



An Investigation of the Relationship between Self-Efficacy and Self-Regulated Learning among Chinese College Students: The Mediated Role of Task Value

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How to cite this paper: Huang, T. (2024) An Investigation of the Relationship between Self-Efficacy and Self-Regulated Learning among Chinese College Students: The Mediated Role of Task Value. *Open Access Library Journal*, 11: e11474. <https://doi.org/10.4236/oalib.1111474>

Received: March 22, 2024

Accepted: April 27, 2024

Published: April 30, 2024

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Abstract

Background: University and college students are the driving force of the sustainability of the future, and their level of self-regulated learning will directly affect their ability to develop sustainably. However, for the current Chinese private college students, they have been used to cramming teaching, and it is difficult for them to change from passiveness to positiveness at once, so it is necessary for educators to study and guide the self-regulated learning among Chinese private college students. **Methods:** This study explores the relationship among self-efficacy, task value and self-regulated learning. In total, 343 freshmen from a selected Chinese college completed a questionnaire to report on their self-efficacy, task value and self-regulated learning. Data analysis was performed by mean, standard deviation, Pearson correlation analysis, linear regression analysis and structural equation modeling (SEM). **Results:** Results from Pearson correlation and linear regression analysis illustrated that both self-efficacy and task value were significant predictors of self-regulated learning. SEM confirmed the mediating role of task value between self-efficacy and self-regulated learning. However, the results also revealed that task value played a partial mediating role between self-efficacy and self-regulated learning. **Conclusion:** The implication of this study is that self-efficacy and task value can be used to improve students' self-regulated learning, and in order to achieve sustainable change, further actions should be carried out to have a greater impact on long-term development. Finally, this study puts forward three suggestions for improving Chinese private college students' self-regulated learning and also makes theoretical and practical contributions to academic research in this field.

Subject Areas

Linguistics, Pedagogy, Psychology

Keywords

Self-Efficacy, Task Value, Self-Regulated Learning, Chinese College Students

1. Introduction

The international community has increasingly recognized that education for sustainable development is an essential component of quality education [1]. The United Nations 2030 agenda for sustainable development regards education and lifelong learning as an important driving force for sustainable development. UNESCO in 2020 also demonstrates that learning should prepare students and learners of all ages with the corresponding autonomous learning ability to find solutions for the challenges of today and the future. Self-regulated learning is the foundation of lifelong learning, and the level of self-regulated learning will directly affect students' ability to develop sustainably [2]. In general, it can be found that we need education for sustainable development more than ever in the world today to address the interconnected global challenges we are facing.

The *UNESCO Roadmap for implementing the Global Action Programme on Education for Sustainable Development* in 2014 puts forward that the goal of sustainable development education is to cultivate people's sustainable learning literacy, especially in terms of learning content, learning methods and learning effects. Sustainable development education should encourage students to form core learning abilities, such as critical and systematic thinking, cooperative decision-making, and self-regulated learning, so as to make them become devotees of sustainable development society [3]. Therefore, it can be considered that self-regulated learning is an inevitable requirement to promote the all-round development of students. Improving self-regulated learning ability will help students have the awareness and ability to adapt to lifelong learning and sustainable development in the future society [4].

In the traditional classroom, the tasks, resources and even the strategies that need to be used are usually provided by teachers, and students follow the instructions of teachers simply [5]. Their self-regulated learning ability has not been effectively developed. However, it has been proved that due to the influence of factors such as self-efficacy, students will show different self-regulated learning abilities, and resulting in different learning outcomes [6]. Zimmerman's [7] research found that even in the same task or situation, some students will be more active and willing to try a variety of problem-solving strategies, while others are less motivated or unwilling to try at all. The former are usually good at setting their own learning goals, choosing suitable learning strategies, seeking relevant resources, and conducting self-evaluation at the end of learning activi-

ties [7]. Such behaviors demonstrate the process of self-regulated learning (including setting goals, adjusting plans and actions, and monitoring learning progress and effect). Currently, with the deepening of concepts such as learner-centered teaching, 21st-century learners, and lifelong learning in university classrooms [8], there is a greater need for research into self-regulated learning. Zimmerman [7] also emphasizes the importance of self-regulated learning, because one of the main functions of higher education is to develop lifelong learning skills, and self-regulated learning has been recognized as one of the main competencies of learners in the 21st century.

