

The Relationship Between Writing Anxiety and Ambiguity Tolerance Among Iraqi University Students

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Abstract

This study focused on the correlation between writing anxiety and ambiguity tolerance among Iraqi university freshmen students. The participants were 75 intermediate Iraqi freshmen students (40 female and 35 male). They aged from 19 to 24 years. The study delved into the prevalent types and degrees of writing apprehension experienced by participants, along with the primary triggers behind their apprehension. The Language Writing Anxiety Survey and the Causes of Writing Anxiety Survey were administered. After completing these scales, the Second Language AT Scale was completed by them. Data was analyzed using SPSS. The study revealed that cognitive anxiety predominantly characterizes writing apprehension among students, indicating a high level of apprehension overall. Notably, apprehension primarily stems from the fear of receiving negative comments from instructors. Moreover, the majority of participants exhibited low levels of ambiguity tolerance, though no statistically significant correlation between ambiguity tolerance and writing anxiety was observed. The findings underscore the need for educators to take into account both writing anxiety and ambiguity tolerance when designing their courses and instructional methods.

Keywords: ambiguity tolerance, anxiety, writing, writing anxiety

Citation: Jawad Abdulridha, H., Shirian Dastjerdi, Z. & Dehghanpour, B. (2025). The relationship between writing anxiety and ambiguity tolerance among Iraqi university students. *Applications of Language Studies*, 3(2), 178–200.

Received: 2024-08-03

Revised: 2024-12-25

Accepted: 2024-12-31

Published online: 2025-10-01

P-ISSN: 2588-6975

E-ISSN: 2588-6983

Article type: Research Paper

DOI: 10.22034/jals.2024.2037463.1038



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1. Introduction

The current study explored the connection between the idea of tolerance of ambiguity (TA), which indicates the degree of acceptance of uncertainty, and second language (L2) writing anxiety. Thus, the current study is relevant in several ways. Writing is a challenge for many English language learners, and mastering this skill poses considerable challenges, particularly for learners who study language academically. One of the purposes of this study was to identify the most critical components and causes of writing anxiety, as well as to ascertain the extent of students' writing apprehension.

The first and most important observation of this study was that numerous cognitive processes are critical for social and academic development because they allow an individual to adjust to the environmental demands of a specific scenario or interaction. As a result, it is critical to investigate the function of ambiguity tolerance as a cognitive process in various language skills. Second, most studies focus on the role of TA in reading, listening, and speaking, while few studies examine its impact on writing ability.

Lastly, writing anxiety is a critical component that may be affected by a number of aspects. Exploring cognitive processes as the source of writing anxiety is so critical. This research was conducted to investigate the topic at hand in the context of English as a Foreign Language (EFL) in Iraq. As a result, it is anticipated that the findings of this study would assist both EFL teachers and learners in considering the function of TA in L2 writing.

The study aimed to explore the different forms of writing anxiety that are commonly experienced by freshmen students within the Department of English at an Iraqi University. It further examined the extent of this anxiety among students learning EFL. Finally, the study investigated the primary factors that contribute to writing anxiety in the context of English language learning. The following research questions were proposed based on the study's objectives:

- 1- What is the predominant type of writing anxiety experienced by freshmen students in Iraq?
- 2- To what extent do freshmen students in Iraq encounter writing anxiety?
- 3- What are the primary reasons underlying writing anxiety among EFL learners?

4- Is there a significant association between writing anxiety levels and TA among Iraqi EFL learners?

2. Literature Review

2.1. Anxiety in Writing

Language acquisition researchers have devised various metrics for assessing the state anxiety arising from language learning, with a predominant focus on anxiety linked to speaking in a foreign or second language (Cheng, 2004; Horwitz et al., 1986). However, the anxieties associated with listening, reading, and writing in a foreign or second language may not be effectively captured by general language acquisition anxiety tests. Recent efforts have been made to develop measures distinguishing anxiety related to the four language skills (Chen & Lin, 2009; Cheng, 2002; Cheng, 2004; Cheng et al., 1999; Daly & Miller, 1975; Daly & Wilson, 1983; Pajares & Johnson, 1994; Pajares et al., 2007).

