interest improves students 'desire for knowledge and maintains students' long-term investment in the subject and learning motivation. Students' interest in the subject helps improve their academic motivation, which in turn has a positive impact on academic performance. Interest-driven learning is often accompanied by deeper learning and higher-quality academic achievement. These findings highlight the importance of the intrinsic values of the subject and student interest in the subject for academic motivation and performance. In educational practice, educators can create a teaching environment to stimulate students' interest in subjects and encourage students to connect the subject content with their interests and values to cultivate a more lasting learning motivation.

During the 1990s, the rise of quality-oriented education, the growing emphasis on student-centered learning, and the focus on SRL abilities in China led to the emergence of SRL as a major research area in education. In recent years, with the deepening of education reform and quality-oriented education, the research on SRL has become more systematic and comprehensive. Many scholars have further explored the improvement of self-directed learning ability from different research perspectives. Chen (2012) proposes that educational reform can pave the way for stronger SRL in college students. By guiding them to clarify their goals and master specific cognitive strategies, we can empower them to become more effective learners.

Shi (2017) highlights research system leadership as a key strategy for nurturing students' SRL. This strategy involves training guidance, building strong network resources, active mentoring, and refining the evaluation system. These measures create a sustainable mechanism to enhance students' SRL skills and boost their network-building abilities. Li (2017) mainly discussed how to cultivate students' SRL abilities in the new media environment. The results show that by improving the students' level of social cognition, optimizing the allocation of environmental resources, strengthening the school support service, changing the learning atmosphere, strengthening teachers' process guidance and teaching supervision and evaluation, the self-drive of current college students can improve SRL abilities.

3. Test Anxiety

Test anxiety remains a prominent concern in educational psychology, with recent studies shedding light on its multifaceted impact on students' cognitive functioning, emotional well-being, and academic performance. Johnson

Thank you for embracing the culture of research with us!

et al. (2019) elucidated the detrimental effects of heightened test anxiety on students' self-regulation processes, highlighting maladaptive strategies such as avoidance behaviors and surface-level information processing. Li et al. (2021) conducted a comprehensive meta-analysis, affirming the consistent association between test anxiety and deficits in self-regulated learning across various educational contexts. Their findings underscored the pervasive nature of test anxiety's influence on students' academic outcomes, emphasizing the importance of targeted interventions to enhance self-regulation skills and mitigate its adverse effects. Moreover, Chang et al. (2023) demonstrated the efficacy of mindfulness-based interventions in alleviating test anxiety and bolstering students' self-regulation abilities, offering promising avenues for supporting students' academic success in the face of test-related stressors.

SRL Strategies

Based on the constructivist perspective, Boekaerts (1991) suggested that learning autonomy involves subjective initiative, situational and social interaction, and self-regulation and self-reflection. Building on this idea, Winne (Simons, 2006) described autonomous learning as a process in which learners continually construct themselves and ultimately decide their own development direction. Similarly, Ding (2006) explained that autonomous learning is the volitional control process of learners in learning activities, based on the results of self-regulation of volitional behavior. Zimmerman (1989) provided a more comprehensive definition of SRL, stating that it is a process of students' metacognition, motivation, and behavior. This definition was also acknowledged by Chen Hongyu (2010) and has been widely accepted and adopted by researchers both domestically and internationally.

1. Cognitive Strategy Use

Foreign studies have a strong theoretical basis for SRL, which is based on numerous domestic and foreign literature reviews. These studies concentrate on cognitive psychology, social cognition theory, and other perspectives. They also explore the meaning and mechanism of autonomous learning and suggest various autonomous learning models, which provide a comprehensive perspective for its theoretical framework. However, there are few empirical studies abroad that focus on the measurement of self-regulatory learning strategies and their impact on academic performance. Conducted through a questionnaire survey and on-site observation, various self-regulation strategies students use was also identified. The researchers found that independent learning is a process in which students actively master the learning direction, method, and rhythm. In this process, self-drive is the intrinsic force that drives the individual's continuous learning. To better realize self-directed learning, students need to adopt self-regulation learning strategies, including cognitive strategy use and self-regulation. Cognitive strategies are the methods and techniques that students adopt when acquiring, processing, and storing information. In self-directed learning, the use of cognitive strategies is crucial to improve learning outcomes. For example, students can use cognitive strategies such as key marking, generalization, and induction to better understand and memorize knowledge. Studies have shown that the use of effective cognitive strategies is closely related to the improvement of academic performance and the cultivation of self-drive (Pintrich & De Groot, 1990).