Besides, learning at the university stage is a critical period in life, which is mainly achieved through conscious and active learning, that is, self-regulated learning. However, the current Chinese university students, have been used to cramming teaching, and it is difficult for them to change from passiveness to positiveness at once, so it is necessary for educators to study and guide the self-regulated learning of university students [9].

To sum up, based on the self-regulated learning theory, this study explores the relationship between self-efficacy and self-regulated learning in which task value is used as mediator. The rest of the paper is organized as follows: First, the literature review, the theoretical framework, and the research questions are discussed in Section 2. Second, the methodology section is presented, including participants, instruments, data collection and analysis. Third, the results are displayed, including the result of reliability and validity analysis, correlation and regression analysis, and structural equation modeling (SEM). Finally, a conclusion is drawn, and further suggestions for developing students' self-regulated learning ability and sustainable higher education are put forward.

2. Literature Review

2.1. Self-Efficacy and Self-Regulated Learning

Many influential educational psychologists have proposed the definition of self-regulated learning from different perspectives. Zimmerman [7] defined self-regulated learning as students' planned regulation of their cognition, emotion, and activities to achieve their goals. Winne and Perry [10] believed that self-regulated learning was an inherent process of students' construction and self-orientation. Continued research into self-regulated learning has also emphasized that self-regulated learning is a series of behavioral processes to achieve specific personal goals [11], and it includes goal setting, effort process and strategy, feedback and self-evaluation. In addition, domestic scholars have expressed similar views and understandings of the concept of "self-regulated learning". Li *et al.* [12] believed that self-regulated learning referred to learners' use of cognitive, motivational and behavioral strategies to organize, guide, monitor and evaluate their own learning process. Pang [13] also demonstrated that self-regulated learning could be seen as the ability of learners to consciously set learning goals, choose learning strategies, monitor the learning process and evaluate learning

results.

Self-efficacy refers to individual's expectations of whether he or she has the ability to accomplish a certain behavior in a particular situation [14]. When referring to course learning, Soffa [15] argued that self-efficacy can be considered as students' confidence or belief in their ability to complete a specific course task. Thus, students with high self-efficacy think that if they can learn new knowledge with serious lectures or reading, they can find ways to solve complex problems and know how to seek resource support; while students with low self-efficacy usually feel that they do not have the ability to solve problems.

Moreover, research on SRL has shown a positive correlation between self-efficacy and the use of SRL strategies. For example, Hamdan *et al.* carried [16] research to find out the factors and relationships that influence self-regulated learning. The results demonstrated that self-efficacy had a significant positive effect on self-regulated learning. Another study from a social cognitive perspective was conducted with a total of 184 English learners by Lee *et al.* [17] also indicated that there was a positive and significant relationship between self-efficacy and self-regulated learning. In addition, developing the self-regulated learning of students can help improve their self-efficacy.

2.2. Task Value and Self-Regulated Learning

Task value refers to students' evaluation of how interesting, important, and useful a task is, and it is considered to be an important predictor of perceived effectiveness in the English learning environment [18]. When students face a new task, they will estimate the value of the task at first. Only when students determine that it is a valuable task will they take further action [19]. However, once students find that they lack of ability to complete the task, they may not take action or choose an easier goal [14]. On the contrary, if it is likely for them to succeed in something, they tend to have an optimistic and positive attitude. These are the processes of cognitive operation and affective coping, which can also be used to assess student self-efficacy.

The importance of task value in learning cannot be ignored. It is not only the source of motivation for learning but also the cornerstone for achieving learning goals [18]. Clear task value can stimulate learners' initiative and creativity, making them more focused on learning tasks, thereby improving learning efficiency and quality. At the same time, task value can also help learners understand the practical application and significance of knowledge, and enhance the pertinence and practicality of learning [19]. Therefore, in the learning process, we should fully recognize and utilize the value of tasks, and integrate them into various stages of learning, in order to achieve better learning outcomes and broader development prospects.