The Writing Apprehension Test (WAT), developed by Daly and Miller (1975), was one of the earliest tools for measuring writing anxiety. While foundational, the WAT was originally designed for native English speakers and has since been critiqued for its applicability to L2 learners (Zheng & Cheng, 2008). In response to the limitations of the WAT, the English Writing Apprehension Test (EWAT) was introduced, but it similarly lacked the specificity needed for non-native contexts (Cheng, 2004).

Recent research has highlighted the multidimensional nature of writing anxiety, which extends beyond the single-dimensional approach of the WAT (Horwitz, 2016). Studies have identified several factors contributing to writing anxiety, including low self-confidence, fear of evaluation, and general aversion to writing (MacIntyre & Gregersen, 2016). This broader perspective suggests that writing anxiety cannot be fully captured by a unidimensional scale.

To address these limitations, the Second Language Writing Anxiety Inventory (SLWAI) was developed to measure writing anxiety across three dimensions: physiological, behavioral, and cognitive (Cheng, 2004). The SLWAI was validated through factor analysis involving a large sample of Taiwanese English majors, confirming its effectiveness in capturing diverse aspects of writing anxiety (Cheng, 2004). This multidimensional approach

aligns with more recent findings that emphasize the complexity of writing anxiety in L2 learners (Gregersen & Horwitz, 2020).

In practical applications, the SLWAI has proven valuable in various educational settings. For instance, Zhang (2020) used the SLWAI to investigate writing anxiety among Chinese EFL learners, reaffirming its reliability in different contexts. Similarly, MacIntyre and Gregersen (2016) employed the SLWAI to study the relationship between writing anxiety and performance among international students, demonstrating its relevance in understanding and addressing writing anxiety in diverse learner populations.

These advancements highlight the importance of using multidimensional tools like the SLWAI to gain a comprehensive understanding of writing anxiety. Such instruments provide a more nuanced view of the factors affecting L2 learners, enabling educators to develop more targeted interventions and support strategies.

Writing anxiety is considered a significant non-cognitive emotional factor that influences, to some extent, learners' attitudes and experiences with writing. It can limit their effort, engagement, and overall language achievement in EFL contexts (Sun et al., 2024). The concept of "writing anxiety" refers to the discomfort or nervousness that individuals may feel when they are required to write, particularly in academic or professional settings. This anxiety can stem from a fear of judgment, self-doubt about one's writing abilities, or the pressure to produce high-quality work. It often results in procrastination, a reluctance to write, or lower-quality writing outcomes (Martínez & Roca, 2021). Depending on the circumstances around the writing, a writer may experience these negative emotions to varying degrees. While some people experience anxiety while writing an essay for school, this fear is not there when writing an email on the same subject. Writing a letter to a loved one may cause anxiety in some people even though they feel good writing a lab report. Thus, writing anxiety is a temporal experience that depends on a variety of elements, including the writing task at hand, the surrounding circumstances, one's expectations for both oneself and the audience, and previous writing experiences. Although the terms "writing anxiety" and "writer's block" are sometimes used interchangeably, the former refers to the many kinds of dread one associates with a writing activity, whereas the latter is the impact it has on one's process of writing.

The study conducted by Waked et al. (2023) found that the age of Arabic-English speakers played a role in their level of writing anxiety. The older students demonstrated a higher level of anxiety in their writing. Congruently, in another study undertaken by Wahyuni and Umam (2017) on Indonesian students, 54% of the students reported a high level of writing anxiety. It was also discovered that the dominant type of anxiety was cognitive writing anxiety. Another study on English as a Second Language (ESL) students in Indonesia was conducted by Rudiyanto (2017), in which a medium level of somatic anxiety was experienced by the participants, with insufficient writing practice as the primary influencing factor. Similarly, Indonesian EFL learners who participated in the research conducted by Wahyuni et al. (2019) experienced a moderate level of writing anxiety, with the most affecting factor being the choice of topic area.

