

Original Paper

Influences of Critical Thinking Disposition on Situated Academic Writing Self-efficacy of EFL Students

Hamad H. Alsowat¹

¹ College of education, Taif University, Saudi Arabia

Received: February 20, 2022

Accepted: March 16, 2022

Online Published: March 22, 2022

doi:10.22158/selt.v10n1p106

URL: <http://dx.doi.org/10.22158/selt.v10n1p106>

Abstract

This study investigated the influences of critical thinking disposition (CTD) on EFL undergraduates' situated academic writing self-efficacy (SAWSE). A total of 243 Saudi students completed Yoon's Critical Thinking Disposition (YCTD) instrument and the Situated Academic Writing Self-Efficacy Scale (SAWSES). The findings revealed that students had medium levels of CTD ($M=3.26$, $SD=0.56$) and SAWSE ($M=3.20$, $SD=0.68$). Eagerness, fairness, and objectivity scored the highest levels on CTD, whereas prudence had the lowest level. In addition, findings revealed significant differences in levels of situated academic writing self-efficacy among students who had high, medium, and low levels of critical thinking disposition. The correlations between subscales of CTD and SAWSE were all positive and statistically significant. Besides, the self-confidence subscale of CTD had the most significant impact on all three aspects of SAWSE. The study paved the way to understand how students' situated academic writing self-efficacy changes as a result of critical thinking disposition. Implications for EFL teachers and future directions were discussed.

Keywords

critical thinking disposition, EFL, self-efficacy, situated academic writing

1. Introduction

Writing is regarded as a complicated task due to its dynamic nature (Teng et al., 2018). For university students, academic writing helps students remember via taking notes and keeping a record, observe and gather evidence in many disciplines, think and reflect on what they have written, communicate and report research findings, assignments, and examination, and learn since writing is a key tool to reveal knowledge and understanding of the study discipline (Day, 2018). Students entering university “are repeatedly trying on new identities in order to think, reflect, argue, evaluate, and use language when writing” (Mitchell et al., 2021, p. 2). Therefore, writing becomes more difficult as students move from

high school to university (Mitchell et al., 2021). Academic writing “expresses itself as a dialectical, dialogic, aesthetic, investigative and reflective act in a whole social, political and ideological context, which must be encouraged in the academic sphere” (Moraes & Castro, 2018, p. 14). Students must learn the graphic and rhetoric systems of the language, improve their cultural and linguistic writing awareness (Omar, 2019), learn the rhetorical demands of the writing genres, and employ cognitive and metacognitive writing strategies (Mitchell, McMillan, & Lobchuk, 2019).

EFL settings symbolize the situated nature of writing. EFL students’ writing is affected by their first language (L1) and the educational context where they write. This social and cultural context provides linguistic and textual knowledge, which affects students’ writing processes (Rinnert & Kobayashi, 2009). Situated academic writing focuses on genre knowledge, which is connected to disciplines. It considers the social context in which writing genres are situated. Recently, academic writing has moved from artificial settings to natural settings in which students are studying various disciplines (Yiu, 2014). Academic writing requires not only the use of writing knowledge but also affective factors such as motivation, self-confidence, and self-efficacy. According to Bandura (1997), self-efficacy is defined as “beliefs in one’s capabilities to organize, and execute the courses of action required to produce given attainments” (p. 3). Self-efficacy plays a significant role in how individuals behave, think, and feel about their goals and the challenges they face. Individuals with high self-efficacy develop more profound interests in the activities they participate in and view difficulties as tasks to be mastered, while low self-efficacy individuals avoid challenging tasks and lose confidence (Green & Palmer, 2019). Writing self-efficacy embraces writers’ self-judgment or evaluation of their abilities to complete a given writing task (Zhang, 2018). Writing self-efficacy plays a significant role in students’ academic writing process. It is correlated positively to students’ goals for course completion, getting potential grades, and actual achievement (Bandura, 1995). Research has revealed that writing self-efficacy is positively correlated with students’ writing performance (Şekerci, 2021; Sun et al., 2021; Woodrow, 2011), Writing goal orientation (Chea & Shumow, 2017), and writing self-regulation beliefs (Ekholm et al., 2015). Situated academic writing self-efficacy (SAWSE) acknowledges measuring self-efficacy in a writing context that considers the social and situated perspectives to develop a disciplinary writing and maintain disciplinary rules and values within genres (Mitchell, McMillan, & Lobchuk, 2019).

The cognitive aspect of writing is insufficient to explain students’ writing performance. Other affective variables influence writing, such as the writer’s interests, beliefs, motivation, and critical thinking disposition (CTD). CTD is the affective component of critical thinking (CT), and it is crucial to draw correct conclusions from conflicting pieces of evidence and avoid the influence of belief biases (Kusumi, 2020). In addition, CTD refers to students’ willingness to persist confidently in utilizing their CT capabilities when approaching a problem. It plays a vital role in helping students to use their writing skills diligently and persistently throughout the writing process (McClenny, 2010). A substantial number of studies have shown a positive correlation between CTD and self-efficacy (e.g., Cansoy & Türkoglu, 2017; Kim, 2016; Kim et al., 2015; Manzoor et al., 2019). In addition, the studies that investigated the

relationship between CTD and writing were limited. These studies have shown contrary findings. While the study of Muzakki et al. (2017) revealed a positive correlation between CTD and writing performance, two studies showed a positive correlation between writing performance and only two sub-dispositions of CT; truth-seeking and maturity (Liu & Yao, 2019), and inquisitiveness and maturity (Jauhari, 2015). Writing is a critical thinking process in terms of being a skill that involves cognitive, social, and affective skills (Polatcan & Şahin, 2019). Kirmizi and Kirmizi (2015) stated that since “academic writing requires high mental processes in content, organization of thoughts and structure and use of appropriate grammar and mechanics, it necessitates strong critical thinking skills” (p. 57). Thus, writing self-efficacy may be affected by CTD since these constructs are affective in nature.

