Mediating Effect of Academic Burnout between Self-efficacy and SRL among Chinese EFL Learners

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Abstract: This study delves into the complex relationships between self-efficacy, academic burnout and self-regulated learning. A total of 322 English as a Foreign Language (EFL) learners in China completed an online questionnaire survey. Structural Equation Modelling (SEM) discovered significant direct and indirect effects. The findings revealed that self-efficacy negatively predicted academic burnout and had a positive influence on SRL, whilst academic burnout negatively predicted SRL. Further analysis demonstrated that academic burnout mediated the association between self-efficacy and Self-regulated learning (SRL). This study not only revealed the mechanism through which self-efficacy and academic burnout influence SRL but also proposed an approach to enhancing EFL learners' SRL by improving their self-efficacy and mitigating their academic burnout.

1. Introduction

Self-regulated learning (SRL) has a significant impact on learning engagement [1]. College students utilizing SRL strategies tend to be more content with their studies[2]. There is an increasing recognition of the importance of EFL learner's SRL[3], while the majority of EFL learners use SRL strategies at a low or moderate level[4]. Therefore, it is essential to examine the factors that influence EFL learners' SRL capacities in order to improve their SRL ability and academic performance.

To date, Previous studies have assessed the impact of self-efficacy and academic emotions on SRL[5], with self-efficacy positively predicting SRL and academic burnout negatively predicting SRL[6]. Additionally, self-efficacy has a negative impact on academic burnout[7]. In other words, the above mentioned three constructs are interrelated and each of them has an impact on the others. However, the structural relationships among them when combined are still unknown. Therefore, studying the relationships among these variables and uncovering the structural mechanisms involved in EFL learning can provide a better understanding of EFL learners' SRL.

2. Literature Review

2.1. Self-efficacy

Self-efficacy is defined as learners' belief in their abilities to successfully complete a specific task and achieve academic goals[8]. It fosters various aspects of engagement during the class[9], stands as a crucial predictor of critical thinking, goal attainment and academic performance[10], enables EFL students to develop confidence in improving their English proficiency and influences the level of effort they invest in task completion, their persistence in overcoming obstacles and their learning motivation[11]. Consequently, enhancing EFL learners' self-efficacy beliefs holds paramount importance and should be integrated into teaching practices[12].

2.2. Academic Burnout

Academic burnout involves experiencing exhaustion due to high study demands, adopting a cynical and detached attitude towards study, and feeling incompetent as a student[13]. It is a multi-

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dimensional as involving exhaustion, cynicism, and reduced efficacy. Exhaustion refers to an individual's diminished emotional and physical resources, accompanied by feelings of tiredness; cynicism involves interpersonal distancing, characterized by a negative response to specific work and a lack of cognitive and emotional involvement with work; reduced efficacy manifests as lower self-evaluation, featuring feelings of incompetence and a perceived lack of ability, skill, and productivity. Elevated academic demands, heightened stress levels, and an unsupportive learning environment can contribute to academic burnout in various settings, including EFL classes[14]. Academic burnout may lead to increased absenteeism, reduced motivation to complete coursework, higher dropout rates, diminished academic and cognitive performance, poorer academic achievement, and decreased well-being[15].

2.3. Self-regulated Learning

SRL (self-regulated learning) is a proactive process wherein students select and implement techniques, monitor and control their cognition, as well as establish and accomplish goals[16]. Students actively using SRL strategies regulate various aspects of the learning process, including cognition, motivation, behaviour, and the social and instructional context[17]. Therefore, it is regarded as an empowering toolkit for optimizing learning across diverse domains and is particularly important in EFL contexts [18]. SRL capacity includes metacognitive control, satiation control, commitment control, emotion control and environmental control[19]. The effective deployment of SRL strategies is a pivotal factor in enhancing EFL learners' ability to achieve learning objectives and improve academic performance [18].

2.4. Relationships among Self-efficacy, Academic Burnout and SRL

EFL learners with higher self-efficacy levels are more self-regulated in their learning process [18] and can employ a range of SRL strategies[20]. In addition, self-efficacy negatively predicts academic burnout[7]. Concerning the association between academic burnout and SRL, emotional exhaustion, a component of academic burnout, predicted self-regulated learning[6]. However, the relationships and mechanisms of influence among these three variables when considered together remain unknown.

