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Deep Approach to Learning and Self-Regulated Learning among EFL University Students: A Descriptive Survey Study

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Abstract

This study describes how English as a Foreign Language (EFL) university students approach English learning and how they regulate their own learning. A descriptive quantitative survey design was used. Thirty-nine EFL university students completed a 25-item, five-point Likert questionnaire. Items 1–10 measured the deep approach to learning English, and items 11–25 measured self-regulated learning (SRL). Data were analyzed with means, standard deviations, response frequencies, Cronbach's alpha, and a Pearson correlation. Both scales were reliable (α = .817 for the deep approach; α = .834 for SRL). Students reported a high deep approach to learning (M = 4.17, SD = 0.47), with 92.3% of them in the high or very high category. Their SRL was also high, but lower (M = 3.86, SD = 0.49), with 84.6% in the high or very high category. The strongest deep approach items reached means of 4.59, while the weakest items ranged from 3.72 to 3.95. Within SRL, students were strongest in items 21, 19, and 22 (M = 4.21–4.41) and weakest in items 13 and 11 (M = 2.90 and 3.18), which were only moderate. The two constructs were strongly and positively correlated (r = .66, p < .001). The findings suggest that students value meaningful English learning but need more structured support to plan, monitor, and sustain it independently. Lecturers are encouraged to embed explicit SRL training, reflective tasks, and goal-setting routines into EFL courses.

Keywords Deep Approach To Learning; Self-Regulated Learning; EFL; University Students; Descriptive Survey

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INTRODUCTION

Learning English at university involves more than memorizing vocabulary and grammatical rules to pass examinations. University students are expected to understand language input, connect new knowledge with existing knowledge, use English to construct meaning, and continuously develop their language skills through independent learning. These expectations require students to adopt meaningful learning approaches and take responsibility for managing their own learning processes. In this regard, two important concepts in educational psychology are particularly relevant: the deep approach to learning and self-regulated learning (SRL). The deep approach emphasizes understanding, meaning-making, and the integration of knowledge, whereas the surface approach focuses primarily on memorization and the reproduction of information (Marton & Säljö, 1976; Biggs et al.,

2001). Meanwhile, SRL refers to learners' ability to establish learning goals, select appropriate strategies, monitor their progress, and evaluate learning outcomes (Zimmerman, 2002; Panadero, 2017).

The concept of learning approaches originated from the work of Marton and Säljö (1976), who identified differences in how students process information when reading the same text. Some students attempted to understand the underlying meaning of the text, while others concentrated on memorizing separate pieces of information. Subsequently, the deep approach was conceptualized as a combination of intrinsic motivation to understand and learning strategies involving the integration of ideas, identification of patterns, and critical evaluation of evidence (Entwistle & Ramsden, 1983; Biggs et al., 2001). In contrast, the surface approach is generally associated with minimal learning effort, fear of failure, and reliance on rote memorization. These approaches are not permanent characteristics of individual learners because they can be influenced by teaching practices, assessment methods, and academic workloads (Biggs & Tang, 2011; Baeten et al., 2010). A systematic review by Asikainen and Gijbels (2017) further indicates that students do not automatically develop deeper learning approaches as they progress through higher education. Therefore, learning environments need to be designed to encourage meaningful engagement with learning materials. In Asian educational contexts, memorization may also function as a complementary strategy for achieving understanding rather than necessarily representing superficial learning (Kember, 1996).

In English as a Foreign Language (EFL) contexts, adopting a deep approach is particularly important because language acquisition requires continuous engagement with linguistic input and opportunities for meaningful practice. Students need to connect vocabulary and grammatical knowledge with authentic contexts, explore additional learning resources, and use English to develop their understanding of various topics. In Indonesia, students often demonstrate considerable motivation to learn English at the beginning of their educational journey; however, formal schooling does not always maintain this motivation, making independent learning outside the classroom increasingly important (Lamb, 2007). Students who approach English learning primarily as a requirement for passing examinations may have difficulty retaining and applying their knowledge. Conversely, learners who focus on understanding and independently manage their learning activities have greater opportunities to sustain their learning development (Dinsmore & Alexander, 2012; Richardson et al., 2012).