In the EFL context, Miri and Joia (2018) investigated the issue among Afghan EFL learners. They discovered the leading causes of writing anxiety to be teachers' negative evaluation, inadequate grammatical knowledge, and errors in composing essays. In another study by Quvanch and Si Na (2022), students in Afghanistan reported that 47.37% (N=63) of the respondents had a high level of anxiety, 41.35% (N = 55) had moderate-level anxiety, and 11.28% (N=15) of the respondents had a low level of anxiety in writing. Among the investigated factors (gender, year of study, and proficiency level), only proficiency level was found to be related to the level of writing anxiety. The beginner students had the highest level of anxiety, and vice versa.

2.2. Ambiguity Tolerance and Writing

The capacity to handle ambiguous new instructions without getting angry and without urgently asking officials for help is regarded as having ambiguity tolerance (Ehrman et al., 2003). The concept of tolerance for ambiguity is defined in many different ways by various academics today. It is described as a person's relationship to an ambiguous incentive or event in terms of a mental conception. Ambiguity may be defined as the unpredictability of language learning settings, usually triggered by the capability to determine the appropriate context for cues or other incentives in a given circumstance when ambiguity is discovered in a novel, complex, or conflicting circumstance (Han, 2021; Nezhad et al., 2013). Additionally, a lot of scholars have found that a person's capacity for ambiguity may be regarded as one of the key characteristics

that characterize their personality (Li & He, 2016). As an instance, Yu et al. (2022) underline that ambiguity tolerance is an emotional factor that is considered as the ability to deal with ambiguous new stimuli without feeling unsatisfied. To be more specific, in the language education context, TA refers to the ability to handle new ambiguities without feeling frustration or depending on knowledge foundations (Xu & Ba, 2022).

Writing proficiency is another aspect that can be impacted by levels of ambiguity tolerance. Sallot and Lyon (2003) observed that students' degrees of tolerance or intolerance toward ambiguity (TIA), when combined with a portfolio grading approach, influenced their perceptions of public relations and evaluations of their experiences in a public relations writing course. In an exploratory, quasi-experimental study, students with low TIA, who received portfolio grading for writing assignments, tended to doubt that their grades accurately reflected their level of effort in the course. Conversely, students with high TIA were more likely to perceive public relations challenges as manageable and valued instructors who introduced novel perspectives.

Research on Second Language Tolerance of Ambiguity (SLTA) in L2 writing also reveals domain-specific patterns. Depending on the language domains, L2 learners may encounter varying levels of ambiguity tolerance. Kazamia (1999) noted that Greek EFL learners exhibited higher TA when reading and listening, yet demonstrated lower tolerance when writing or speaking English. L2 learners tended to resist acknowledging their inability to articulate themselves effectively in English. Consequently, such difficulties led to heightened levels of ambiguity intolerance, which, as the study suggested, hinders students' progress in L2 writing and listening skills.

The proficiency of L2 learners in task-based writing can be influenced by their TA in the L2 context. Lee (1999) employed a TA questionnaire, developed by the Institution of Houston, to explore how varying levels of TA impact the task-based writing performance of 93 undergraduate participants at a Korean university. The study revealed that students with high TA tended to outperform those with low TA. Additionally, it investigated how students organize their writing, paragraphs, and concepts, showing that high TA students demonstrated better organization, employed topic sentences, and effectively summarized paragraphs, showcasing a more logical expression of ideas compared to their less tolerant counterparts.