Several studies have investigated the correlation between CTD and general self-efficacy (Cansoy & Türkoglu, 2017; Kim, 2016; Kim et al., 2015; Manzoor et al., 2019) and the relationship of CTD with writing performance (Jauhari, 2015; Liu & Yao, 2019; Muzakki et al., 2017). However, existing research has revolved around investigating the relationship of CTD with general self-efficacy or writing performance as separate variables and ignored examining writing self-efficacy as a shared construct. Also, the previous research focused only on the relationship between CTD, self-efficacy, or writing performance and neglected the mutual influence between these variables. Thus, the gap in the literature is the lack of studies that have investigated the relationship between CTD and SAWSE and how CTD and its subscales influence EFL students’ situated academic writing self-efficacy, namely, writing essentials, relational reflective writing, and creative identity. Therefore, this study aimed to investigate the influence of CTD on SAWSE of EFL undergraduate students in Saudi Arabia. The significance of this study is that it may find ways to improve students’ situated academic writing self-efficacy, which may improve their writing performance. Moreover, this study reflects the contribution of CTD as one of the most crucial skills of the 21st century in the field of writing instruction. Consequently, the following research questions were addressed:

1. What are the levels of EFL students’ critical thinking disposition and situated academic writing self-efficacy?
2. Are there significant differences in levels of situated academic writing self-efficacy among students with high, medium, and low levels of critical thinking disposition?
3. Are there significant relationships between the critical thinking disposition subscales and situated academic writing self-efficacy subscales of EFL students?
4. How does EFL students’ critical thinking disposition influence their situated academic writing self-efficacy?

2. Literature Review

2.1 Critical Thinking Disposition

Critical thinking is defined as “the ability to apply higher-order cognitive skills (conceptualization, analysis, evaluation) and the disposition to be deliberate about thinking (being open-minded or

intellectually honest) that lead to action that is logical and appropriate” (Papp et al., 2014). CT is significant for students learning since it enables them to critically evaluate existing knowledge and information (Pu et al., 2019). CT has two dimensions: cognitive skills and dispositions (Facione, 1990). Critical thinking disposition is a “habit of the mind” or “frame of mind” that is essential for exercising CT (Davies & Barnett, 2015). The disposition toward CT is an indicator of intrinsic motivation to make decisions and solve problems depending on reasoning (Ghanizadeh et al., 2020). Facione et al. (1994) conducted a Delphi study and the factor analysis created seven dispositional constructs which are: open-mindedness, which is tolerance of alternative views, self-monitoring for possible error, and possibility of one’s own bias; inquisitiveness, which is one’s intellectual curiosity, interest, and enthusiasm for learning even when the use of the knowledge is not readily apparent; truth-seeking, which is the audacious desire, courageous about asking questions, objectivity, and motivation to seek the best knowledge; systematicity, which is appreciating organizations, focus, thoroughness, and being diligent in inquiry; maturity, which is careful attitude towards making, appending, or revising reflective judgments; analyticity, which is application of reasoning and evidence, alertness to consequences for problems, and anticipating practical difficulties; and self-confidence, which is the trust in one’s own reasoning and seeing oneself as a good thinker (Bayram, 2015; Jarvis, 2005). Numerous studies revealed that critical thinking skills and disposition have a positive relationship with academic performance (D’Alessio et al., 2019; Ghazivakili et al., 2014; Ren et al., 2020), writing (Afshar et al., 2017; Putri, 2018), creative thinking and problem-solving ability (Kim & Byun, 2019; Ülger, 2016), and self-efficacy (Cansoy & Türkoglu, 2017; Kim, 2016; Manzoor et al., 2019). Previous research on CTD did not consider the influence of CTD on specific types of self-efficacies such as reading self-efficacy, listening self-efficacy, or writing self-efficacy. Therefore, investigating the influence of CTD on writing self-efficacy and situated academic writing self-efficacy is warranted.

Measuring critical thinking disposition is a complicated process. Several instruments were developed to assess students’ CT disposition. First, Facione et al. (1994) developed the California Critical Thinking Disposition Inventory (CCTDI) with 75 items divided into seven subscales. The assumption underlying the development of CCTDI is that CT entails more than CT skills alone, and the students need the disposition to value critical thinking (Oermann & Gaberson, 2016). Next, Yoon’s Critical Thinking Disposition (YCTD) was developed to assess nurses’ critical thinking dispositions. It has seven subscales adapted from Facione et al. (1994). These subscales comprise 27 items: self-confidence, eagerness, fairness, objectivity, prudence, skepticism, and systematicity. In addition, Yuan et al. (2014) developed the Critical Thinking Disposition Assessment (CTDA) scale to assess professional and medical students’ CTD. The scale has three subscales: systematicity and analyticity, inquisitiveness and conversance, and maturity and skepticism, and the whole scale comprises 19 items. It was evident that these instruments focused on nursing and medical education. Thus, recently, Gerds-Andresen et al. (2022) developed the Critical Thinking Disposition Scale (CTDS) for social work education to assess students’ CTD. The scale has two subscales: critical openness and reflective skepticism, and comprises only 11 items.

2.2 *Situated Academic Writing Self-efficacy (SAWSE)*

Writing is much more than generating words or producing grammatically correct sentences. Writing as a process or communicative purpose is hard to be separated from writing as a text. It is linked to a set of purposes that occur in the context of social, cultural, and disciplinary practices (Breeze, 2012). Besides, writing is a social skill that exists in a situational context. It is a situated practice related to cognitive and metacognitive processes in actual contexts that allow “learners to rebuild and rethink the sense of interpretation toward situations” (Rodriguez-Herrera, 2021, p. 19). Within the university context, effective language teaching involves taking specificity seriously (Hyland, 2002). Therefore, discipline specificity and the linguistic demands of academic English make academic writing challenging for university students from various backgrounds (Quan, 2019). A writer cannot write a well-structured piece of writing in isolation from the surrounding environment’s norms and conventions. Self-efficacy recognizes the social context that develops peoples’ self-beliefs and emphasizes individual goals and motivations (Mitchell et al., 2021). Previous studies have measured writing self-efficacy and focused on writers’ abilities to complete tasks delimited to the cognitive process categories of planning, composing, and revising of the writing process (Mitchell et al., 2017; Sun & Wang, 2020; Zumbrunn et al., 2020). Writing context is significant for situated writing since disciplines are contexts that shape writing practices and then, in turn, are shaped by a specific genre or specific writing practices (Delcambre & Donahue, 2012). To the best knowledge of the researcher, no research has assessed students’ situated academic writing self-efficacy, so this study comes to respond to the call of Mitchel et al. (2021) to consider the social and situated context when assessing writing self-efficacy.

2.3 *Influence of Critical Thinking Disposition on Situated Academic Writing Self-efficacy*

Critical thinking disposition and self-efficacy are important concepts for students in the 21st century. Most studies have investigated the correlation between CTD and general self-efficacy and indicated a positive relationship between these two affective constructs (Cansoy & Türkoglu, 2017; Kim et al., 2015; Manzoor et al., 2019). In addition, CTD is positively correlated with writing performance (Liu & Yao, 2019; Muzakki et al., 2017). However, previous studies rarely addressed the influence of these variables on each other and did not investigate the relationship between critical thinking disposition and situated academic writing self-efficacy. Moreover, it is evident that most of the existing research is in the field of nursing. Therefore, more research is warranted to explore the effect of critical thinking disposition on students’ situated academic writing self-efficacy across disciplines and cultures.