2.5. The Present Study

Motivated by this knowledge gap, the present study aimed to explore the relationships among self-efficacy, academic burnout and SRL. As such, the following research hypotheses and hypothesized model (see Figure 1) were proposed.

H1: Self-efficacy positively predicts SRL.

H2: Self-efficacy negatively predicts academic burnout.

H3: Academic burnout negatively predicts SRL.

H4: Academic burnout mediates the association between self-efficacy and SRL.

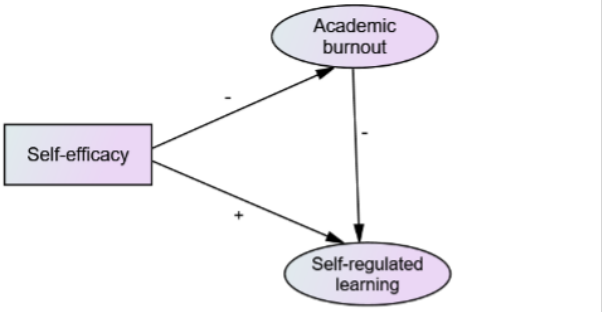


Figure 1 The hypothesized model.

3. Methodology

3.1. Participants

This study engaged 297 EFL Chinese college learners from various universities in China to

conduct an online questionnaire survey. The participants (173 males, 124 females) were from four grades: 72 first-year, 57 second-year, 60 third-year, and 108 fourth-year students. These EFL learners pursued various majors, with ages ranging from 18 to 25 years (Mean=20.87).

3.2. Research Instrument

The study utilized a self-report questionnaire comprised of three 6-point Likert scales (ranging from 1=completely not true of me to 6=completely true of me) to measure self-efficacy, academic burnout, and SRL in the setting of EFL learning in the tertiary context. Self-efficacy was assessed with an 8-item one-dimensional scale[21] (α=0.937). An exemplar item is "I am confident that I will be able to learn English well." Academic burnout was examined using the Scale of Academic Burnout in EFL learning[22] (α=0.928), which consists of 13 items across 3 sub-scales: emotional exhaustion (e.g., "I feel very tired after English class"; α=0.944), 5 items; reduced efficacy (e.g., "I have no confidence in learning English"; α=0.923), 3 items; cynicism (e.g., "I don't think it is necessary to learn English" α=0.927), 5 items. To measure SRL, we modified the Self-regulating Capacity in Vocabulary Learning Scale (SRCvoc scale; α=0.954)[19], with the term "vocabulary" replaced by "English". The scale encompasses 5 subscales: commitment control (e.g., "When learning English, I have special techniques to achieve my learning objectives"; α=0.862), 4 items; metacognitive control (e.g., "When it comes to learning English, I have my special techniques to prevent procrastination"; α=0.844), 4 items; satisfaction control (e.g., "I feel satisfied with the methods I use to eliminate the boredom in studying English"; α=0.817), 4 items; emotion control (e.g., "When I feel stressed about my English learning, I cope with this problem immediately"; α=0.756), 4 items; environment control (e.g., "When learning English, I know how to arrange the environment to make learning more efficient"; α=0.817), 4 items. The Cronbach α coefficient of all the scales were above the cut-off value of 0.70, indicating a good internal consistency. Item 1 and Item 12 from SRL were removed due to the lower factor loading based on the results of CFA.

3.3. Data Analysis

To explore the relationships among variables, we conducted descriptive and correlation analysis in SPSS 29. Structural Equation Modelling (SEM) in AMOS 24 was employed to test hypotheses.

4. Results

Table 1 depicts the descriptive and correlation analyses of the variables. The skewness and kurtosis of all the scales fell well between ± 2, indicating the normal distribution of the current data. The correlation analyses showed that self-efficacy exhibited a significant positive correlation with SRL and its constituent factors ($p < 0.01$), while both self-efficacy and SRL exhibited highly significant negative correlations with academic burnout and its elements ($p < 0.01$).