According to Lee *et al.* [17], task value is a positive predictor of self-regulated learning. Similarly, Joo, Lim and Kim [18] also found that there was a relationship between the task value of the course and the self-regulated learning skills employed by students. These findings provide teachers and instructional de-

signers with new insights into how to design courses to support students' self-regulated learning in terms of self-efficacy and task value.

2.3. Mediating Role of Task Value

The literatures suggest that task value and self-efficacy should be positively correlated. As Li and Zheng's [20] study showed, task value may be affected by students' self-efficacy. In other words, self-efficacy may not only directly affect students' self-regulated learning, but also indirectly influence them via task value. For instance, Arian Far *et al.* [21] surveyed 320 undergraduates in 2018-19 academic year at Payame Noor University of Tehran from, and pointed out that task values played a mediating role between self-efficacy and self-regulated learning. In addition, Wang, Shannon and Ross [22] also identified the mediation effect of task value on the relationship between self-efficacy and self-regulated learning. Similarly, Cerezo *et al.* [23] demonstrated that the impact of self-efficacy on self-regulated learning may be mediated by task value. These existing studies imply that task value may function as a mediator between self-efficacy and self-regulated learning.

However, as educational researchers have pointed out, research on self-regulated learning has mostly focused on students in public universities [12], while the self-regulated learning abilities of students in private colleges still need to be explored. In addition, most studies only focus on the relationship between self-efficacy and self-regulated learning, or between task value and self-regulated learning, and the relationship between these three needs to be further clarified among Chinese private college students [20].

In order to fill some existing research gaps, this study will investigate the following three questions:

RQ1: Does self-efficacy have an impact on self-regulated learning among students in private colleges?

RQ2: Does task value have an impact on self-regulated learning among students in private colleges?

RQ3: Does task value mediate the self-efficacy and self-regulated learning among students in private colleges?

3. Methods

3.1. Participants

This study was conducted at a private college in southern China. The college has been ranked among the top three private universities and colleges for three consecutive years and has been conducting English teaching for many years, however, the self-regulated learning ability of students has yet to be improved. Therefore, it is urgent to carry out relevant research to enhance their abilities. The implementation of this study can effectively help students understand their self-efficacy and self-regulated learning abilities, and recognize the importance of task value in this process.

The college has more than 16,500 students and approximately 400 students majoring in English, Business English and Translation from the School of English Language. This group of students has just entered college from high school and needs to adjust their learning methods and strategies in time in order to better adapt to the new model of the college. A total of 343 freshmen were invited to participate in this research, whose ages ranged from 18 to 22 ($M = 19.02$, $SD = 0.863$). Due to the nature of English major students in China with more female students enrolled, the questionnaire respondents included 55 male students (16.03%) and 288 female students (83.96%).

3.2. Research Instruments

The pilot questionnaire was administered in two parallel classes of the same grade in the selected college in China. The respondents answered a battery of questionnaires: The background information questionnaire (including gender and age, which are also the control variables of this study), the Self-Regulated Learning Questionnaire, the Self-Efficacy Scale, and the Task Value Scale. To ensure the adaptation of the measurement items in the target college, two professors from this college reviewed the validity of the questionnaires and provided feedback to refine the measurement items. Based on the good level of English of participants, all the research instruments were conducted in English.

The revised version of the Self-Regulated Learning Questionnaire developed by Barnard, Lan, To, Paton and Lai [24] was used to measure student' level of self-regulated English learning. This 16-item SRLQ consisted of five sub-scales: 1) goal setting (GS), 2) environmental structuring (ES), 3) task strategies and time management (TSTM), 4) help-seeking (HS), and 5) self-evaluation (SEVA). The items were rated on a 7-point Likert scale ranging from "not at all true of me" (1 point) to "very true for me" (7 points). In this study, the reliability with Cronbach's alpha value was 0.973, and Kaiser-Meyer Olkin (KMO) value was 0.916 and significance probability was 0.000.

The Self-Efficacy Scale was adapted from the Motivated Strategies for Learning Questionnaire [25] primarily aiming to measure students' self-efficacy levels in English learning. The items consisted of a seven-point Likert scale ranging from "not at all true of me" (1 point) to "very true of me" (7 point). The items were slightly modified to reflect the context of the English courses. For example, "I'm confident I can do an excellent job on the assignments and test in this course" was modified to "I'm confident I can do an excellent job on the assignments and test in the English courses." The reliability with Cronbach's alpha value was identified as 0.959, and KMO value was 0.847 and the significance probability was 0.000.