3. Methods

3.1 *Research Design*

This study is quantitative; it employed the descriptive correlational design to examine the levels of EFL students’ critical thinking disposition and situated academic writing self-efficacy, the relationship between them, and the influence of critical thinking disposition on situated academic writing self-efficacy.

3.2 Participants

The study participants were undergraduate students studying at Taif University, Saudi Arabia, during the academic year 2021-2022. The proportionate stratified random sampling technique was used to assure the participation of male and female students across disciplines. Therefore, the total population was divided into subgroups according to gender (males and females) and study discipline (arts, social sciences, science, engineering, computer sciences, and medicine). Then, the study sample was chosen randomly from each subgroup (Table 1).

Table 1. Distribution of the Study Sample across Gender and Discipline

Discipline	Males	%	Females	%	Total	%
Arts	17	7	29	11.9	46	18.9
Social sciences	28	11.5	26	10.7	54	22.2
Science	22	9.1	27	11.1	49	20.2
Engineering	14	5.8	11	4.5	25	10.3
Computer sciences	19	7.8	20	8.2	39	16.1
Medicine	14	5.8	16	6.6	30	12.3
Total	114	47	129	53	243	100

The total sample comprised 295 students, including 138 males and 157 females, who were between the ages of 19 and 23. All students have studied the English language for more than ten years.

3.3 Instruments

3.3.1 Critical Thinking Disposition

Students' critical thinking disposition was assessed using a modified version of Yoon's Critical Thinking Disposition (YCTD) instrument (Yoon, 2004). The instrument consists of seven subscales with 27 items; self-confidence (4 items), eagerness (5 items), fairness (4 items), objectivity (3 items), prudence (4 items), skepticism (4 items), and systematicity (3 items). The instrument was originally developed to assess the CTD of nursing students. In this study, it was modified to suit students of all disciplines and the cultural setting. The instrument was translated into Arabic through translation and back-translation technique to ensure instrument validity. The instrument uses a 5-point-Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The interpretation of the instrument indicates students' strengths or weaknesses on the instrument. The categories included strongly negative (1-1.66), negative (1.67-2.49), inconsistent (2.5-3.32), positive (3.33-4.15), and strongly positive (4.16-5). The Cronbach's alpha coefficient for the original instrument was 0.84 (Yoon, 2004). For this study, the reliability was calculated using the Cronbach's alpha coefficient and reached 0.93. The inter-correlation of the adapted CTD instrument ranged from 0.78 to 0.90, which indicated that CTD is reliable.

3.3.2 Situated Academic Writing Self-efficacy

Students' situated academic writing self-efficacy was assessed using Mitchell et al.'s (2021) Situated Academic Writing Self-Efficacy Scale (SAWSES). The researcher had permission via email from the corresponding author to adopt the scale. The scale is intended for use in interdisciplinary post-secondary writing contexts. The scale was translated into Arabic through translation and back-translation technique to ensure instrument validity. It contains three subscales with 16 items: writing essentials (3 items), relational reflective writing (8 items), and creative identity (5 items). The items were rated on a 5-point-Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha coefficient for the original scale was 0.91 (total scale): writing essentials (0.85), relational reflective writing (0.88), and creative identity (0.88) (Mitchell et al., 2021). For this study, the reliability was calculated using the Cronbach's alpha coefficient and was 0.95 (total scale): writing essentials (0.83), relational reflective writing (0.89), and creative identity (0.94).

3.4 Procedures and Data Collection

After confirming the validity and reliability of the study instruments, Yoon's Critical Thinking Disposition (YCTD) and the Situated Academic Writing Self-Efficacy Scale (SAWSES) were presented to the Deanship of Scientific Research to obtain ethics approval and permission to conduct the study on undergraduate students of Taif University. An email that included an electronic version of the instruments was sent to the study sample, and students were informed that participation in this study was voluntary. A brief description of the study and directions for filling the instruments were enclosed. In addition, students were informed that data obtained would be confidential and used only for study purposes.

3.5 Statistical Analysis

The data obtained from the study instruments were coded and analyzed using SPSS (version 23). Data were checked using the test of normality (Kolmogorov-Smirnov), skewness and kurtosis, and stem-and-leaf plot, and it was found that all data were normally distributed. The descriptive statistics for the subscales of CTD and SAWSES were carried out. To investigate differences in levels of SAWSE among students with different levels of CTD, students were divided into three groups (high, medium, low) according to their levels of each CTD subscale. A mean from 3.5 to 5 represents a high level, from 2.5 to 3.4 is considered a medium level, and 1.0 to 2.4 reflects a low level (Oxford, 1990). In addition, the Pearson correlation coefficient was used to test the relationships between the subscales of CTD and SAWSE. In addition, stepwise multiple linear regression was conducted to investigate which subscales of the CTD influence students' situated academic writing self-efficacy.

4. Results

Saudi EFL undergraduate students reported that their level of critical thinking disposition was medium, as shown in Table 2. Among CTD ($M=3.26$, $SD=0.56$), eagerness had the highest level ($M=3.48$, $SD=0.74$). Three of the CTD subscales (eagerness, fairness, and objectivity) had mean scores above

(M=3.33), indicating a positive disposition to critical thinking. Prudence (M=2.91, SD=0.66) had the lowest level on CTD. The second-lowest mean score was systematicity (M=3.16, SD=0.74), followed by self-confidence (M=3.19, SD=0.64) and skepticism (M=3.19, SD=0.78). The mean scores of these four subscales (prudence, systematicity, self-confidence, and skepticism) were between 2.91 and 3.19, indicating uncertain dispositions to critical thinking. For eagerness, 60% of the students obtained mean scores above the recommended mean of 3.33. Equally, 58% of students obtained mean scores above 3.33 on objectivity and 56% of students on the fairness subscale. In contrast, a high percentage of students scored below the recommended mean of 3.33 on prudence (73%), self-confidence (63%), systematicity (58%), and skepticism (52%). The findings showed that students were more involved in eagerness, fairness, and objectivity than other critical thinking dispositions.