Lee's (1999) study stands out as a significant contribution to understanding the impact of TA on L2 writing. Despite its valuable insights into the technical analysis of second-level writing processes and their outcomes, no comprehensive investigation of the correlation has been undertaken. Hence, there is an urgent need for further studies exploring this phenomenon, which could enrich existing research on ambiguity tolerance and its relationships with other variables across various domains of L2 learning. To address this gap, the current research adopted a mixed design to explore ambiguity tolerance and writing anxiety among Iraqi undergraduate students enrolled in freshman English courses.

In a more related study on intermediate Iranian EFL learners, Zareie Khatooni and Ghobadi (2022) investigated the relationship between writing anxiety and ambiguity tolerance. They found a significant relationship between writing anxiety and ambiguity tolerance, meaning that the students with a higher level of ambiguity tolerance experienced less anxiety. Their study also shed light on the role of gender in the matters under investigation. Female students experienced more writing anxiety compared to male students. However, no significant difference was found between gender and TA.

3. Method

3.1. Research Design

A descriptive correlational design study was conducted to investigate the relationship between writing anxiety and ambiguity tolerance, as well as to determine the dominant type of writing anxiety that learners experience and the extent to which learners experience writing anxiety. Moreover, it tried to detect the primary factors contributing to writing anxiety among Iraqi EFL learners. This research was unique in that it focused on Iraqi university students. The primary two variables of the study that were investigated are writing anxiety and ambiguity tolerance.

3.2. Participants

A purposive sampling approach was utilized to select participants based on their proficiency in English. The study involved 75 freshmen students from the Department of English Language at Karbala University. Among them, 40 were female students, and 35 were male students, with ages ranging from 19 to 24 years old. They were all at the intermediate level. None of the

participants had studied or lived in English-speaking countries, and none of them reported any substantial out-of-class interaction with English native speakers.

3.3. Instruments

Various instruments were utilized in this study to gather comprehensive data on language proficiency, writing anxiety, and ambiguity tolerance. The Oxford Quick Placement Test (OQPT), featuring 60 multiple-choice questions, was used to assess participants' grammar and vocabulary proficiency, categorizing learners into levels from Beginner to Very Advanced. Writing anxiety was evaluated using the SLWAI, a 22-item Likert scale questionnaire developed by Cheng (2004). This instrument, which measures anxiety levels related to writing in ESL, demonstrated reliability with a Cronbach's Alpha of 0.86 after being piloted on 15 students. Additionally, the Causes of Writing Anxiety Inventory (CSLWAI), adapted from Rezaei and Jafari (2014), was used to identify the factors contributing to writing anxiety. It consisted of demographic questions and 10 Likert-scale items designed to explore the root causes of students' anxiety. Lastly, participants' TA was measured using Ely's (1995) Second Language Ambiguity Tolerance Scale (SLATS), a 12-item questionnaire revised by Erten and Topkaya (2009) to include an "uncertain" response option. This instrument assessed learners' TA in specific language learning contexts and yielded a reliability score of 0.74. All instruments were validated by three Ph.D. holders in Applied Linguistics, ensuring their suitability for the target sample.

3.4. Data Analysis

The findings of this study were quantitative in nature. The data were interpreted, displayed, and analyzed to further understand the findings of the study. The analysis was done by SPSS Software. The interpretation and analysis were based on the scores of the three questionnaires given to the students. As for the first, second, and third questions of the research, descriptive statistics were applied to find the dominant type of writing anxiety that Iraqi freshmen students experience. For the fourth research question, the Pearson Correlation was applied to determine the correlation between the degree of TA and writing anxiety.

4. Results

4.1 the First Research Question

As previously stated, the first research question in this study was "What is the predominant type of writing anxiety experienced by freshmen students in Iraq?" As indicated in Table 1, the mean score for cognitive anxiety was 3.61, while somatic anxiety and avoidance behavior both had a mean of 3.41. This implies that cognitive anxiety exhibited the highest mean among the three types. Despite having the same mean, somatic anxiety and avoidance behavior displayed differing standard deviations. Specifically, the standard deviation for somatic anxiety was higher than that of avoidance behavior. Consequently, somatic anxiety emerged as the second most prominent type, whereas avoidance behavior registered the lowest mean. In summary, cognitive anxiety stood out as the predominant type of writing anxiety among the three assessed.