The Task Value Scale was also from the Motivated Strategies for Learning Questionnaire [25], aiming to measure students' views on task value in English learning. The items utilized a seven-point Likert scale ranging from "not at all true of me" (1 point) to "very true of me" (7 point). The items were slightly modified to reflect the context of the English courses. For example, "I'm very in-

terested in the content area of this course” was modified to “I’m very interested in the content area of the English courses.” In this study, the reliability with Cronbach’s alpha value was 0.957, and KMO value was 0.867 and the significance probability was 0.000.

Exploratory factor analyses (EFA) were conducted to examine the underlying factor structure of the whole scale. The Bartlett’s spherical test provided a significant chi-square value of 673.156 ($p < 0.001$), and KMO value was 0.868 exceeding the minimum adequacy value of 0.50, meaning that the data were suitable for structure detection [26]. Moreover, Cronbach’s alpha value of the whole scale was 0.980, which indicated a high level of internal consistency for the whole scale.

3.3. Data Collection and Analysis

After the design was approved by the Teaching and Research Committee of the School of English Language, the battery of questionnaires was distributed online to around 12 natural intact classes of first-year students majoring in English, which yielded 343 valid questionnaires.

Based on the purpose of the research, research questions were developed to explore the relationship between the selected variables. SPSS 26.0 was used to analyze the data collected from the questionnaire. The general data was described by using mean and standard deviation. Pearson correlation analysis and linear regression analysis were used to determine the relationship between self-efficacy, task value and self-regulated learning in terms of goal setting, environmental structuring, task strategies and time management, help-seeking and self-evaluation. Finally, the data were subjected to AMOS 26.0 using structural equation models (SEM) to investigate the structural relationships between self-efficacy, task value and self-regulated learning. The following model fit indices were used for evaluating the model fit [27]: the Chi-square statistic (χ^2) and its Degrees of Freedom (df), along with the associated p-value; the Comparative Fit Index (CFI) (a value equal to or greater than 0.90 indicates acceptable model fit); Non-Normed Fit Index (NNFI) (a value equal to or greater than 0.90 indicates acceptable model fit); the Root Mean Square Error of Approximation (RMSEA) (a value between 0.05 - 0.08 indicates good fit); and the Standardized Root Mean-square Residual (SRMR) (a value less than 0.05 indicates good fit).

4. Results

4.1. Reliability and Validity Analysis

According to the analysis of reliability and validity on the research variables, it could be seen from **Table 1** that the Cronbach’s alpha value of all variables was greater than 0.8, indicating that the questionnaire had good reliability. As illustrated in **Table 1**, the factor loading values of all variables were greater than 0.6, the Average Variance Extracted (AVE) values of all variables were greater than 0.5, and the Composite Reliability (CR) values of all variables were greater than

Table 1. Reliability and validity analysis of variables.

Constructs	Factor Loading	Cronbach's α	AVE	CR
Goal setting	0.778 - 0.921	0.874	0.711	0.880
Environmental structuring	0.796 - 0.850	0.867	0.683	0.866
Task strategies and time management	0.725 - 0.888	0.886	0.672	0.891
Help-seeking	0.820 - 0.888	0.884	0.722	0.886
Self-evaluation	0.858 - 0.917	0.913	0.779	0.914
Task value	0.876 - 0.930	0.940	0.797	0.940
Self-efficacy	0.842 - 0.900	0.933	0.776	0.933

0.8, indicating that the questionnaire had a good convergent validity. In addition, discriminant validity was used to test the degree of difference between a given aspect as well as other aspects where the observed aspects could be distinguished from each other. As shown in **Table 2**, the AVE arithmetic square root value of the diagonal was much higher than the value of the correlation factor in the same column, indicating that each potential can distinguish the variable from others with high discriminant validity.