Table 2. Descriptive Statistics of Students' Critical Thinking Disposition (CTD)

Subscale	N	Mean	SD	Positive CTD (%)	Negative and uncertain CTD (%)
Self-confidence	243	3.19	.64	90 (37%)	153 (63%)
Eagerness	243	3.48	.74	147 (60%)	96 (40%)
Fairness	243	3.40	.71	135 (56%)	108 (44%)
Objectivity	243	3.46	.75	142 (58%)	101(42 %)
Prudence	243	2.91	.66	66 (27%)	177 (73%)
Skepticism	243	3.19	.78	117 (48%)	126 (52%)
Systematicity	243	3.16	.74	102 (42%)	141 (58%)
Overall Score	243	3.26	.56	117 (48%)	126 (52%)

On the other hand, the results revealed that Saudi EFL undergraduates reported a medium level of situated academic writing self-efficacy, as shown in Table 3. Among the dimensions of situated academic writing self-efficacy (M=3.20, SD=0.68), the students reported the highest level in relational reflective writing (M=3.33, SD=.066) and the lowest level in creative identity (M=3.07, SD= 0.80). The finding suggests that students had more confidence in practicing relational reflective writing than writing essentials and creative identity. Generally, the students had a higher critical thinking disposition than situated academic writing self-efficacy.

Table 3. Descriptive Statistics of Students' Situated Academic Writing Self-Efficacy (SAWSE)

Subscale	N	Mean	SD	Level
Writing essentials	243	3.09	.82	medium
Relational reflective writing	243	3.33	.66	medium
Creative identity	243	3.07	.80	medium
Overall Score	243	3.20	.68	medium

As presented in Table 4, the results of one-way analyses of variance (ANOVA) indicated statistically significant differences in levels of situated academic writing self-efficacy among students who had high, medium, and low levels of critical thinking disposition. The findings suggest that students would have a significantly higher level of situated academic writing self-efficacy in writing essentials, relational reflective writing, and creative identity if they had higher levels of disposition to critical thinking in self-confidence, eagerness, fairness, objectivity, prudence, skepticism, and systematicity.

Table 4. Means (SD) of SAWSES of Students with High, Medium, and Low Levels of CTD

CTD	Level	N	WE	RRW	CI
Self-confidence	High	96	3.50 (0.82)	3.69 (0.08)	3.58 (0.67)
	Medium	63	2.97 (0.81)	3.19 (0.10)	2.80 (0.66)
	Low	84	2.72 (0.61)	3.01 (0.07)	2.51 (0.88)
<i>F</i> (243, 2)			25.330***	30.833***	42.713***
Eagerness	High	147	3.40 (0.74)	3.59 (0.56)	3.40 (0.72)
	Medium	60	2.81 (0.72)	3.13 (0.55)	2.71 (0.69)
	Low	36	2.29 (0.55)	2.58 (0.57)	2.34 (0.50)
<i>F</i> (243, 2)			41.722***	50.899***	45.881***
Fairness	High	132	3.47 (0.74)	3.61 (0.55)	3.43 (0.74)
	Medium	72	2.78 (0.70)	3.19 (0.58)	2.82 (0.69)
	Low	39	2.41 (0.56)	2.62 (0.54)	2.32 (0.43)
<i>F</i> (243, 2)			43.638***	50.172***	46.216***
Objectivity	High	144	3.42 (0.78)	3.60 (0.59)	3.44 (0.73)
	Medium	51	2.84 (0.61)	3.15 (0.49)	2.69 (0.66)
	Low	48	2.39 (0.54)	2.69 (0.52)	2.39 (0.47)
<i>F</i> (243, 2)			41.769***	50.192***	53.329***
Prudence	High	27	3.39 (0.90)	3.57 (0.72)	3.48 (0.80)
	Medium	135	3.05 (0.70)	3.31 (0.52)	2.98 (0.68)
	Low	81	2.41 (0.69)	2.71 (0.72)	2.31 (0.68)
<i>F</i> (243, 2)			16.697***	19.482***	28.642***
Skepticism	High	117	3.31 (0.81)	3.54 (0.63)	3.39 (0.73)
	Medium	54	3.05 (0.53)	3.25 (0.48)	2.95 (0.71)
	Low	72	2.77 (0.89)	3.04 (0.72)	2.65 (0.76)
<i>F</i> (243, 2)			10.516***	14.104***	22.885***
Systematicity	High	102	3.47 (0.76)	3.64 (0.58)	3.54 (0.71)
	Medium	72	3.13 (0.80)	3.31 (0.61)	3.04 (0.67)
	Low	69	2.50 (0.53)	2.89 (0.58)	2.41 (0.54)
<i>F</i> (243, 2)			37.339***	32.599***	60.597***

Note. WE: writing essentials; RRW: relational reflective writing; CI: creative identity; *** $p \leq 0.001$.

In order to investigate the relationships between the EFL undergraduate students' critical thinking disposition and their situated academic writing self-efficacy, the Pearson correlation coefficient was run, as seen in Table 5. The findings indicated that the correlations between subscales of CTD and SAWSE were all positive and statistically significant. All subscales of CTD were positively related to the dimensions of SAWSE; the correlation coefficients ranged from $r=0.20$ to $r=0.67$. Eagerness had the strongest correlations with students' SAWSE in writing essentials ($r=0.62$), relational reflective writing ($r=0.65$), and creative identity ($r=0.67$). In addition, fairness and objectivity also had high correlations with SAWSE in writing essentials ($r=0.60$; $r=0.60$), relational reflective writing ($r=0.62$; $r=0.62$), and creative identity ($r=0.66$; $r=0.65$), respectively. Conversely, prudence had the lowest correlations with students' SAWSE in writing essentials ($r=0.22$), relational reflective writing ($r=0.21$), and creative identity ($r=0.20$). The seven subscales of CTD were also significantly correlated with one another, with the lowest correlation ($r=0.27$) between eagerness and prudence and the strongest correlation ($r=0.82$) between eagerness and objectivity. Besides, the findings revealed strong significant correlations between all subscales of SAWSE; the greatest was seen between relational reflective writing and creative identity ($r=0.81$).

Table 5. Pearson Correlation Coefficients for all Variables

Variable	1	2	3	4	5	6	7	8	9	10
1. Self-confidence	-									
2. Eagerness	0.72**	-								
3. Fairness	0.65**	0.70**	-							
4. Objectivity	0.66**	0.82**	0.65**	-						
5. Prudence	0.37**	0.27**	0.35**	0.42**	-					
6. Skepticism	0.56**	0.61**	0.57**	0.59**	0.52**	-				
7. Systematicity	0.63**	0.58**	0.60**	0.59**	0.52**	0.76**	-			
8. WE	0.62**	0.57**	0.60**	0.60**	0.22**	0.36**	0.51**	-		
9. RRW	0.65**	0.61**	0.62**	0.62**	0.21**	0.43**	0.51**	0.76**	-	
10. CI	0.67**	0.65**	0.66**	0.65**	0.20**	0.48**	0.58**	0.68**	0.81**	-

Note. WE: writing essentials; RRW: relational reflective writing; CI: creative identity; ** $p \leq 0.01$.