Table 1

Dominant Type of Writing Anxiety Based on SLWA Questionnaire

Type of Anxiety	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Cognitive Anxiety	75	2.38	4.50	271.13	3.6150	.50074
Somatic Anxiety	75	1.43	4.57	255.86	3.4114	.62681
Behavior	75	1.71	4.86	255.86	3.4114	.64487
Valid N	75	1.43	4.86			

4.2. the Second Research Question

The second research question of the study asked, "To what extent do freshmen students in Iraq encounter writing anxiety?" After analyzing the SLWAI questionnaire, the researcher categorized the levels of writing anxiety into three main classifications. They were categorized as high, moderate, and low levels. The total number of participants was 75. According to Table 2, 90.6% of participants had a high level of writing anxiety, participants with a moderate level of writing anxiety represented 6.6%, while participants with a low level of writing anxiety accounted for 2.6%. According to the statistical results, high levels of anxiety had taken over as the dominant level. So, it is concluded that the majority of participants had a high level of writing anxiety.

According to the explanation of the five-point Likert scale, the mean was divided into five categories. Strongly disagree category ranged from 1.00 to 1.80, disagree 1.81 to 2.60, uncertain 2.61 to 3.40, agree from 3.41 to 4.20, and strongly agree 4.21 to 5.00. As we can see, the mean of the first question was 4.01, meaning that most of the students chose "agree," and for the last question, the mean was 3.40, which indicates that students chose "uncertain." The results showed that the total mean of all the questions of the L2 writing anxiety inventory (SLWAI) was 3.59, with a standard deviation of 1.13 according to the explanation of the five-point Likert scale. This indicates that the overall direction was toward "agree," indicating that a majority of the participants experienced a high level of writing anxiety.

Table 2

Levels of Writing Anxiety Based on SLWAI Inventory

	N	Minimum score	Maximum score	Percentage (%)
High Anxiety	68	66	100	90.666%
Moderate Anxiety	5	63	65	6.666%
Low Anxiety	2	45	45	2.666%
Total	75	45	100	100%

Table 3

Levels of Writing Anxiety Based on Total Mean of SLWAI Inventory

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
TOTAL	75	2.05	4.55	261.45	3.4860	.45979
Valid N	75					

4.3. the Third Research Question

The Causes of Writing Anxiety Scale (CWAI) questionnaire was analyzed to identify the primary triggers of writing anxiety among participants. Each questionnaire point, ranging from 1= strongly disagree to 5= strongly agree, was multiplied by the corresponding counting score. The questionnaire comprises ten questions scored on a five-point Likert response scale. To determine the main cause of writing anxiety, the total score for each item was summed up after multiplication by the Likert point, and the percentage was calculated using the formula: Percentage = (Total score for each item / Total score of all items) x 100%. Additionally, SPSS software was utilized to calculate the mean for each question.

Based on the data analysis findings, conclusions were drawn regarding the causes of writing anxiety among the participants. The subsequent table presents the results. The predominant causal factor of writing anxiety among the participants was the fear of negative comments from teachers (10.74%), corresponding to the first statement in the questionnaire. This percentage represents the highest among the various causes of writing anxiety identified in the study.