4.2. Correlation and Regression Analysis

A Pearson's correlation was run to determine the relationships among self-efficacy, task value, and self-regulated learning. The statistical findings shown in **Table 3** supported that task value and self-efficacy had a significant and positive relationship with self-regulated learning ($r = 0.861$, $r = 0.855$, $p < 0.01$). In particular, the five dimensions of self-regulated learning were positively correlated with self-efficacy and task value ($p < 0.01$). According to **Table 3**, moreover, self-efficacy also had a significant and positive correlation with task value ($r = 0.858$, $p < 0.01$).

In order to eliminate the influence of other irrelevant variables, this study divided the predictors into three groups for linear regression analysis. The first group was demographic, including gender and age; the second group was self-efficacy; and the third group was task value. From the regression analysis results in **Table 4**, it can be seen that age and gender had no predictive effect on self-regulated learning ($p > 0.05$), so the effects of age and gender on SRL can be excluded. Moreover, self-efficacy and task value had significant predictive effects on self-regulated learning ($p < 0.05$), which could explain 79.1% of the variance of SRL. This illustrated that with the improvement of students' self-efficacy, their self-regulated learning ability would also be enhanced, and students who were interested in the task and understood its value also had higher level of self-regulated learning.

Table 2. Discriminant validity.

	F1	F2	F3	F4	F5	F6	F7
F1	0.843						
F2	0.566	0.827					
F3	0.724	0.630	0.820				
F4	0.634	0.600	0.677	0.849			
F5	0.698	0.655	0.813	0.758	0.883		
F6	0.685	0.735	0.777	0.698	0.810	0.893	
F7	0.681	0.698	0.757	0.731	0.810	0.859	0.881

a. Note: F1 = Goal setting; F2 = Environmental structuring; F3 = Task strategies and time management; F4 = Help-seeking; F5 = Self-evaluation; F6 = Task value; F7 = Self-efficacy.

Table 3. Relationships among self-efficacy, task value, and self-regulated learning.

Variables	Mean	SD	1	2	3	4	5	6	7
1) Goal setting	4.689	1.000	1						
2) Environmental structuring	5.284	1.059	0.567**	1					
3) Task strategies and time management	4.734	1.026	0.723**	0.632**	1				
4) Help-seeking	4.781	1.153	0.634**	0.600**	0.677**	1			
5) Self-evaluation	4.769	1.091	0.696**	0.656**	0.812**	0.759**	1		
6) Self-regulated learning	4.851	0.918	0.836**	0.803**	0.890**	0.860**	0.913**	1	
7) Task value	5.038	1.103	0.686**	0.737**	0.777**	0.698**	0.810**	0.861**	1
8) Self-efficacy	4.960	1.067	0.681**	0.699**	0.757**	0.731**	0.810**	0.855**	0.858**

a. Note: N = 343; * p < 0.05 ** p < 0.01.

Table 4. Linear regression results of each variable on self-regulated learning.

	Predictors	Beta	t	p	R2	Adjusted R2
1	Gender	0.080	1.475	0.141	0.007	0.001
	Age	-0.015	-0.279	0.781		
2	Gender	0.000	-0.017	0.987	0.732	0.729
	Age	0.001	0.046	0.964		
	Self-efficacy	0.855	30.259	0.000**		
3	Gender	-0.023	-0.911	0.363	0.794	0.791
	Age	0.015	0.620	0.536		
	Self-efficacy	0.438	9.106	0.000**		
	Task value	0.489	10.102	0.000**		

a. Note: Dependent Variable: self-regulated learning; * p < 0.05 ** p < 0.01.

4.3. Mediation Analysis

The structural equation model analysis was performed using AMOS 26.0 software to validate the proposed research questions. After analyzing the sample data using the maximum likelihood estimation method, the fit indices of the model were obtained and the standardized regression coefficients (path coefficients) and significance of each path were calculated. The results of the structural equation model SEM constructed with AMOS showed that the chi-square was 702.015 and the degrees of freedom were 244. In this study, the χ^2/df value was 2.877 ($\chi^2 = 702.015$; $df = 244$); this meant that the test model was well-fitted ($2.877 < 3.00$). Model fit indices (SRMR, RMSEA, CFI, IFI, NFI, and NNFI) exceeded acceptable levels (SRMR = 0.040 < 0.05, RMSEA = 0.074 < 0.08, CFI = 0.943 > 0.90, IFI = 0.944 > 0.90, NFI = 0.916 > 0.90, NNFI = 0.936 > 0.90).