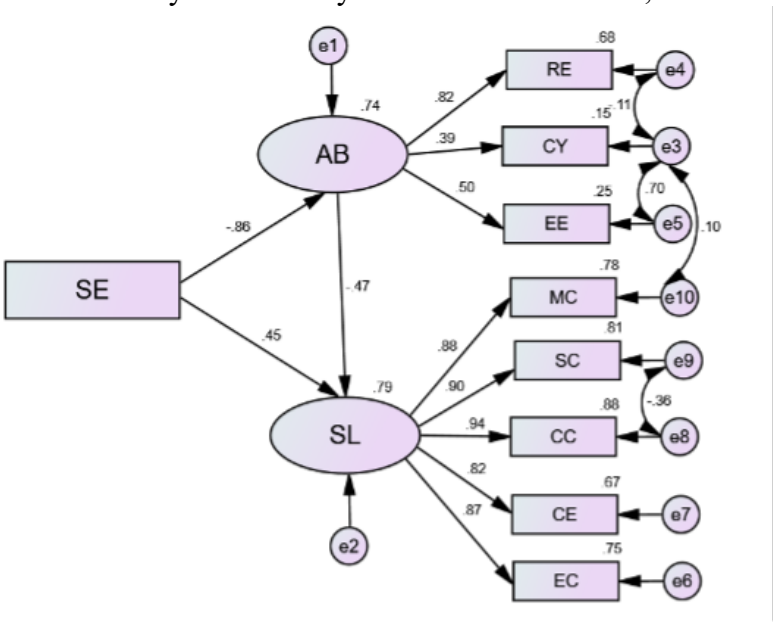
Table 1 Descriptive statistics and correlations values between the variables.

	1	2	3	4	5	6	7	8	9
1. SE	1	-.403**	-.330**	-.605**	.785**	.712**	.736**	.700**	.700**
2. EE	-.403**	1	.722**	.339**	-.334**	-.330**	-.368**	-.308**	-.308**
3. CY	-.330**	.722**	1	.207**	-.244**	-.193**	-.287**	-.322**	-.322**
4. RE	-.605**	.339**	.207**	1	-.648**	-.590**	-.558**	-.499**	-.499**
5. CC	.785**	-.334**	-.244**	-.648**	1	.849**	.814**	.759**	.759**
6. MC	.712**	-.330**	-.193**	-.590**	.849**	1	.818**	.672**	.672**
7. SC	.736**	-.368**	-.287**	-.558**	.814**	.818**	1	.730**	.730**
8. EC	.733**	-.292**	-.213**	-.562**	.805**	.772**	.776**	1	.745**
9. CE	.700**	-.308**	-.322**	-.499**	.759**	.672**	.730**	.745**	1
Mean	4.8792	3.3051	2.6835	2.9714	4.0833	3.9520	4.1291	4.0584	4.4285
SD	1.17404	1.28810	1.22956	1.11729	1.00379	1.00296	1.01227	.92246	.84812
Skewness	-.552	.206	.583	.507	-.489	-.434	-.284	-.254	-.896
Kurtosis	.199	-.888	-.401	-.196	.121	.105	.501	.126	1.840

**p <0.01.

SE=self-efficacy, EE=emotional exhaustion, CY=cynicism, RE=reduced efficacy, CC=commitment control, MC=metacognitive control, SC=satisfaction control, EC=emotion control, CE=environment control.

SEM was employed to further investigate the intricate relationship among factors. The goodness-of-fit indices of the proposed SEM model were satisfactory(χ^2/df= 2.095, RMR=.020, GFI=.966, NFI=.979, IFI =.989, TLI=.981, CFI =.989, RMSEA=.063), indicating that the model accurately represented the data[23]. Figure 2 demonstrates that self-efficacy negatively predicted academic burnout (β = -0.86, $p < 0.01$). Through the mediating effect of academic burnout, self-efficacy positively predicted SRL, with an effect size of 0.40 (-0.86 × -0.47). Additionally, 79% of the variance in SRL is accounted for by self-efficacy and academic burnout, both directly and indirectly.