Table 4

Descriptive Statistics of Causes of Writing Anxiety

Statements	SA	A	U	D	SD	Total score	Mean	St. Deviation	Percent (%)
1	25	33	10	5	2	291	3.99	0.99	10.740%
2	21	30	10	10	4	279	3.72	1.16	10.306%
3	14	27	25	7	2	271	3.59	0.98	10.011%
4	20	28	15	10	2	279	3.72	1.08	10.306%
5	14	24	18	15	4	254	3.39	1.15	9.383%
6	22	24	13	12	4	273	3.64	1.21	10.084%
7	14	26	20	9	6	258	3.44	1.16	9.530%
8	23	22	18	9	3	287	3.71	1.14	10.602%
9	15	25	22	9	4	263	3.51	1.1	9.715%
10	15	25	15	12	8	252	3.36	1.26	9.309%

4.4. the Fourth Research Question

As mentioned above, the fourth question was "Is there a significant association between writing anxiety levels and TA among Iraqi EFL learners?" To answer this question, the researcher had to take a look at the levels and the total mean of ambiguity tolerance that was obtained from the SLTAS. The results are displayed in Tables 5, 6, and 7. The researcher classified the levels of ambiguity of tolerance (the second language AT scale) into two main categories after analyzing the SLTAS questionnaire. They were categorized as high and low levels. The total number of participants was 75. According to Table 5, 46.66 % of the participants had a high level of ambiguity tolerance, while students with a low level of writing anxiety account for 53.33%. According to the statistical results, a high level of ambiguity tolerance was 46.66 %. Table 6 provides the total mean.

Table 5

Level of Ambiguity Tolerance

Score	N	Minimum score	Maximum score	Percentage (%)
0-24	40	8	24	53.3333 %
25-48	35	25	39	46.6666 %
48	75	8	39	100 %

Table 6

Total Mean of Second Language AT Scale

Total	N	Minimum	Maximum	Sum	Mean	Std. Deviation
MEAN	75	.67	3.25	137.58	1.8344	.62773

Table 6 shows us the results of the second language TA scale. The researcher applied the four-point scale. According to the explanation of the four-point Likert scale, the mean was divided into four categories: from 0.99 to 1.00 = strongly disagree, from 1.00 to 1.99 = disagree, from 2.00 to 2.99 = agree, and from 3.00 to 4.00 = strongly agree (Nee & Yunus, 2020). The results showed that the total mean of all the questions of the second language TA inventory was 1.83, with a standard deviation of 0.62 according to the explanation of the four-point Likert scale. This means that the general direction was "disagree," which indicates that most of the participants had a low level of ambiguity tolerance. The Pearson correlation coefficient was utilized to examine the relationship between writing anxiety and ambiguity tolerance. The outcomes of these correlations are detailed in Table 7.

Table 7

Pearson Correlation Between Writing Anxiety and Ambiguity Tolerance

	Writing Anxiety		Tolerance of Ambiguity
Writing anxiety	Pearson Correlation	1	-.098-
	Sig. (2-tailed)		.401
	N	75	75
Tolerance of ambiguity	Pearson Correlation	-.098-	1
	Sig. (2-tailed)	.401	
	N	75	75

In Table 7, the correlation coefficient between writing anxiety and ambiguity tolerance was presented as $-.098$. This value suggested that there was no significant relationship between writing anxiety and ambiguity tolerance. As a result, the correlation value was not significant since the p value was above the significance level. The row was higher than the significance level ($.000 < .05$). The association led to the conclusion that there was no significant relationship between writing anxiety and ambiguity tolerance.

5. Discussion

Considering the dominant part of anxiety, the results of this study showed that cognitive anxiety was the dominant type. This aligns with the results of Rezaei and Jafari's study (2014). They concluded that cognitive anxiety was the most prevalent type of writing anxiety. Cognitive anxiety encompasses the cognitive aspects of anxiety experiences, including negative expectations, preoccupation with achievement, and concerns about external perceptions. Expectations from teachers or other students may have a big impact on how students perform. For instance, the students should fulfill the instructor's high standards since the teacher has high expectations for them. Due to their increased attention to other people's expectations rather than their own work, it may have an influence on the students' writing (Cheng, 2004).