Alongside learning approaches, self-regulated learning represents another essential dimension of successful language learning. Zimmerman (1990, 2002) describes self-regulated learners as active participants who manage their learning through metacognitive, motivational, and behavioral processes. His cyclical model consists of three interconnected phases: forethought, which involves goal setting and planning; performance, which involves implementing strategies and monitoring learning progress; and self-reflection, which involves evaluating outcomes and adjusting subsequent learning activities. Similarly, Pintrich and De Groot (1990) demonstrate that cognitive strategy use and self-regulation contribute to students' classroom performance. Pintrich (2004) subsequently developed a framework encompassing the regulation of cognition, motivation, behavior, and learning context. A comparative analysis of six major SRL models by Panadero (2017) also highlights common elements, particularly goal setting, monitoring, and adaptive control of learning processes.

The importance of SRL has been widely discussed in higher education, particularly in relation to students' academic achievement. Research indicates that strategies such as effort regulation, time management, and metacognitive monitoring are associated with better academic performance (Broadbent & Poon, 2015; Richardson et al., 2012). In language learning, SRL has been investigated across different areas, including vocabulary acquisition (Tseng et al., 2006), writing performance (Teng & Zhang, 2016), and overall English achievement (Wang & Bai, 2017; Bai & Wang, 2023). Bai and Wang (2023) found that monitoring and effort regulation significantly predicted English achievement, although goal setting and planning did not demonstrate the same predictive contribution. In addition, Kim et al. (2015) showed that learners with stronger self-efficacy tended to employ more SRL strategies. These findings suggest that successful language learning involves not only the acquisition of linguistic knowledge but also learners' ability to regulate their motivation, strategies, and learning behavior.

In the Indonesian EFL context, previous studies have also examined students' self-regulatory practices in different learning environments. Umamah and Cahyono (2020) investigated self-regulated learning in academic writing, while Mahmud and German (2021) explored students' self-regulatory experiences in online learning. More recently, Ni'mah et al. (2025) contributed to the discussion of self-regulated learning among Indonesian EFL learners. Although these studies provide valuable insights into students' learning regulation, research has generally focused on particular language skills or specific learning modes. Consequently, a broader understanding of how students approach English learning and regulate their learning activities within the same educational context remains necessary.

The relationship between the deep approach to learning and self-regulated learning provides an important perspective for understanding students' learning behavior. Although these two constructs are closely related, they represent different dimensions of the learning process. The deep approach concerns students' intentions to understand learning materials and the ways they process information meaningfully, whereas SRL focuses on how students organize, monitor, and control their learning activities over time. A student may have a strong intention to understand English deeply but may not necessarily possess adequate skills to plan learning activities, monitor progress, or evaluate learning outcomes. In this regard, Dinsmore and Alexander (2012) emphasize the importance of strategic selection and monitoring in deep information processing. Therefore, examining both constructs simultaneously may provide a more comprehensive understanding of students' learning characteristics and the factors that support meaningful language learning.

Despite the growing attention to deep learning and self-regulated learning, studies examining both constructs simultaneously among university-level EFL students remain relatively limited, particularly in the Indonesian higher education context. Previous research has provided evidence regarding students' learning approaches and self-regulatory strategies, but these dimensions are often investigated separately or within specific language-learning activities. This creates a research gap concerning how students' intentions to engage in meaningful learning correspond with their actual capacity to regulate their learning processes. Understanding this relationship is important because students who demonstrate a deep approach may still require support in developing planning, monitoring, and evaluation skills. Conversely, students who possess self-regulatory strategies may need encouragement to move beyond memorization toward deeper understanding.

Accordingly, the novelty of this study lies in examining the deep approach to learning

and self-regulated learning together within one group of university-level EFL students. Rather than investigating these constructs independently, this study explores their respective levels and examines the relationship between them. Such an approach is expected to provide a more integrated description of students' English learning characteristics and offer practical insights for lecturers in designing learning activities that promote meaningful engagement, learner autonomy, and effective self-regulation. Therefore, this study aims to investigate the extent to which university-level EFL students adopt a deep approach to learning English, examine the extent to which they practice self-regulated learning, and analyze the relationship between the deep approach to learning and self-regulated learning among these students.