2. Self-Regulation

Self-regulation refers to the process in which students monitor, adjust, and control their behavior, emotions, and cognition during the learning process. Self-regulation includes goal setting, plan setting, time management, task monitoring and many other aspects. Through self-regulation, students can better adapt to the difficulty of learning tasks and adjust learning strategies to improve efficiency, thus improving students' self-drive and academic performance (Zimmerman, 2000).

Autonomous learning and self-drive are complementary, and self-regulation learning strategies are bridges and catalysts (Oates, 2019). Cognitive strategy use provides students with more flexible and efficient learning tools to help them better understand and apply knowledge. Self-regulation, based on students' internal driving force, guides them to learn more purposefully and improve their learning effect.

Foreign studies have highlighted the strong theoretical foundation of SRL, which mainly involves cognitive psychology, social cognition theory, and other perspectives. They discuss the meaning and mechanism of autonomous learning and suggest various autonomous learning models, which provide a comprehensive perspective for its theoretical framework. However, there are relatively few empirical studies abroad that focus on the measurement of self-regulatory learning strategies and their impact on academic performance. Through questionnaire surveys and on-site observations, researchers have identified the different self-regulation strategies adopted by students and have initially explored the relationship between these strategies and academic performance.

Thank you for embracing the culture of research with us!

For educators, it is crucial to pay attention to the students' SRL and their cultivation of self-drive. Educators can promote students to better realize self-directed learning by stimulating their interest, encouraging them to set clear learning goals, and teaching the use of cognitive strategies and developing self-regulation skills. Self-directed learning and self-drive are the cornerstones of lifelong learning, while self-regulation learning strategies are the key tools to achieve both. This integrated learning framework helps students to achieve better in a changing learning environment and to be fully prepared for future professional and academic challenges.

Synthesis

Comprehensive studies show that self-learning motivational beliefs, especially self-efficacy, and intrinsic values, have profound effects on students' learning motivation and academic performance. High self-efficacy and the perception of the intrinsic value of the subject can help encourage students to participate more actively in learning activities. However, examination anxiety as a negative emotional experience may suppress the students' motivation for learning and influence their academic performance. Therefore, educators and researchers should pay attention to how to improve students' motivation for SRL and find effective ways to reduce test anxiety to create a learning environment more conducive to students' development.

In the era of scientific and technological revolution, the rapid development of information technology is profoundly affecting the study and life of college students. As the main auxiliary tool for college students' SRL, electronic products bring convenience to college students' learning, but they also bring many bad temptations, which hinder the smooth development of college students' SRL. In addition, students lack confidence in their own learning and have a low sense of self-achievement. The ideal learning effect plays a positive role in promoting the student's learning, but in practice, the effort is not always proportional to the rewards. If college students do not have enough self-regulation ability in the face of failure, they are prone to negative emotions such as depression and even self-doubt, lose confidence in learning, and even have different degrees of learning anxiety. From the above aspects, learning motivation belief and self-regulation learning complement each other, and there is a close relationship between the two. Good learning motivation and beliefs can motivate students to study more actively and independently.

METHODS

Research Design

Descriptive-correlational quantitative research design was utilized in the study to describe the variables and their relationships. This design delineates the variables under examination and their interrelationships. The quantitative research methodology is employed to procure numerical data and formulate generalizations across diverse cohorts or explicate particular phenomena. Hence, this methodological approach is deemed appropriate to underscore the reliance on objective measurements and the utilization of statistical, mathematical, or numerical analyses in data interpretation.

Study Participants

The study participants were 617 college students from different departments in a selected university in Jiangsu, China. This study used a random sampling method to conduct a survey. The population size of the school was around 16,000 students. Through the Raosoft calculator, the sample size was at least 376 students.

Inclusion and Exclusion Criteria

For inclusion criteria, respondents should be: 1). over 18 years old, 2). Chinese citizens, and 3). currently enrolled in a selected university in Jiangsu, China. For exclusion criteria, a respondent should not be 1). a part-time student (less than four subjects), 2). with medical or psychological conditions, and 3). conflicting interests with the researchers.