Based on the validation information, the results demonstrated that the model had a mediation effect. The details of the structural relationships in the SEM are shown in **Figure 1**.

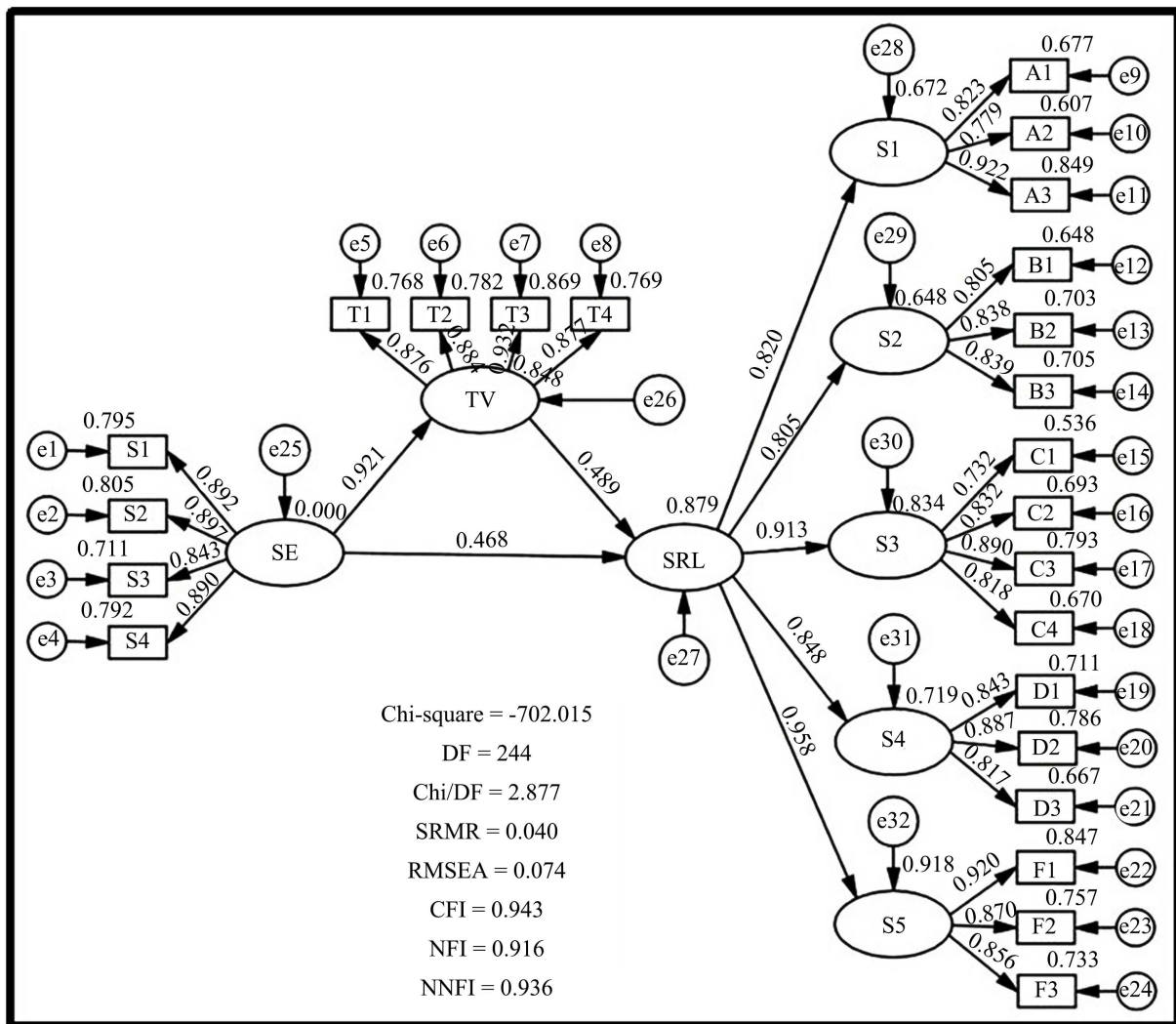


Figure 1. The results of SEM.