METHOD

This study employed a descriptive quantitative survey design to examine students' approaches to learning English and their self-regulated learning practices. Survey research is appropriate for describing the attitudes, opinions, and behaviors of a particular group through numerical data collected at a specific point in time (Creswell & Creswell, 2018). No variables were manipulated in this study, as the primary purpose was to describe students' existing learning approaches and self-regulatory practices. The participants consisted of 39 English as a Foreign Language (EFL) students enrolled at Universitas Klabat, Indonesia, during the odd semester of the 2026/2027 academic year. Participants were recruited using convenience sampling based on their accessibility and availability to participate in the study. Participation was voluntary, and all responses were collected anonymously. Students were also informed that their participation and questionnaire responses would not influence their academic grades.

The data were collected using a questionnaire comprising 25 items measured on a five-point Likert scale, ranging from 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), to 5 (strongly agree). The questionnaire consisted of two sections designed to measure the main constructs investigated in this study. The first section, comprising items 1–10, assessed students' deep approach to learning English, adapted from the deep approach subscale of the Revised Two-Factor Study Process Questionnaire (R-SPQ-2F) developed by Biggs et al. (2001). The second section, consisting of items 11–25, measured students' self-regulated learning practices, drawing on established SRL frameworks and instruments used in language learning research (Zimmerman, 2002; Pintrich & De Groot, 1990; Wang & Bai, 2017). The questionnaire was administered in [Indonesian/English] to ensure that participants could understand the statements and provide appropriate responses.

The internal consistency of the questionnaire was examined using Cronbach's alpha coefficient. According to Taber (2018), a Cronbach's alpha value of .70 or higher is generally considered acceptable for research instruments. The reliability analysis showed that the deep approach to learning scale, consisting of 10 items, obtained a Cronbach's alpha coefficient of .817. Meanwhile, the self-regulated learning scale, comprising 15 items, achieved a coefficient of .834. The overall questionnaire, consisting of 25 items, demonstrated a Cronbach's alpha coefficient of .889. These results indicate that both scales and the questionnaire as a whole had good internal consistency, as presented in Table 1.

Table 1. Reliability of the Research Instrument

Scale	Items		Cronbach's α	Interpretation
Deep approach to	1		.817	Good

learning	–10	9		
Self-regulated learning	11–25	9	.834	Good
Whole questionnaire	1–25	9	.889	Good

The collected data were analyzed using descriptive and inferential statistics. Descriptive statistical analysis involved calculating the mean, standard deviation, and percentage distribution of responses for each questionnaire item. The mean scores were used to identify the levels of students' deep approach to learning and self-regulated learning. Both individual item means and students' overall scale means were interpreted using a five-level classification based on equal interval ranges across the 1–5 Likert scale. Each interval represented a range of 0.80, as presented in Table 2.

Table 2. Interpretation Criteria for Mean Scores

Mean Score	**Category**
4.21–5.00	Very high
3.41–4.20	High
2.61–3.40	Moderate
1.81–2.60	Low
1.00–1.80	Very low

Furthermore, Pearson's product-moment correlation coefficient was employed to examine the relationship between students' deep approach to learning and self-regulated learning. The correlation analysis was conducted using the mean scores of each participant on both scales. This analysis aimed to determine the direction and strength of the relationship between the two constructs and to address the third research question.

FINDINGS AND DISCUSSION

Results

Deep approach to learning English

Students reported a high deep approach to learning, with an overall mean of 4.17 (SD = 0.47). Four of the ten items reached the very high category, and the remaining six were high. No item fell into the moderate category or below.

Table 3. Students' responses on the deep approach to learning English (N = 39)

No.	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. Dev.	Category
1	[Statement 1]	0.0	2.6	7.7	46.2	43.6	4.31	0.73	Very high
2	[Statement 2]	0.0	0.0	2.6	35.9	61.5	4.59	0.55	Very high
3	[Statement 3]	0.0	0.0	10.3	28.2	61.5	4.51	0.68	Very high
4	[Statement 4]	0.0	0.0	7.7	25.6	66.7	4.59	0.64	Very high

No.	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. Dev.	Category
5	[Statement 5]	0.0	2.6	33.3	53.8	10.3	3.72	0.69	High
6	[Statement 6]	0.0	5.1	20.5	43.6	30.8	4.00	0.86	High
7	[Statement 7]	0.0	0.0	17.9	53.8	28.2	4.10	0.68	High
8	[Statement 8]	0.0	0.0	35.9	28.2	35.9	4.00	0.86	High
9	[Statement 9]	2.6	2.6	23.1	46.2	25.6	3.90	0.91	High
10	[Statement 10]	0.0	7.7	28.2	25.6	38.5	3.95	1.00	High
	Overall						**4.17**	**0.47**	**High**

Note. SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree.