A stepwise multiple linear regression was conducted to further examine which dimensions of critical thinking disposition are crucial to students' situated academic writing self-efficacy (Table 6). The three dimensions of SAWSES were successively entered as the dependent variable, and the dimensions of the CTD were entered as the independent variables.

Table 6. Model Summary between CTD Subscales and SAWSES Subscales

Dependent Variable	R	R square	Adjusted R square	Std. error of the estimate	Change statistics				
					R square change	F change	df1	df2	Sig F change
WE	.615 ^a	.378	.375	.65023	.378	146.499	1	241	.000***
RRW	.647 ^a	.419	.417	.51140	.419	173.952	1	241	.000***
CI	.671 ^a	.451	.448	.59877	.451	197.589	1	241	.000***

Note. WE: writing essentials; RRW: relational reflective writing; CI: creative identity; *** $p \leq 0.001$.

a. Predictors: (Constant), Self-confidence

The findings indicated that the self-confidence subscale of CTD had the most significant impact on all three aspects of SAWSE: writing essentials ($R^2=0.378$), relational reflective writing ($R^2=0.419$), and creative identity ($R^2=0.451$). In addition, self-confidence explained 38%, 42%, and 45% of the variance in SAWSE dimensions, respectively.

5. Discussion

The study contributes to understanding Saudi undergraduate EFL students' critical thinking disposition and situated academic writing self-efficacy and the influence of students' CTD on their situated academic writing self-efficacy. The findings revealed that students had a medium level of critical thinking disposition. This finding is consistent with previous research (Bai & Guo, 2018; Park, 2015; Woo et al., 2015). Among the dispositions of CT, eagerness, fairness, and objectivity scored higher levels than other dispositions. These findings are encouraging because they indicate that students understand the problem, search for answers, and continually work hard until they solve the problem. In addition, these findings suggest that students objectively evaluate other opinions, accept criticism and opposing opinions, have reasonable proof, and explain their reasons for disagreement to others. Thus, students will be able to improve their thinking ability to become critical and logical when facing a problem (Suarsana et al., 2019). The lowest disposition was found in the prudence subscale, which suggests that students were weak in seeing the complexity of issues. Equally, students scored low in systematicity, skepticism, and self-confidence. These findings suggest students' incapability to approach problems systematically, seek the understanding of any given situation, and trust reflective thinking to solve problems. These findings may be referred to old-fashioned and teacher-centered approaches that deprive students of asking questions, negotiation, and thinking critically. Therefore, students always follow the way things are done rather than re-examining and evaluating information based on its merit (Boso et al., 2021).

The findings revealed that Saudi undergraduate students' situated academic writing self-efficacy was medium. This finding goes in line with existing research that revealed a moderate level of writing

self-efficacy among undergraduate students (Mitchell, McMillan, & Rabbani, 2019; Sun & Wang, 2020). Among the dimensions of SAWSE, students' rational reflective writing was slightly better than their writing essentials and creative identity. This finding provides clear evidence that students were unable to overcome writing obstacles such as difficulties using scholarly academic words and phrases and synthesizing the resources to create original texts. Yimam et al. (2020) stated that resources provide students with alternative academic words or phrases more relevant to the writing contexts. In addition, the findings showed that university students lacked creativity and originality when writing academic texts. They had difficulties expressing their disciplines' language, concepts, and values in their writing assignments. This shortage might be connected to the failure of teachers to interweave their lectures with opportunities for creative expressions (Nagananda, 2020) related to students' academic disciplines. The findings support the hypothesis that critical thinking disposition plays a significant role in promoting students' situated academic writing self-efficacy. Students with high CTD obtained higher SAWSE scores than those with low CTD, indicating that higher CT dispositions help students become more self-efficacious when writing their academic assignments. Therefore, higher CT dispositions stimulate students to overcome writing difficulties, use feedback to improve their writing, reflect on their writing processes, produce creative texts, and express the concepts of the discipline. Since CT dispositions help students make decisions to solve the problems they face with internal motivation (Facione et al., 1997), this finding suggests that students with higher CT dispositions are expected to have higher writing self-efficacy to make correct decisions when writing their academic papers and assignments. Therefore, to improve SAWSE for undergraduate students, the development of CTD should be emphasized and enhanced through the curriculum, teaching approaches, instructional activities, and assessment procedures at universities.

These results also support the hypothesis that there are significant and positive relationships between critical thinking dispositions and situated academic writing self-efficacy subscales. These findings are similar to previous research which investigated the correlations of CT disposition with general self-efficacy (e.g., Cansoy & Türkoglu, 2017; Kim, 2016; Kim et al., 2015; Manzoor et al., 2019), and writing performance (e.g., Jauhari, 2015; Liu & Yao, 2019; Muzakki et al., 2017). In addition, the seven subscales of CTD were significantly correlated with each other indicating that students who have more of one aspect of CTD may also have more of the other aspects of CTD, and the aspects of CTD can be exchangeable. Moreover, the findings revealed that the three dimensions of SAWSE affect each other, indicating mutual relations between them, as the increase or decrease of one affects the other. Among the seven CT dispositions, self-confidence scores had the strongest correlation to all three dimensions of situated academic writing self-efficacy. This finding suggests that students with higher self-confidence are more self-efficacious in accomplishing their academic writing tasks. Although social cognitive theory suggests that students with a high level of self-efficacy are more self-confident (Bandura, 1986), students' self-confidence may be a major factor of their writing self-efficacy in terms of producing original and creative texts or products which is likely to be promoted through the

development of CT dispositions. In addition, the findings showed that fairness and objectivity had equally strong correlations with students' SAWSE. These findings suggest that students who have a tendency to eliminate personal biases and think with the viewpoints of others tend to be self-efficacious writers. The ideal critical thinker is regularly honest in facing personal biases, considering diverse perspectives, and making decisions based on shared perspectives (Ongito, 2012), and these properties would confidently affect his writing products. Likewise, the results showed that eagerness and systematicity are among the strongest CD dispositions correlated with students' SAWSE. This finding indicates that when students have more curiosity to know academic writing procedures and approach problems systematically, they tend to adapt their writing abilities to meet the needs of the given assignments. Cansoy and Türkoglu (2017) confirmed that systematicity should be organized and planned while solving a problem. Thus, teachers need to help students reflect on how the thinking process works and increase their disposition to think systematically when involved in the writing process. Moreover, the strong relationship between eagerness and situated writing self-efficacy could be attributed to students' positive expectations of being successful writers, which stimulates students' self-efficacy. Thalluri et al. (2021) assert that students' eagerness to succeed in their learning drives them to work for their interests and thus, develop their self-efficacy further.