The structural equation-AMOS model path analysis results demonstrated that self-efficacy and task value were both statistically significantly associated with self-regulated learning ($\beta = 0.468$, $p = 0.003 < 0.01$, 95% CI [0.186, 0.710]; $\beta = 0.489$, $p = 0.001 < 0.01$, 95% CI [0.254, 0.761]), and the path from self-efficacy to task value was also statistically significant ($\beta = 0.921$, $p = 0.000 < 0.01$, 95% CI [0.876, 0.956]). The mediating effect of task value was tested using bootstrapping approach. In addition, the indirect effect of self-efficacy on self-regulated learning via task value was equal to the product of the coefficients for each of the paths in the mediation chains ($0.921 * 0.489 = 0.450$). The 95% bias-corrected confidence interval for the mediated effect was between 0.239 and 0.715 did not include 0, with a p-value at 0.001 for the two-tailed significance test and the standard error at 0.120. These data illustrated the existence of intermediary effect. Moreover, the direct effect between self-efficacy and self-regulated learning was also significant ($\beta = 0.468$, $p < 0.01$). The 95% bias-corrected confidence interval for the mediated effect was between 0.186 and 0.710 did not include 0. Therefore, the effect of self-efficacy on self-regulated learning was partially mediated by task value. The total effect of self-efficacy on self-regulated learning was $0.450 + 0.468 = 0.918$, and the proportion of mediating effect to total effect was 49.02%.

5. Discussion

5.1. Summary of Findings

This study would increase understanding of the relationship among self-regulated learning, task value and self-efficacy, and also provide feasible suggestions for the development of students' self-regulated learning in selected colleges in China. The results of this study indicated a positive correlation among self-efficacy, task value and self-regulated learning. In addition, the SEM model which explained how self-efficacy and task value affect self-regulated learning was a partial mediating model: Self-efficacy affected self-regulated learning directly as well as indirectly through the mediating effects of task value. In other words, task value played a partial mediating role between self-efficacy and self-regulated learning.

Correlation analysis found that self-efficacy had a significant positive correlation with self-regulated learning, and regression analysis also found that self-efficacy had a strong positive predictive effect on self-regulated learning. Thus, students with higher self-efficacy have stronger self-regulated ability in learning. These findings are consistent with previous studies. The stronger the sense of self-efficacy, the higher the challenge that students set for their goals, and the better they can conduct self-regulated learning, such as rationally organizing learning tasks and adjusting learning strategies. However, those with low self-efficacy will avoid making choices that exceed their own abilities, and they will adopt evasive attitudes when face with challenges. It can be seen that self-efficacy is an important factor affecting self-regulated learning. Therefore, self-efficacy can be

used as a significant predictor to promote students' self-regulated learning and finally improve their learning outcomes.

In addition, task value played a mediating role in the effect of self-efficacy on self-regulated learning. From the above research results, it can be shown that self-efficacy had a direct positive effect of 0.468 on self-regulated learning, accounting for 50.98% of the total effect, and 49.2% of the indirect effect was through task value. In order to pursue knowledge and interests, students with high self-efficacy generally have stronger intrinsic motivation and higher self-regulated learning ability. At the same time, they pay more attention to the intrinsic value of the task, which further enhances the ability of self-regulated learning.

5.2. Theoretical Implications

The study offers students and practitioners in the second language acquisition and related disciplines important insights into identifying research topics, variables, and methodological approaches.

Firstly, although previous studies have examined sub-dimensions of public university students' self-regulated learning [28] [29], this study further illustrates that self-regulated learning is also affected by such five dimensions, including goal setting, environmental structuring, task strategies and time management, help-seeking and self-evaluation among private college students. Students with a higher level of self-regulated learning pay more attention to goal setting and will monitor, adjust, and self-evaluate their own learning process. Thus, the five sub-variables can be identified to measure self-regulated learning.