Study Instrument

The Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich and De Groot (1990) was developed with 44 items to assess student motivational beliefs and SRL strategies. It consists of 5 scales; self-efficacy (alpha = .92), intrinsic value (alpha = .92), test anxiety (alpha = .85), cognitive strategy use (alpha = .94) and self-regulation (alpha = .92). The items were answered using a 7-point Likert scale (1 = not at all true of me to 7 = very true of me). The first three scales cover the motivational components while the last two scales cover the SRL components.

The score was interpreted by computing their means and standard deviations (SD) on each item. The tool was adapted in this study.

Procedures

Permission from the school administrator/head to conduct the study via online survey was sought by writing a fomal letter. The letter included a general description of the study's nature and purpose, along with the ethics clearance certificate once it was granted by the Ethics Review Committee of Angeles University Foundation. The students were recruited through the help of the department heads of the school. Additionally, the informed consent form, demographic information, and research questionnaires for data collection purposes were appended in the letter. The informed consent form sought the respondent's permission to complete the survey questions, which would take approximately 8-10 minutes of their time. The questionnaires were translated into Mandarin.

Statistical Analysis of Data

The researcher utilized the jamovi project (2023) version 2.3 to analyze the gathered quantitative data. The profile of the respondent was described in terms of sex, age, school/collge, and socioeconomic background. For the descriptive statistics, the mean and standard deviation of respondents' motivational beliefs and SRL strategies were reported using the research instruments. For the inferential statistics, Spearman correlation was performed to analyze the collected data if there is a significant relationship between the respondents' motivational beliefs and SRL strategies.

Ethical Considerations

The researcher ensured strict adherence to ethical principles in conducting the research. Approval was obtained from the Ethics Review Committee at Angeles University Foundation, guaranteeing no conflict of interest. Prior to participation, respondents provided informed consent including demographic details via online survey. Privacy and confidentiality of data were maintained, with voluntary participation emphasized and the option to withdraw at any time without consequence. Respondents' identities remained anonymous throughout the study, with data used solely for the intended purpose and treated confidentially. Moreover, no data alterations were made.

RESULTS AND DISCUSSIONS

The present study examined the relationship between motivational beliefs and SRL strategie among Chinese college students. The findings revealed significant insights into the dynamics of learning motivation and SRL in the context of education.

Profile of the Respondents

The total sample size of the study was 817 college students. The mean of their age was 20 (see Table 1). There were 16 schools/colleges who partake in the study (see Table 2). In terms of gender, 50.3% were female, while 49.7% were male (see Table 3). Regarding the socioeconomic background, 34% belonged to the high category; 32.4% to the middle category; and 33.5% to the low category (see Table 4).

Table 1. Descriptive Statistics of the Age of the Respondents

	Mean	SD
Age	20	1.42

Table 2. Distribution of the Respondents by School/College

Major	Frequency	Percentage
School of Marine Science and Fisheries	51	6.2%
College of Marine Technology and Surveying	52	6.4%
School of Marine Engineering	51	6.2%
School of Civil and Harbor Engineering	51	6.2%
School of Engineering	51	6.2%
School of Electronic Engineering	50	6.1%
School of Environmental and Chemical Engineering	51	6.2%

238

ETCOR's Website : https://etcor.org
Facebook Page : https://www.facebook.com/EmbracingTheCultureOfResearch
Twitter Account : https://twitter.com/ETCOR_research
YouTube Channel : https://tinyurl.com/YouTubeETCOR
E-mail Address : embracingthecultureofresearch@etcor.org
Mobile Number : 0939-202-9035

Thank you for embracing the culture of research with us!