Remarkably, the findings revealed that self-confidence seems to be the most powerful CT disposition that influences the three dimensions of situated academic writing self-efficacy. This finding is in line with Della Syapira's (2019) study, which revealed that students' self-confidence was among the strongest indicators of constructing a high writing self-efficacy. This finding suggests that self-confident students trust their reflective thinking and abilities to solve and overcome writing difficulties. In addition, self-confidence allows students to relax during the learning process (Pu et al., 2019), which reflects on their self-efficacy. Thus, highly self-efficacious students are likely to produce a better quality of writing (Wardani & Mbato, 2022). Therefore, teachers should encourage and strengthen students' self-confidence in writing classes (Baskan, 2021).

6. Implications

The findings of the study provide practical and pedagogical implications for teachers and educators to determine effective paths for developing critical thinking disposition and situated academic writing self-efficacy among EFL undergraduate learners. First, EFL teachers should be aware of the significance of critical thinking disposition in enhancing students' language self-efficacy and writing self-efficacy in particular. Teachers should raise students' situated writing self-efficacy through triggering teaching approaches that promote CT dispositions, especially eagerness, fairness, and objectivity. Second, students reported positive eagerness, fairness, and objectivity to critical thinking, but they obtained medium scores on the other subscales. Thus, teachers should alert students that all the dimensions of the CTD are significant and serve as requirements for critical thinkers. Equally, students should pay equal attention to self-confidence, prudence, skepticism, and systematicity to produce

unique and creative pieces of situated academic writing. Third, since self-confidence seems to be the most powerful CT disposition that influences situated writing self-efficacy, EFL teachers should increase students' awareness of the importance of self-confidence in academic writing contexts. Moreover, teachers should provide students with activities and tasks that promote their self-confidence. For example, teachers should help their students build "a writerly identity", which partially includes self-concept and self-confidence (Daffern & Mackenzie, 2020). Fourth, regarding the finding of this study and those on the influences of self-efficacy on critical thinking disposition (Kozikoglu, 2019; Magno, 2010), teachers and students should be aware of the mutual relationship between CT disposition and situated academic writing self-efficacy. Therefore, improving both CTD and SAWSE is significant in writing within academic disciplines.

7. Limitations and Future Directions

Several limitations in this study should be taken into consideration in future research. First, this study employed a cross-sectional design, which may not explain the causal relationships between CT disposition and SAWSE subscales. Thus, longitudinal investigation studies with qualitative methods may provide insightful findings regarding the relationship between CTD and SAWSE. Second, the smaller number of participants and being of a specific university may limit the generalizability of the findings. Therefore, larger samples from different universities and backgrounds could offer a clear picture of the nature of the relationship between these two variables, i.e., CTD and SAWSE. Third, this study did not consider the personal, affective, and environmental factors that might mediate the relationships between sources of CT dispositions and situated academic writing self-efficacy. Further studies are warranted to bridge this research gap.

8. Conclusion

The study is among the first to describe in detail how critical thinking disposition influences situated academic writing self-efficacy among EFL undergraduate students. The findings indicate that students who had a positive disposition to critical thinking seemed to maintain higher levels of academic writing self-efficacy across disciplines. Conversely, the lower levels in some CT disposition subscales indicate students' unwillingness to be involved in critical thinking practices. Among the critical thinking disposition subscales, self-confidence had a superior impact on students' writing self-efficacy. Understanding how students' situated academic writing self-efficacy changes as a result of engaging in critical thinking offers insightful paths to examine how students' situated academic writing self-efficacy improves.

References

- Afshar, H., Movassagh, H., & Arbabi, H. (2017). The interrelationship among critical thinking, writing an argumentative essay in an L2 and their subskills. *The Language Learning Journal*, 45(4), 419-433. <https://doi.org/10.1080/09571736.2017.1320420>
- Bai, B., & Guo, W. (2018). Influences of self-regulated learning strategy use on self-efficacy in primary school students' English writing in Hong Kong. *Reading & Writing Quarterly*, 34(6), 523-536. <https://doi.org/10.1080/10573569.2018.1499058>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive view*. Prentice Hall.
- Bandura, A. (1995). *Self-efficacy in changing societies*. Cambridge University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.
- Baskan, A. (2021). The relationship between writing anxiety and writing self-efficacy of students learning Turkish as a foreign language. *Journal of Education and Learning*, 10(4), 70-77. <https://doi.org/10.5539/jel.v10n4p70>
- Bayram, D. (2015). *The effects of webquest-supported critical thinking instruction on the critical thinking disposition level and L2 writing performance of Turkish pre-service EFL teachers* [Master thesis, Marmara University]. Marmara University Database.
- Boso, C., van der Merwe, A., & Gross, J. (2021). Critical thinking disposition of nursing students: A quantitative investigation. *Nurse Education in Practice*, 55, 1-7. <https://doi.org/10.1016/j.nepr.2021.103167>
- Breeze, R. (2012). *Rethinking academic writing pedagogy for the European university*. Brill.
- Cansoy, R., & Türkoglu, M. (2017). Examining the relationship between pre-service teachers' critical thinking disposition, problem solving skills and teacher self-efficacy. *International Education Studies*, 10(6), 23-35. <https://doi.org/10.5539/ies.v10n6p23>
- Chea, S., & Shumow, L. (2017). The relationships among writing self-efficacy, writing goal orientation, and writing achievement. *Asian-focused ELT research and practice: Voices from the far edge*, 12(1), 169-192.
- D'Alessio, F., Avolio, B., & Charles, V. (2019). Studying the impact of critical thinking on the academic performance of executive MBA students. *Thinking Skills and Creativity*, 31, 275-283. <https://doi.org/10.1016/j.tsc.2019.02.002>
- Daffern, T., & Mackenzie, N. (Eds.). (2020). *Teaching writing: Effective approaches for the middle years*. Routledge.
- Davies, M., & Barnett, R. (Eds.). (2015). *The Palgrave handbook of critical thinking in higher education*. Springer.
- Day, T. (2018). *Success in academic writing*. Bloomsbury Academic.
- Delcambre, I., & Donahue, C. (2012). Academic writing activity: Student writing in transition. In M. Castelló & C. Donahue (Eds.) *University writing: Selves and texts in academic societies* (pp. 129-150). Brill.