Also, the results of this investigation corroborate Ningsih's (2015) conclusions, indicating that the most prominent category of writing anxiety was cognitive anxiety. Her study focused on exploring writing anxiety experienced by EFL students at Jember University, Indonesia. Moreover, Tupang's study (2014) examined students' writing anxiety at Satya Christian University's English Teacher Education. He discovered that the most prevalent type of writing anxiety was cognitive anxiety. When students are concerned about others' perceptions or other expectations, they experience cognitive anxiety. Students are unconcerned about their expectations. They are concerned and anxious because they are aware that their composition is supposed to be assessed and debated in front of their classmates. They express concerns about their classmates' potential judgment of their English compositions upon reading them, particularly fearing poor grades for their work. As a result, students who are suffering from cognitive anxiety must fight various external unfavorable forces; next, they must be capable of controlling their minds to lessen their anxiety levels.

Regarding the second research question, it is evident that Iraqi EFL learners encountered a considerable level of writing anxiety. According to the findings, 68 students (90.66%) reported experiencing high levels of writing anxiety, while five students (6.66%) reported moderate levels, and two students (2.66%) reported low levels of writing anxiety.

Based on the analysis of writing anxiety categories, cognitive anxiety emerged as the most prevalent type experienced by students. These results are in line with Wahyuni and Umam's study (2017). They reported that there are certain conclusions that can be drawn based on the statistics presented in the study findings. The majority of students experienced high levels of writing anxiety; twenty-seven students (54%) had high levels, twenty-two students (44%) had moderate levels, and only one student (2%) had a low level of writing anxiety.

The findings of this research are consistent with those of Rezaei and Jafari's study (2014), which also observed that the majority of students reported high levels of writing anxiety. In their study focusing on Iranian EFL students, Rezaei and Jafari employed a mixed-methods approach and found that Iranian EFL students exhibited a high level of anxiety regarding writing.

The third research question aimed to identify the primary causes of writing anxiety. The analysis of the data revealed several main causes, including fear of the teacher's negative comments (10.74%), high frequency of writing assignments (10.6%), insufficient writing technique (10.3%), and fear of writing tests (10.3%). Notably, fear of the teacher's negative comments emerged as the foremost cause of writing anxiety. Many students experience anxiety when their writing undergoes evaluation, particularly when it does not meet their teachers' expectations, resulting in unfavorable evaluations. This apprehension about teachers' assessments outweighs their concerns about the quality of their writing, leading to discomfort and heightened writing anxiety. Consequently, it is recommended that teachers and lecturers provide more positive feedback and frequent encouragement to help students improve their writing skills. Based on the findings, addressing the fear of teachers' negative comments appears crucial in mitigating writing anxiety among students.

The fourth research question was addressed by the data analysis, which revealed no statistically significant relationship between TA and writing anxiety. The results indicated that

the participants had a high level of writing anxiety, and at the same time, they had a low level of TA. Therefore, these findings gave rise to the rejection of the hypothesis of the study.

Many studies have been done on the relationship between TA and language learning in general, and a small number of studies have investigated the relationship between writing and TA. According to Khajeh (2002), who investigated the relationship between TA and language proficiency as well as language learning strategies, there is a positive association between TA and both proficiency level and frequency of strategy use. This finding logically doesn't apply to writing generally, and writing anxiety specifically, because writing is an independent skill, and writing anxiety is related to several factors, such as psychological, cognitive, and behavioral factors.

Thus, according to Kamran and Maftoon's (2012) research, there is no noticeable association between learners' ambiguity tolerance and their overall reading strategy utilization. Furthermore, no statistically significant link was found between participants' TA and variables such as their global usage, issue-solving, and support sub-scales of reading strategy. This relationship may depend mainly on the level of ambiguity tolerance itself. Oxford (1999) notes that only a suitable degree of ambiguity tolerance is beneficial to L2 learning, contrary to Haddadi's (2011) claim that a high level of SLTA is a predictor of L2 outcomes.