School of Food Science and Engineering	50	6.1%
School of Computer Engineering	51	6.2%
College of Pharmacy	50	6.1%
School of Science	51	6.2%
School of Business	51	6.2%
School of Grammar	52	6.4%
School of Foreign Language	52	6.4%
College of Art Design	51	6.2%
School of Physical Education	52	6.4%
Total	617	100

Table 3. Distribution of the Respondents by Gender

Gender	Frequency	Percentage
Male	406	49.7
Female	411	50.3
Total	817	100

Table 4. Distribution of the Respondents by Socioeconomic Status

Gender	Frequency	Percentage
High	278	34
Middle	265	32.4
Low	274	33.5
Total	817	100

Descriptive Statistics of the Self-efficacy, Intrinsic Value, and Test Anxiety

Table 5 reveals the mean and standard deviation (SD) of the three sub-facets of the respondents' motivational beliefs. Their average score on their self-efficacy was 4.51 (SD=1.47); intrinsic value was 4.53 (SD=1.48); and test anxiety was 4.53 (SD=1.54) (see Table 5). This may suggest that college students with high test anxiety could still have a high self-efficacy and the intrinsic value. However, the study of Maier et al. (2021) showed that test anxiety is negatively correlated with self-efficacy.

Table 5. Descriptive Statistics of the Self-efficacy, Intrinsic Value, and Test Anxiety

Variables	Mean	SD
Self-efficacy	4.51	1.47
Intrinsic Value	4.53	1.48
Test Anxiety	4.52	1.54

Descriptive Statistics of the Cognitive Strategy Use and Self-Regulation

Table 6 presents the mean and SD of the two sub-facets of the respondents' SRL strategies. Their mean on their cognitive strategy use was 4.53 (SD=1.45) and self-regulation was 4.55 (SD=1.45). This may indicate that Chinese college students have an above average level of SRL strategies. In the study of Dörrenbächer and Perels(2016), it was found out that undergraduate students with moderate and motivated SRL profile tend to regulated their learning.

Table 6. Descriptive Statistics of the Cognitive Strategy Use and Self-Regulation

Variables	Mean	SD
Cognitive Strategy Use	4.53	1.45
Self-Regulation	4.55	1.45

Thank you for embracing the culture of research with us!

Correlation and Internal Consistency

Table 7 and 8 reports the results of the correlation and Cronbach alpha value of the total sample of the study variables. All scales revealed good internal reliabilities (see Table 8). Also, Spearman correlation analysis was conducted to determine the relationship between Chinese college students' motivational beliefs and SRL strategies. Their motivational beliefs and SRL strategies were positively related (r=.62, p=.001) (see Table 14). The observed relation of the study variables may imply that Chinese college students with high motivational beliefs are most likely to regulate their learning processes. In the study of It was concluded that freshman students who value their education and have confidence in their abilities are more likely to demonstrate a higher level of academic performance through SRL.

Table 7. Correlation of Motivational Beliefs and SRL Strategies

	r	p
Motivational Beliefs and SRL Strategies	.62	<.001

Note. N=817

Table 8. Cronbach Alpha Value of Motivational Beliefs and SRL Strategies

	Motivational Beliefs	*SRL Strategies*
Cronbach Alpha Value	.966	.965

Note. N=817

Motivational beliefs, including self-efficacy, intrinsic motivation, and goal orientation, significantly influence students' engagement and persistence in learning tasks (Pintrich & De Groot, 1990). In the Chinese educational context, where academic achievement is highly esteemed, students' beliefs about their capabilities and the value they place on learning play a pivotal role in shaping their learning behaviors (Li, 2020). For instance, students with high self-efficacy beliefs are more likely to exert effort and persevere in the face of challenges, thereby adopting effective self-regulated learning strategies (Zimmerman, 2000).

SRL strategies encompass a myriad of cognitive, metacognitive, and motivational processes that students utilize to manage their learning (Zimmerman, 2000). These strategies include goal setting, time management, metacognitive monitoring, and self-evaluation, which enable students to regulate their cognition, motivation, and behavior in achieving academic success (Zimmerman, 2000; Wang et al., 2017). In the Chinese educational context, where students often face intense academic pressure and competition, the cultivation of effective self-regulated learning strategies is indispensable for academic achievement and personal growth (Li, 2020).

The relationship between motivational beliefs and self-regulated learning strategies among Chinese college students in China is intricate and dynamic. Research suggests that students' motivational beliefs influence the adoption and utilization of self-regulated learning strategies, while the enactment of these strategies, in turn, shapes students' motivational beliefs and academic outcomes (Li, 2020; Wang et al., 2017). For example, students with high intrinsic motivation are more likely to engage in deep-level processing and elaborative rehearsal strategies, leading to better understanding and retention of course materials (Pintrich & De Groot, 1990). Moreover, students who perceive a strong sense of autonomy and competence are more inclined to set challenging goals and persist in the face of difficulties, thereby enhancing their self-regulated learning capabilities (Deci & Ryan, 2000).