SE=self-efficacy, AB=academic burnout, RE=reduced efficacy, CY=cynicism, EE=emotional exhaustion, SL=self-regulated learning, MC=metacognitive control, SC=satisfaction control, CC=commitment control. CE=environment control, EC=emotion control.

Figure 2 The final model.

5. Discussion

The present study investigated the intricate relationships between self-efficacy, academic burnout and SRL. The findings provided intriguing implications into the study of psychological and affective factors influencing L2 acquisition.

Firstly, self-efficacy had a direct, positive, and significant predictive effect on SRL, confirming H1. This finding aligns with previous research illustrating that students with higher self-efficacy profiles exhibit greater self-regulated ability[24]. Secondly, self-efficacy had a direct, negative, and significant predictive effect on academic burnout, supporting H2. Previous study has also shown a significant association between Chinese EFL students' self-efficacy and academic burnout[7]. High self-efficacy level reflects students' confidence in their learning ability, providing an advantage in the learning process and reducing academic burnout [25]. Thirdly, the results indicated that academic burnout served as a direct, negative, and significant predictor of SRL, confirming H3. This result partially aligns with two prior studies. Academic burnout depletes the necessary resource(s) required for self-control[26], a phase immediately preceding self-regulation[27]. As this resource depletes, the practice of self-control becomes less effective[28]. In this study, we confirm that academic burnout had a negative impact on SRL. Fourthly, the results demonstrated that academic burnout mediated the association between self-efficacy and SRL, supporting H4. This finding proved that it is vital to reduce academic burnout in the learning process as an attempt to improve college EFL learners' SRL capacity. College EFL learners with a high self-efficacy level experience less academic burnout and are more self-regulated in the process of learning. Therefore, instructors should attempt to improve college EFL learners' SRL capacity by both increasing self-efficacy level and reducing academic burnout level.

6. Conclusion, Implications and Limitation

This study revealed that self-efficacy positively influenced SRL and negatively influenced academic burnout. Additionally, in the relationship between self-efficacy and SRL, academic burnout served as a mediating factor. These findings carry significant educational implications for EFL teachers. A fundamental objective of a course on language learning is to promote effective SRL[29]. The results and model of this study underscore the importance of improving EFL learners' self-efficacy and alleviating their academic burnout in promoting SRL. EFL teachers can significantly elevate students' self-efficacy by providing emotional support, thereby positively influencing subjective well-being and academic performance[30].

There exist some limitations in the research design of this study. Firstly, a larger amount of sample can enhance the reliability of the findings. Furthermore, all factors were measured nearly simultaneously. The results would be more convincing with assessments of the variables at multiple time points and the conduct of a longitudinal study.

References

[1] Doo, M.Y., Bonk, C.J. & Heo, H (2023). Examinations of the relationships between self-efficacy, self-regulation, teaching, cognitive presences, and learning engagement during COVID-19. Education Tech Research Dev, 71, 481–504.

[2] Liborius, P., Bellh¨ auser, H., & Schmitz, B. (2019). What Makes a Good Study Day? An Intraindividual Study on University Students' Time Investment by Means of Time Series Analyses. Learning and Instruction, 60(October), 310–321.

[3] Bai, B., & Guo, W. J. (2018). Influences of SRL (SRL) strategy use on self-efficacy in primary school students' English writing in Hong Kong. Reading & Writing Quarterly, 34, 523–536.

[4] Bai, B., & Guo, W. (2021). Motivation and self-regulated strategy use: Relationships to primary school students' English writing in Hong Kong. Language Teaching Research, 25(3), 378–399.

[5] Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic Emotions in Students' SRL and Achievement: A program of Qualitative and Quantitative research. Educational Psychologist, 37(2), 91–105.

[6] Duru, E., Duru, S., & Balkis, M. (2014). Analysis of relationships among burnout, academic achievement, and self-regulation. Kuram ve Uygulamada Eğitim Bilimleri, 14(4), 1274–1284

[7] Ma, Y. (2024). The impact of academic self-efficacy and academic motivation on Chinese EFL students' academic burnout. Learning and Motivation, 85, 101959.