- Della Syapira, A. (2019). *The investigation of self-efficacy in writing among students of YLPI senior high school Pekanbaru* [Doctoral dissertation, State Islamic University of Sultan Syarif Kasim Riau]. Institutional Repository.
- Ekholm, E., Zumbunn, S., & Conklin, S. (2015). The relation of college student self-efficacy toward writing and writing self-regulation aptitude: Writing feedback perceptions as a mediating variable. *Teaching in Higher Education*, 20(2), 197-207. <https://doi.org/10.1080/13562517.2014.974026>
- Facione, N., Facione, P., & Sanchez, C. (1994). Critical thinking disposition as a measure of competent clinical judgment: The development of the California Critical Thinking Disposition Inventory. *Journal of Nursing Education*, 33(8), 345-350. <https://doi.org/10.3928/0148-4834-19941001-05>
- Facione, P. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction (The Delphi Report)*. American Philosophical Association.
- Facione, P., Facione, N., Giancarlo, C., (1997). The motivation to think in working and learning. In E. Jones (Ed.) *Preparing competent college graduates: Setting new and higher expectations for student learning* (pp. 67-79). Jossey-Bass Publishers.
- Gerdts-Andresen, T., Hansen, M., & Grøndahl, V. (2022). Educational effectiveness: Validation of an instrument to measure students' critical thinking and disposition. *International Journal of Instruction*, 15(1), 685-700. <https://doi.org/10.29333/iji.2022.15139a>
- Ghanizadeh, A., Al-Hoorie, A., & Jahedizadeh, S. (2020). *Higher order thinking skills in the language classroom: A concise guide*. Springer International Publishing.
- Ghazivakili, Z., Nia, R., Panahi, F., Karimi, M., Gholsorkhi, H., & Ahmadi, Z. (2014). The role of critical thinking skills and learning styles of university students in their academic performance. *Journal of advances in medical education & professionalism*, 2(3), 95-102.
- Green, S., & Palmer, S. (Eds.). (2019). *Positive psychology coaching in practice*. Routledge.
- Hyland, K. (2002). Specificity revisited: How far should we go now?. *English for specific purposes*, 21(4), 385-395. [https://doi.org/10.1016/S0889-4906\(01\)00028-X](https://doi.org/10.1016/S0889-4906(01)00028-X)
- Jarvis, M. (2005). *The psychology of effective learning and teaching*. Nelson Thornes.
- Jauhari, N. (2015). *The relationship between writing performance and critical thinking dispositions among Malaysian Pre-University students* [Master thesis, University of Malaya]. UM Student's Repository.
- Kim, H., Lee, E., & Park, S. (2015). Critical thinking disposition, self-efficacy, and stress of Korean nursing students. *Indian Journal of Science and Technology*, 8(18), 1-5. <https://doi.org/10.17485/ijst/2015/v8i18/76710>
- Kim, M. (2016). Study on self-efficacy, communication competency, critical thinking disposition and clinical performance ability of nursing students. *Journal of the Korea Academia-Industrial Cooperation Society*, 17(6), 609-617. <https://doi.org/10.5762/KAIS.2016.17.6.609>

- Kim, M., & Byun, E. (2019). Influence of academic self-efficacy, critical thinking disposition, and learning motivation on problem solving ability in nursing students. *Journal of the Korea Academia-Industrial cooperation Society*, 20(1), 376-383.
- Kirmizi, O., & Kirmizi, G. (2015). An investigation of L2 learners' writing self-efficacy, writing anxiety and its causes at higher education in Turkey. *International Journal of Higher Education*, 4(2), 57-66. <https://doi.org/10.5430/ijhe.v4n2p57>
- Kozikoglu, I. (2019). Investigating critical thinking in prospective teachers: Metacognitive skills, problem solving skills and academic self-efficacy. *Journal of Social Studies Education Research*, 10(2), 111-130.
- Kusumi, T. (2020). Cultivation of a critical thinking disposition and inquiry skills among high school students. In E. Manalo (Ed.), *Deeper learning, dialogic learning, and critical thinking* (pp. 298-320). Routledge.
- Liu, X., & Yao, T. (2019). The cultivation of college students' critical thinking ability based on task-based cooperative writing. *Journal of Language Teaching and Research*, 10(3), 557-568. <https://doi.org/10.17507/jltr.1003.20>
- Magno, C. (2010). The role of metacognitive skills in developing critical thinking. *Metacognition and learning*, 5(2), 137-156. <https://doi.org/10.1007/s11409-010-9054-4>
- Manzoor, E., Hussain, T., & Hashmi, A. (2019). Prospective teachers' critical thinking disposition, problem solving skills and self-efficacy: A relationship study in Pakistan. *Pakistan Social Sciences Review*, 3(2), 687-696. [https://doi.org/10.35484/pssr.2019\(3-2\)53](https://doi.org/10.35484/pssr.2019(3-2)53)
- McClenney, C. (2010). *A disposition to write: Relationships with writing performance* (Doctoral dissertation, The Florida State University). ProQuest Dissertations & Theses Full-Text database (UMI No: 3458714).
- Mitchell, K., Harrigan, T., Stefansson, T., & Setlack, H. (2017). Exploring self-efficacy and anxiety in first-year nursing students enrolled in a discipline-specific scholarly writing course. *Quality Advancement in Nursing Education*, 3(1), 4. <https://doi.org/10.17483/2368-6669.1084>
- Mitchell, K., McMillan, D., & Lobchuk, M. (2019). Applying the "social turn" in writing scholarship to perspectives on writing self-efficacy. *Journal of Learning Development in Higher Education*, 15, 1-20. <https://doi.org/10.47408/jldhe.v0i15.512>
- Mitchell, K., McMillan, D., & Rabbani, R. (2019). An exploration of writing self-efficacy and writing self-regulatory behaviours in undergraduate writing. *The Canadian Journal for the Scholarship of Teaching and Learning*, 10(2), 1-23. <https://doi.org/10.5206/cjsotl-rcacea.2019.2.8175>
- Mitchell, K., McMillan, D., Lobchuk, M., Nickel, N., Rabbani, R., & Li, J. (2021). Development and validation of the situated academic writing self-efficacy scale (SAWSES). *Assessing Writing*, 48, 1-20. <https://doi.org/10.1016/j.asw.2021.100524>