Understanding the significant relationship between motivational beliefs and SRL strategies holds profound implications for educational practices in China. Educators and policymakers should strive to create a supportive and conducive learning environment that fosters students' intrinsic motivation, self-efficacy, and mastery goals (Li, 2020). This can be achieved through the implementation of learner-centered pedagogical approaches, such as inquiry-based learning, collaborative problem-solving, and formative assessment, which empower students to take ownership of their learning and develop adaptive self-regulated learning strategies (Wang et al., 2017). Additionally, educators should provide timely feedback, scaffolding, and resources to scaffold students' motivational beliefs and self-regulated learning processes, thereby promoting academic success and lifelong learning (Deci & Ryan, 2000).

Conclusion

The significant relationship between motivational beliefs and SRL strategies among college students in China underscores the importance of understanding motivational factors in shaping students' learning behaviors and academic outcomes. It is evident that motivational beliefs play a crucial role in influencing Chinese college students'

engagement and persistence in learning tasks. Similarly, self-regulated learning strategies are fundamental for Chinese college students to manage their learning effectively.

These findings highlight the need for educational manager to adopt a good understanding of motivational beliefs and SRL strategies when designing interventions and support systems for Chinese college students. Interventions and programs should be tailored to address individual differences in motivational orientations and learning preferences. Moreover, educational institutions should prioritize the cultivation of a supportive and autonomy-supportive learning environment that fosters students' intrinsic motivation, self-efficacy, and adaptive SRL strategies. By integrating learner-centered pedagogical approaches and providing personalized feedback and scaffolding, educators can empower Chinese college students to take ownership of their learning and develop lifelong learning skills. The significant relationship between motivational beliefs and SRL strategies among college students in China underscores the importance of adopting a holistic approach to student support and development. By acknowledging individual differences and leveraging evidence-based practices, educators and policymakers can empower Chinese college students to thrive academically and achieve their full potential in an increasingly competitive global landscape.

Recommendations

Further research endeavors may consider longitudinal studies to explore the developmental trajectories of motivational beliefs and SRL strategies among Chinese college students. By conducting longitudinal research, different insights may be gained into how motivational beliefs and SRL strategies evolve over time and their impact on academic outcomes. In addition, longitudinal studies can explore the dynamic interplay between motivational factors, demographic characteristics, and socio-cultural influences on students' learning behaviors and academic achievement. Moreover, researchers may conduct program evaluations to assess the effectiveness of interventions designed to enhance students' motivational beliefs and SRL strategies. By evaluating intervention programs, best practices and evidence-based strategies for promoting student motivation and SRL in diverse educational contexts will be examined. In addition, comparative studies across different cultural contexts can shed light on the universality and cultural specificity of motivational beliefs and SRL strategies. By comparing the various experiences of Chinese college students with their counterparts in other cultural settings, the unique socio-cultural factors that shape students' motivational orientations and learning behaviors will be uncovered. Ultimately, future researchers may strive to advance the theoretical understanding of motivational beliefs and SRL strategies and inform evidence-based practices to support student success in higher education.

The school administrators may propose curricular activities and programs that develops the motivational beliefs and SRL strategies of college students. Also, faculty members must be also equipped with necessary skills by attending seminars and training, fostering motivations and SRL.

REFERENCES

Abdala, U., & Alemu, Y. (2023). Assessing the Relationship between Motivational Beliefs, Self-Regulated Learning Strategies, and Academic Performance of Freshmen Students. *Longdom*. https://doi.org/10.35248/2469-9837.23.10.313

Amihan, S. R., & Sanchez, R. D. (2023). Connecting Workplace Literacy Gaps through Innovative Academe-Industry Collaboration. *International Journal of Open-access, Interdisciplinary and New Educational Discoveries of ETCOR Educational Research Center (iJOINED ETCOR), 2*(2), 515-528.