Items 2 and 4 had the highest means (M = 4.59). For item 2, 97.4% of students agreed or strongly agreed, and no one disagreed. Item 3 (M = 4.51) and item 1 (M = 4.31) were also very high. The lowest item was item 5 (M = 3.72), where one third of the students (33.3%) chose neutral and only 10.3% strongly agreed. Items 8 and 10 also drew many neutral answers (35.9% and 28.2%), and item 10 had the widest spread of responses (SD = 1.00).

Self-regulated learning

Students' SRL was high overall (M = 3.86, SD = 0.49), but it was lower and more varied than their deep approach. Three items were very high, ten were high, and two were moderate.

Table 4. Students' responses on self-regulated learning (N = 39)

No.	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. Dev.	Category
11	[Statement 11]	2.6	17.9	43.6	30.8	5.1	3.18	0.88	Moderate
12	[Statement 12]	2.6	15.4	28.2	33.3	20.5	3.54	1.07	High
13	[Statement 13]	2.6	30.8	46.2	15.4	5.1	2.90	0.88	Moderate
14	[Statement 14]	0.0	0.0	20.5	48.7	30.8	4.10	0.72	High
15	[Statement 15]	2.6	7.7	17.9	30.8	41.0	4.00	1.08	High
16	[Statement 16]	0.0	10.3	25.6	48.7	15.4	3.69	0.86	High
17	[Statement 17]	0.0	2.6	23.1	38.5	35.9	4.08	0.84	High
18	[Statement 18]	0.0	5.1	30.8	33.3	30.8	3.90	0.91	High
19	[Statement 19]	0.0	0.0	15.4	41.0	43.6	4.28	0.72	Very high
20	[Statement 20]	0.0	5.1	25.6	41.0	28.2	3.92	0.87	High
21	[Statement 21]	0.0	2.6	12.8	25.6	59.0	4.41	0.82	Very high
22	[Statement 22]	0.0	2.6	15.4	41.0	41.0	4.21	0.80	Very high
23	[Statement 23]	0.0	5.1	41.0	33.3	20.5	3.69	0.86	High

No.	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. Dev.	Category
24	[Statement 24]	7.7	2.6	20.5	43.6	25.6	3.77	1.11	High
25	[Statement 25]	0.0	2.6	17.9	38.5	41.0	4.18	0.82	High
	Overall						**3.86**	**0.49**	**High**

Item 21 had the highest mean (M = 4.41), with 59.0% of students strongly agreeing. Items 19 (M = 4.28) and 22 (M = 4.21) were also very high. The weakest items were item 13 (M = 2.90) and item 11 (M = 3.18), both in the moderate category. For item 13, a third of the students (33.3%) disagreed or strongly disagreed, and 46.2% were neutral. Items 24, 15, and 12 showed the largest disagreement among students (SD = 1.11, 1.08, and 1.07); in item 24, 7.7% strongly disagreed even though 69.2% agreed.

Distribution of students across categories

Most students were in the high or very high category on both scales. The deep approach had twice as many students in the very high category as SRL (16 versus 8).

Table 5. Distribution of students by category (N = 39)

Category	Deep approach: n	Deep approach: %	SRL: n	SRL: %
Very high (4.21–5.00)	16	41.0	8	20.5
High (3.41–4.20)	20	51.3	25	64.1
Moderate (2.61–3.40)	3	7.7	5	12.8
Low (1.81–2.60)	0	0.0	1	2.6
Very low (1.00–1.80)	0	0.0	0	0.0
Min–max of student means	3.20–5.00		2.60–4.87	

Relationship between the deep approach and SRL

A Pearson correlation showed a strong positive relationship between students' deep approach scores and their SRL scores ($r = .66$, $p < .001$, $N = 39$). Students who reported deeper learning of English also tended to report stronger self-regulation. The shared variance was about 43% ($r^2 = .435$).