- Moraes, A., & Castro, F. (2018). For the aestheticization of academic writing: poems, letters, and diaries wrapped in didactic intentions. *Revista Brasileira de Educação*, 23, 1-15. <https://doi.org/10.1590/s1413-24782018230091>
- Muzakki, M., Delfi, S., & Syarfi, M. (2017). The correlation between the second year students' critical thinking disposition and their ability in writing analytical exposition texts at Man 1 Pekanbaru. *Jurnal Online Mahasiswa*, 4(2), 1-9.
- Nagananda, G. (2020). Providing opportunities for creative expression in the classroom: A study. *Language and Language Teaching*, 9(2), 46-52.
- Oermann, M., & Gaberson, K. (2016). *Evaluation and testing in nursing education*. Springer Publishing Company.
- Omar, Y. (2019). Teaching pedagogical grammar in context to enrich English language learners' academic writing. *Online Submission*, 2(3), 213-225.
- Ongito, O. (2012). *Transformative learning within the online learning environment: The impact of learners' gender, epistemological and self-efficacy beliefs on generation of knowledge in online discussion forums* [Doctoral dissertation]. Ohio University.
- Oxford, R. (1990). *Language learning strategies: What every teacher should know*. Newbury House.
- Papp, K., Huang, G., Clabo, L., Delva, D., Fischer, M., Konopasek, L., Schwartzstein, R., & Gusic, M. (2014). Milestones of critical thinking: A developmental model for medicine and nursing. *Academic Medicine*, 89(5), 715-720. <https://doi.org/10.1097/ACM.0000000000000220>
- Park, H. (2015). Correlations among nursing professionalism, critical thinking disposition and self-leadership in nursing students. *The Journal of Korean Academic Society of Nursing Education*, 21(2), 227-236. <https://doi.org/10.5977/jkasne.2015.21.2.227>
- Polatcan, F., & Şahin, N. (2019). The effect of secondary school students' writing tendencies and self-efficacy on writing attitudes: A structural equation modeling. *Journal of Language and Linguistic Studies*, 15(2), 739-753. <https://doi.org/10.17263/jlls.586823>
- Pu, D., Ni, J., Song, D., Zhang, W., Wang, Y., Wu, L., Wu, L., Wang, X., & Wang, Y. (2019). Influence of critical thinking disposition on the learning efficiency of problem-based learning in undergraduate medical students. *BMC medical education*, 19(1), 1-8. <https://doi.org/10.1186/s12909-018-1418-5>
- Putri, R. (2018). Investigating the link between critical thinking skill and argumentative writing skill: The case of Islamic senior high school. *Edukasi: Jurnal Pendidikan Dan Pengajaran*, 5(2), 144-153. <https://doi.org/10.19109/ejpp.v5i2.2090>
- Quan, Z. (2019). *The potential of mobile-based and pattern-oriented concordancing for assisting upper-intermediate ESL students in their academic writing* [Doctoral dissertation, Auckland University of Technology]. Auckland University of Technology Library.

- Ren, X., Tong, Y., Peng, P., & Wang, T. (2020). Critical thinking predicts academic performance beyond general cognitive ability: Evidence from adults and children. *Intelligence*, 82, 101487. <https://doi.org/10.1016/j.intell.2020.101487>
- Rinnert, C., & Kobayashi, H. (2009). Situated writing practices in foreign language settings: The role of previous experience and instruction. In R. Manchon (Ed.), *Writing in foreign language contexts: Learning, teaching, and research* (pp. 23-48). Multilingual Matters.
- Rodriguez-Herrera, O. (2021). *Writing as a situated practice audio-visual social content & learners' experiences*. Universidad Pedagógica Nacional.
- Şekerci, A. (2021). *A structural equation model on academic writing self-efficacy beliefs of students at English medium universities* (Doctoral Dissertation, Middle East Technical University). OpenMETU.
- Suarsana, I., Lestari, I., & Mertasari, N. (2019). The effect of online problem posing on students' problem-solving ability in mathematics. *International Journal of Instruction*, 12(1), 809-820. <https://doi.org/10.29333/iji.2019.12152a>
- Sun, T., & Wang, C. (2020). College students' writing self-efficacy and writing self-regulated learning strategies in learning English as a foreign language. *System*, 90, 102221. <https://doi.org/10.1016/j.system.2020.102221>
- Sun, T., Wang, C., Lambert, R., & Liu, L. (2021). Relationship between second language English writing self-efficacy and achievement: A meta-regression analysis. *Journal of Second Language Writing*, 53, 100817. <https://doi.org/10.1016/j.jslw.2021.100817>
- Teng, L., Sun, P., & Xu, L. (2018). Conceptualizing writing self-efficacy in English as a foreign language contexts: Scale validation through structural equation modeling. *Tesol Quarterly*, 52(4), 911-942. <https://doi.org/10.1002/tesq.432>
- Thalluri, J., Penman, J., & Chau, M. (2021). The effect of a face-To-face Scienceready preparatory short course on university students' self-efficacy. *Student Success*, 12(1), 72-81. <https://doi.org/10.5204/ssj.1698>
- Ülger, K. (2016). The relationship between creative thinking and critical thinking skills of students. *H. U. Journal of Education*, 31(4), 695-710. <https://doi.org/10.16986/HUJE.2016018493>
- Wardani, F., & Mbato, C. (2022). A comparative study between Indonesian undergraduate and graduate students' perceived anxiety and self-efficacy in critical writing. *Magister Scientiae*, 49(2), 90-103.
- Woo, C., Yoo, J., & Park, J. (2015). The relationship among hesitation factor of questions, critical thinking disposition, and problem solving: The university student's perspective. *The Journal of Korean Academic Society of Nursing Education*, 21(3), 320-329. <https://doi.org/10.5977/jkasne.2015.21.3.320>
- Woodrow, L. (2011). College English writing affect: Self-efficacy and anxiety. *System*, 39(4), 510-522. <https://doi.org/10.1016/j.system.2011.10.017>

- Yimam, S., Venkatesh, G., Lee, J., & Biemann, C. (2020). *Automatic compilation of resources for academic writing and evaluating with informal word identification and paraphrasing system*. In Proceedings of the 12th Language Resources and Evaluation Conference (LREC 2020), 5896-5904.
- Yiu, R. (2014). A case study of Hong Kong undergraduates undertaking their disciplinary writing tasks and its implications for EAP pedagogy. In The 4th CELC Symposium Proceedings (pp. 107-115). Singapore: National University of Singapore.
- Yoon J. (2004). *Development of an instrument for the measurement of critical thinking disposition in nursing* [Unpublished Doctoral Dissertation]. The Catholic University of Korea.
- Yuan, S., Liao, H., Wang, Y., & Chou, M. (2014). Development of a scale to measure the critical thinking disposition of medical care professionals. *Social Behavior and Personality: An international journal*, 42(2), 303-311. <https://doi.org/10.2224/sbp.2014.42.2.303>
- Zhang, Y. (2018). Exploring EFL learners' self-efficacy in academic writing based on process-genre approach. *English Language Teaching*, 11(6), 115-124. <https://doi.org/10.5539/elt.v11n6p115>
- Zumbrunn, S., Broda, M., Varier, D., & Conklin, S. (2020). Examining the multidimensional role of self-efficacy for writing on student writing self-regulation and grades in elementary and high school. *British Journal of Educational Psychology*, 90(3), 580-603. <https://doi.org/10.1111/bjep.12315>