Azevedo, R., & Cromley, J. G. (2004). Does training on self-regulated learning facilitate students' learning with hypermedia? *Journal of Educational Psychology, 96*(3), 523-535.

Chang, S. H., Chen, Y. C., & Lee, L. C. (2022). Mindfulness-based interventions for reducing test anxiety: A systematic review and meta-analysis. Educational Psychology Review, 34(3), 441-459. DOI: 10.1007/s10648-021-09624-2

Chen, G., & Liu, S. (2016). Utilitarian tendencies of college students and educational prevention during the social transformation period. *Ideological Education Research, 4*, 120-123.

Chen, R. (2012). On strategies to improve college students' autonomous learning ability. *Education and Teaching Forum, 35*, 127-130.

Chen, S. (2017). Research on the application of career assessment tools in career guidance in colleges and universities - focusing on strengthening the strength of career guidance teachers as the main adjustment method. Xiang, Vocational Education Forum, 14, 22-26.

Chen, Y. (2013). Independent learning ability and cultivation of college students in the information age. Chinese Adult Education, 6, 166-168.

Cheng, H. (2010). The latest development trend of foreign independent learning measurement technology. *Educational Science, 26*(3), 92-96.

Cheng, X. (1999). On autonomous learning. *Subject Education, 9*, 42-44.

Chu, J. (2012). Crisis of trust: Analysis of the root causes of individual existential anxiety among college students. *Journal of University of Science and Technology Beijing, 28*(3), 145-149.

Dang, Y. (2020). Pursuing Self: The Crisis and Opportunity of Modern Self-Identity. *Journal of Tongji University, 31*(5), 94-102+113.

De Silva, D. V. M. (2020). Developing self-regulated learning skills in university students studying in the open and distance learning environment using the KWL method. *Journal of Learning for Development, 7*(2), 204-217.

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. Springer Science & Business Media.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self determination of behavior. *Psychological Inquiry, 11*(4), 227–268.

Ding, Q. (2019). Is it important to choose or to cultivate—A study on the relationship between undergraduate major independent choice, professional commitment and professional satisfaction. *Educational Development Research, 492*(23), 27-33.

Ding, W. (2006). Self-regulated learning and efficient learning environment. *Foreign Education Research, 1*, 7-11.

Dizon, E. C., & Sanchez, R. D. (2020). Improving select grade 7 Filipino students' reading performance using the eclectic model. *Journal of World Englishes and Educational Practices*, 2(2), 216-221.

Dörrenbächer, L., & Perels, F. (2016). *Self-regulated learning profiles in college students: Their relationship to achievement, personality, and the effectiveness of an intervention to foster self-regulated learning. Learning and Individual Differences, 51, 229–241.* doi:10.1016/j.lindif.2016.09.0

Filgona, J., Sakiyo, J., Gwany, D. M., & Okoronka, A. U. (2020). Motivation in Learning. Asian Journal of Education and Social Studies,10(4),16 37.https://doi.org/10.9734/ajess/2020/v10i430273

Han, Q. (2007). Some basic issues about the "autonomous learning" education and teaching reform experiment. *Educational Theory Research, 6*, 4-9.

Han, Z. (2004). Thoughts on modernity and identity. *Learning and Exploration, 6*, 13-15.

Hayat, A. A., Shateri, K., Amini, M., & Shokrpour, N. (2020). Relationships between academic self-efficacy, learning-related emotions, and metacognitive learning strategies with academic performance in medical students: a structural equation model. *BMC Medical Education*, *20*(1). https://doi.org/10.1186/s12909-020-01995-9
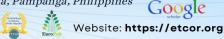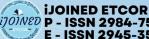
Thank you for embracing the culture of research with us!

He, W., & Lei, S. (2020). Realistic representation, causes and reasonable guidance of the "Buddhist mentality" of contemporary college students - starting from the case of Student A. *Educational Academic Monthly, 5*, 77-83.

Huo, B., & Xu, H. (2012). The concept of students' autonomous learning and its cultivation. *Global Education Outlook, 7*, 18-24.

Jiang, Q. (2012). Analysis of William James's Self-Theory. *Journal of Shangqiu Normal University, 28*(5), 30-32.

Jiang, W. (2006). On improving the learning ability of college students through reflection. *Education and Occupation, 528*(32), 184-185.