Discussion

Students hold a strong deep orientation toward English

The first research question asked how far students adopt a deep approach to learning English. The answer is clearly positive: the overall mean was 4.17, no item fell below the high category, and more than nine in ten students were high or very high. This profile suggests that the students see English as something to understand and use, not only as a subject to pass. It fits the description of a deep approach, driven by an intrinsic motive to understand (Biggs et al., 2001), and it echoes reports that Indonesian learners often hold strong motivation toward English (Lamb, 2007). The pattern inside the scale is also informative. The very high items (items 1–4) had small standard deviations, which shows broad agreement among students. Items 5, 8, 9, and 10 had lower means and many neutral responses. [Briefly state what items 5, 8, 9, and 10 ask about.] Neutral answers on these items may mean that

students value deep learning in principle but act on it less consistently. This gap between intention and action matches Asikainen and Gijbels' (2017) finding that a deep orientation does not grow on its own; it needs teaching and assessment that reward understanding (Baeten et al., 2010; Biggs & Tang, 2011).

Self-regulation is high but uneven

The second research question concerned SRL. Students reported high SRL (M = 3.86), but the mean was lower than for the deep approach; fewer students were very high (20.5% versus 41.0%), and two items were only moderate. In other words, students' wish to learn deeply is stronger than their ability to organize that learning on their own. This finding echoes studies of Indonesian university students, who often report difficulty with planning and time management even when they are motivated (Mahmud & German, 2021; Umamah & Cahyono, 2020). The strongest SRL items were 21, 19, and 22 (M = 4.21–4.41). [Briefly state what these items ask about and link them to the relevant phase of Zimmerman's model: forethought, performance, or self-reflection.] The weakest items were 13 and 11. In item 13, a third of the students disagreed, and nearly half were neutral, so this behavior is not yet a habit for most of them. [State what items 13 and 11 ask about.] Zimmerman (2002) notes that SRL skills are learned, not innate, and that students develop them most when teachers model and coach them. The wide spread in items 24, 15, and 12 also shows that students differ a great deal in some regulatory habits, so a single classroom approach may not suit everyone.

Deep learning and self-regulation go together

The third research question examined the link between the two constructs. The strong positive correlation (r = .66) indicates that students who aim to understand English deeply also tend to regulate their learning more actively. This agrees with Dinsmore and Alexander's (2012) argument that deep processing depends on strategic control, and with evidence that monitoring and effort regulation predict English achievement (Bai & Wang, 2023). Since the study is correlational and cross-sectional, it cannot show which construct influences the other. A likely explanation is that the two reinforce each other: the intention to understand gives a reason to plan and monitor, and good regulation makes deep learning possible to sustain. These findings have practical value for EFL lecturers. Because students already value deep learning, lecturers can focus on the regulatory skills that turn intention into routine. Useful steps include asking students to set short-term learning goals, keep learning journals, assess their own work against rubrics, and review their strategies after each task (Zimmerman, 2002; Panadero, 2017). Such activities can also be built into online and blended courses, where self-regulation matters even more (Broadbent & Poon, 2015).

CONCLUSION

This study found that EFL university students hold a high deep approach to learning English (M = 4.17) and a high, though somewhat weaker, level of self-regulated learning (M = 3.86). The two constructs were strongly and positively related (r = .66). Students' intention to understand English is well established, while some regulatory habits, especially those in items 13 and 11, are still developing. The main implication is that EFL programs should

teach self-regulation explicitly, through goal setting, self-monitoring, reflection, and feedback, so that students can act on their deep orientation more consistently. The study has several limitations. The sample was small (N = 39) and came from one institution, so the results cannot be generalized to all Indonesian EFL students. The data were self-reported and may reflect social desirability. The design was descriptive and cross-sectional, so it cannot establish cause and effect. Future research could use larger, multi-institution samples, add surface approach and achievement measures, test the factor structure of the instrument, and include interviews or learning journals to explain why some SRL behaviors remain moderate.