[8] Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. Educational Psychologist, 28(2), 117–148.

[9] Linnenbrink, E. A., & Pintrich, P. R. (2003). The role of self-efficacy beliefs in student engagement and learning in the classroom. Reading & Writing Quarterly, 19(2), 119–137.

[10] Huang, C. (2016). Achievement goals and self-efficacy: A meta-analysis. Educational Research Review, 19(1), 119–137.

[11] Schunk, D.H., & Usher, E.L. (2012). Social cognitive theory and motivation. In Ryan, R.M. (Ed.), Oxford library of psychology: The Oxford handbook of human motivation (pp. 13–27). Oxford University Press.

[12] Wang, C., Schwab, G., Fenn, P., & Chang, M. (2013). Self-efficacy and SRL strategies for English language learners: Comparison between Chinese and German college students. Journal of Educational and Developmental Psychology, 3(1), 173–191.

[13] Schaufeli, W.B., Salanova, M., González-romá, V. et al. (2002). The Measurement of Engagement and Burnout: A Two Sample Confirmatory Factor Analytic Approach. Journal of

Happiness Studies, 3, 71–92.

[14] Li, C., Zhang, L. J., & Jiang, G. (2021). Conceptualisation and measurement of foreign language learning burnout among Chinese EFL students. Journal of Multilingual and Multicultural Development, 1–15.

[15] May, R. W., Bauer, K. N., & Fincham, F. D. (2015). School burnout: Diminished academic and cognitive performance. Learning and Individual Differences, 42, 126–131.

[16] Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. American Educational Research Journal, 45, 166-183.

[17] Zimmerman, B. J. (2000). Attaining self-regulation. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 13–39). Academic Press.

[18] Bai, B., & Wang, J. (2020). The role of growth mindset, self-efficacy and intrinsic value in SRL and English language learning achievements. Language teaching research, 27(1), 207-228.

[19] Tseng, W., Dörnyei, Z., & Schmitt, N. (2006). A new approach to assessing strategic learning: the case of Self-Regulation in Vocabulary Acquisition. Applied Linguistics, 27(1), 78–102.

[20] Teng, L. S. (2021). Individual differences in SRL: Exploring the nexus of motivational beliefs, self-efficacy, and SRL strategies in EFL writing. Language Teaching Research, 1–23.

[21] Wang, C. M., & Zhou B. G. (2008). Chinese students' self-concept of English learning. Shanghai Foreign Language Education Press.

[22] Liu, X. H., Niu, R. X. & Guo, J. D. (2020). The Support of Teachers and Classmates, and the Relationship Between Support and Learning Burnout in English Learning. Journal of Jiangxi Normal University (Philosophy and Social Sciences Edition), 53(05), 138-144.

[23] Wu, M. (2013). Structural Equation Modelling: Tips for Practical Application. Chongqing University Press.

[24] Kim, D. H., Wang, C., Ahn, H.S., & Bong, M. (2015). English language learners' self-efficacy profiles and relationship with SRL strategies. Learning and Individual Differences, 38, 136–142.

[25] Ling, L., Shen, Q., & Shen, L. (2014). An investigation about learning burnout in medical college students and its influencing factors. International Journal of Nursing Sciences, 1(1), 117–120.

[26] Seibert, G. S., May, R. W., Fitzgerald, M., & Fincham, F. D. (2016). Understanding school burnout: Does self-control matter? Learning and Individual Differences, 49, 120–127.

[27] Kopp, C. B. (1982). Antecedents of self-regulation: A developmental perspective. Developmental Psychology, 18(2), 199–214.

[28] Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. Psychological Inquiry, 7(1), 1–15.

[29] Hofer, B. K., Yu, S. L., & Pintrich, P. R. (1998). Teaching college students to be self-regulated learners. In D. H. Schunk, & B. J. Zimmerman (Eds.), SRL: From teaching to self-reflective practice (pp. 57–85). Guilford Press.

[30] Zhou, M., Liu, X., & Guo, J. (2023). The mediating effect of self-efficacy between teacher emotional support and interaction engagement in EFL learning. Journal of Multilingual and Multicultural Development, 1-15.