Jiang, X. (2020). Exploring the source of loss and guidance of college students' self-awareness. *Ideological and Political Education Research, 36*(5), 112-116.

Johnson, A. B., Smith, C. D., & Garcia, E. L. (2019). Test anxiety and its impact on students' self-regulation processes. Educational Psychology Review, 31(2), 215-231. DOI: 10.1007/s10648-019-09463-5

Kong, Y. (2001). Talking about the connotative characteristics and implementation strategies of independent learning. *Liaoning Education Research, 7*, 74-75.

Li, H. (2017). The influence and countermeasures of youth subculture on the ideological and political education of college students. *School Party Building and Ideological Education, 533*(14), 54-56.

Li, H., & Lei, Q. (2006). From "enlightenment" to "endogenous" education - Exploring the educational significance of Anthony Giddens' self-identity theory. *Educational Research and Experimentation, 1,* 40-43.

Li, J. (2020). Motivational beliefs and self-regulated learning strategies: Their roles in Chinese students' academic achievement. *Educational Psychology Review, 32*(4), 1067-1089.

Li, Y., Wang, Q., & Zhang, H. (2020). Meta-analysis of test anxiety and academic performance: The role of self-regulated learning strategies. Journal of Educational Psychology, 112(4), 789-805. DOI: 10.1037/edu0000392

Liu, F., & Liu, S. (2009). Research on the relationship between autonomous learning and general self-efficacy among college students. *Journal of Chifeng University, 25*(3), 166-167.

Liu, Q. (2008). Discussion on enhancing students' independent learning ability. *Journal of Capital Normal University, 54*, 48-50.

Maier, A., Schaitz, C., Kröner, J., Berger, A., Keller, F., Beschoner, P., Connemann, B., & Sosic-Vasic, Z. (2021). The Association Between Test Anxiety, Self-Efficacy, and Mental Images Among University Students: Results From an Online Survey. *Frontiers in psychiatry*, *12*, 618108. https://doi.org/10.3389/fpsyt.2021.618108

Oates, S. (2019). The Importance of Autonomous, Self-Regulated Learning in Primary Initial Teacher Training. *Front. Educ.* 4, 102.

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. Journal of Educational Psychology, 82(1), 33–40.

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.

Thank you for embracing the culture of research with us!

Salendab, F. A., & Sanchez, R. D. (2023). Graduates Tracer Study: The Employability Status of Bachelor of Elementary Education (BEED) of Sultan Kudarat State University – Kalamansig Campus. *International Journal of Open-access, Interdisciplinary and New Educational Discoveries of ETCOR Educational Research Center (iJOINED ETCOR),* 2(2), 642-655

Sanchez, R. (2023). Utilization of the daily lesson logs: An evaluation employing the CIPP model. *International Journal of Open-access, Interdisciplinary and New Educational Discoveries of ETCOR Educational Research Center (iJOINED ETCOR),* 2(1), 199-215.

Sanchez, R., & Sarmiento, P. J. (2020). Learning together hand-in-hand: An assessment of students' immersion program in a schools division. *International Journal of Research Studies in Education,* 9(1), 85-97.

Sanchez, R., Sarmiento, P. J., Pangilinan, A., Guinto, N., Sanchez, A. M., & Sanchez, J. J. (2022). In the name of authentic public service: A descriptive phenomenological study on the lives of Filipino teachers in select coastal villages. *International Journal of Open-access, Interdisciplinary and New Educational Discoveries of ETCOR Educational Research Center (iJOINED ETCOR),* 1(1), 35-44.

Shan, Z., & Meng, Q. (2006). Preparation of the autonomous learning questionnaire for middle school students. *Psychological Science, 6*, 1422-1424.

Tong, D. H., Uyen, B. P., & Ngan, L. K. (2022). The effectiveness of blended learning on students' academic achievement, self-study skills and learning attitudes: A quasi-experiment study in teaching the conventions for coordinates in the plane. *Heliyon, 8*(12), e12657.

Wang, J., Zhang, M., & Hou, X. (2017). College students' self-regulated learning strategies and motivation in a blended course in China. *The Internet and Higher Education, 35*, 10-19.

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81*(3), 329-339.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 13-39). Academic Press.