References

Asikainen, H., & Gijbels, D. (2017). Do students develop towards more deep approaches to learning during studies? A systematic review on the development of students' deep and surface approaches to learning in higher education. *Educational Psychology Review, 29*(2), 205–234. https://doi.org/10.1007/s10648-017-9406-6

Baeten, M., Kyndt, E., Struyven, K., & Dochy, F. (2010). Using student-centred learning environments to stimulate deep approaches to learning: Factors encouraging or discouraging their effectiveness. *Educational Research Review, 5*(3), 243–260. https://doi.org/10.1016/j.edurev.2010.06.001

Bai, B., & Wang, J. (2023). The role of growth mindset, self-efficacy and intrinsic value in self-regulated learning and English language learning achievements. *Language Teaching Research, 27*(1), 207–228. https://doi.org/10.1177/1362168820933190

Biggs, J., Kember, D., & Leung, D. Y. P. (2001). The revised two-factor Study Process Questionnaire: R-SPQ-2F. *British Journal of Educational Psychology, 71*(1), 133–149. https://doi.org/10.1348/000709901158433

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university* (4th ed.). Open University Press.

Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education, 27*, 1–13. https://doi.org/10.1016/j.iheduc.2015.04.007

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE.

Dinsmore, D. L., & Alexander, P. A. (2012). A critical discussion of deep and surface processing: What it means, how it is measured, the role of context, and model specification. *Educational Psychology Review, 24*(4), 499–567. https://doi.org/10.1007/s10648-012-9198-7

Entwistle, N., & Ramsden, P. (1983). *Understanding student learning*. Croom Helm.

Kember, D. (1996). The intention to both memorise and understand: Another approach to learning? *Higher Education, 31*(3), 341–354. https://doi.org/10.1007/BF00128436

Kim, D.-H., Wang, C., Ahn, H. S., & Bong, M. (2015). English language learners' self-efficacy profiles and relationship with self-regulated learning strategies. *Learning and Individual*

Differences, 38, 136–142. https://doi.org/10.1016/j.lindif.2015.01.016

Lamb, M. (2007). The impact of school on EFL learning motivation: An Indonesian case study. *TESOL Quarterly, 41*(4), 757–780. https://doi.org/10.1002/j.1545-7249.2007.tb00102.x

Mahmud, Y. S., & German, E. (2021). Online self-regulated learning strategies amid a global pandemic: Insights from Indonesian university students. *Malaysian Journal of Learning and Instruction, 18*(2), 45–68. https://doi.org/10.32890/mjli2021.18.2.2

Marton, F., & Säljö, R. (1976). On qualitative differences in learning: I—Outcome and process. *British Journal of Educational Psychology, 46*(1), 4–11. https://doi.org/10.1111/j.2044-8279.1976.tb02980.x

Ni'mah, U., Nasihah, M., & Munfaati, F. (2025). Exploring self-regulated learning strategies to enhance English speaking skills among EFL students. *Indonesian Journal of Applied Linguistics, 14*(3), 472–483. https://doi.org/10.17509/ijal.v14i3.72000

Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. *Frontiers in Psychology, 8*, 422. https://doi.org/10.3389/fpsyg.2017.00422

Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review, 16*(4), 385–407. https://doi.org/10.1007/s10648-004-0006-x

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. https://doi.org/10.1037/0022-0663.82.1.33

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin, 138*(2), 353–387. https://doi.org/10.1037/a0026838

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education, 48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

Teng, L. S., & Zhang, L. J. (2016). A questionnaire-based validation of multidimensional models of self-regulated learning strategies. *The Modern Language Journal, 100*(3), 674–701. https://doi.org/10.1111/modl.12339

Tseng, W.-T., 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. https://doi.org/10.1093/applin/ami046

Umamah, A., & Cahyono, B. Y. (2020). Indonesian university students' self-regulated writing (SRW) strategies in writing expository essays. *Indonesian Journal of Applied Linguistics, 10*(1), 25–35. https://doi.org/10.17509/ijal.v10i1.24958

Wang, C., & Bai, B. (2017). Validating the instruments to measure ESL/EFL learners' self-efficacy beliefs and self-regulated learning strategies. *TESOL Quarterly, 51*(4), 931–947. https://doi.org/10.1002/tesq.355

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview.

Educational Psychologist, 25(1), 3–17. https://doi.org/10.1207/s15326985ep2501_2

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice, 41*(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2