Secondly, existing literature generally studies the relationship between self-efficacy and self-regulated learning [30] [31], and relatively few studies have explored the effect of self-efficacy on self-regulated learning via task value. On this basis, this study investigates the role of task value between self-efficacy and self-regulated learning through the construction of SEM model. The results demonstrate that self-efficacy can directly affect self-regulated learning, and can also affect self-regulated learning through task value. By improving students' self-efficacy and helping them understand the value of tasks, students' self-regulated learning ability can be effectively improved. Therefore, learners should actively motivate themselves and use appropriate learning strategies in the language learning process.

5.3. Practical Implications

The results of this study provide support for how to improve self-regulated learning ability.

Firstly, students' self-efficacy determines their choice in a given environment, that is, the possibility of choosing simple or complex tasks [32]. Students usually avoid activities and situations that are beyond their ability to cope and tend to choose what they feel they can handle [33]. Different choices lead to different

abilities and experiences of students and profoundly affect the direction of personal development. Therefore, the higher a student's self-efficacy is, the more he can challenge high goals, and thus exhibit a higher self-regulated learning ability.

Secondly, self-regulated learning is of great significance to individual development now and in the future. It is not only the need to cultivate students' comprehensive ability but also the basis of lifelong development. In the process of learning, students should change passive acceptance into active participation, fully mobilize their enthusiasm and play a subjective role [34].

6. Conclusions

According to this study, students' self-regulated learning can be improved through self-efficacy and task value among private college students in China. In particular, this study demonstrates that the relationship between self-efficacy and self-regulated learning may be mediated by task value. The research results illustrate that teachers should:

1) Guide self-regulated learning

In the whole learning process, teachers should constantly encourage students to conduct self-regulated learning [35], which can record their learning behavior in time and help them set certain learning goals [32]. Zhao and Johnson [36] found through empirical research that teachers' continuous reminding of students' self-regulation not only enhanced the interaction between teachers and students but also improved students' learning ability. At the same time, teachers can set up a special module for those students who have never received self-regulated learning guidance. In addition, teachers can adopt the method of questionnaire survey to evaluate the current situation of self-regulation learning of such students who have entered English classes, select students with low self-regulation level, and put forward more targeted suggestions, such as learning time, effort level, etc., so as to avoid the loss of students.

2) Improve students' self-efficacy

Teachers can mobilize the learning enthusiasm of college students through diversified teaching means and class group discussion, and strive to help college students build up their confidence in learning. Shea and Bidjerano [37] found that there was a significant positive correlation between the curriculum design and organizational form in teaching and students' self-efficacy. In addition, teachers can also set some difficult goals to let students experience success through their own efforts, so as to improve students' academic self-efficacy [38].

3) Guide students to correctly understand task value

When students think that tasks are important and valuable, they are more likely to set specific and feasible goals for themselves [18]. The higher the individual's participation and involvement in learning tasks, the more likely it is to promote the development of self-regulated learning [39]. If students cannot correctly understand the value of learning tasks and have no interest in learning tasks, they will not be able to actively adjust their learning activities. Therefore,

in order to promote the development of students' self-regulated learning, teachers can stimulate their motivation by improving the importance, interest and utility value of learning materials, and make students have certain goal orientation through external influence, so as to make them interested in learning tasks.

One of the limitations of this study is sampling. This study only surveyed English majors offered by a college in Zhejiang, China. These findings may not represent the overall situation of Chinese private college students. Therefore, further research should adopt the random sampling strategy to select students across China to check whether the results of this study are replicated.

Second, this study only conducted a qualitative study to examine the relationship among private college students' self-efficacy, task value, and self-regulated learning. Therefore, further research should also take qualitative research to obtain more reliable results, such as interviews, observations, and student feedback reports. In addition, the present study has launched a cross-sectional design, so the causal relationship among self-efficacy, task value and self-regulated learning may not be well established. To complement this limitation, longitudinal studies are suggested to address this issue.

Finally, if possible and available, some cross-cultural comparisons should be conducted to identify the unique features of Chinese university students and the universal findings shared by all university students worldwide.

Acknowledgements

This paper was supported by 2021 Zhejiang Province First Level Course "Academic Writing" (online and offline course). The ownership of the research results belongs to Zhejiang Yuexiu University.

Conflicts of Interest

The author declares no conflicts of interest.

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