Oxford asserts that a high SLTA can result in "unquestioned acceptance and cognitive inactivity," posing a detriment to L2 learning achievement, comparable to having a very low level (1992, pp. 37-38). Additionally, SLTA is recognized as domain-specific, implying that L2 learners may encounter differing levels of TA based on language domains.

Kazamia (1999) found that Greek EFL learners exhibited tolerance toward ambiguity in reading and listening, but demonstrated less tolerance when it came to writing or speaking English, a trend consistent with the findings of the current study. In the current study, the majority of students displayed high levels of writing anxiety coupled with low ambiguity tolerance. This diminished tolerance may stem from a cognitive belief that learning is not evolving, contrasting with the notion of learning-as-becoming, which perceives learning as a journey where students advance by making mistakes and learning from them (Dweck, 2006).

Writing ability is essential in learning any language. Few studies have delved into the correlation between ambiguity tolerance and writing ability in L2. Jin and Zhang (2021)

explored the relationships among writing anxiety, writing proficiency, ambiguity tolerance, and self-regulation. The study also examined whether writing ability, ambiguity tolerance, and self-regulation could predict writing proficiency. Results indicated no statistically significant association between writing ability and ambiguity tolerance, but a significant positive correlation between writing ability and self-regulation. Similarly, no statistically significant link was found between writing proficiency and ambiguity tolerance, aligning with the present study's observations that ambiguity tolerance can be influenced by various factors.

In contrast, Lee (1999) employed a TA questionnaire developed by the Institution of Houston to evaluate the impact of different TA levels on task-based writing performance among 93 participants at a Korean university. Learners with high TA outperformed those with low TA, displaying better organization of their writing, paragraphs, and ideas. High TA students exhibited more structured writing, utilized topic sentences, and effectively summarized their paragraphs, expressing their thoughts more logically compared to their less tolerant counterparts. Lee's (1999) study stands as the sole investigation into the influence of TA on L2 writing thus far, employing distinct measurements in different settings. Despite the study's noteworthy outcomes highlighting the significance of TA in L2 writing processes, no comprehensive analysis has been undertaken to explore this connection further.

6. Conclusion

This study examined the relationship between TA and writing anxiety among Iraqi university freshmen enrolled in EFL courses. The findings indicated that cognitive anxiety, characterized by overthinking and worry during the writing process, was the most prevalent form of writing anxiety among these students. A significant portion of the participants also demonstrated high overall levels of writing anxiety, with "fear of teachers' negative comments" emerging as the primary source. Additionally, the study revealed that most students possessed low TA, reflecting their discomfort with uncertainty and unpredictable outcomes in the learning process. Interestingly, no statistically significant relationship was found between TA and writing anxiety, suggesting that while both variables were present in the learners, they might not directly influence one another in this specific context.

The study's findings underscore the need for educators to take into account both writing anxiety and ambiguity tolerance when designing their courses and instructional methods. Writing

anxiety can significantly hinder a student's ability to perform, especially when it stems from fear of criticism or negative feedback. Teachers should be aware of this anxiety and aim to provide constructive and supportive feedback that helps reduce fear without sacrificing academic rigor. At the same time, ambiguity tolerance plays a critical role in students' ability to adapt to complex or uncertain learning scenarios. Instead of attempting to eliminate uncertainty, teachers can foster environments that promote risk-taking, creativity, and resilience in the face of ambiguity. Activities that encourage students to guess, experiment, and embrace challenges may help learners become more comfortable with uncertainty while simultaneously reducing their anxiety.

Furthermore, this research suggests that teachers should recognize that students are not homogeneous in their responses to ambiguity and writing anxiety. Some students may thrive in uncertain situations, while others might struggle, and this variation must be taken into account when planning assignments or activities. By being attentive to these individual differences, educators can create more inclusive and flexible learning environments that accommodate varying levels of ambiguity tolerance and help students manage their writing anxiety more effectively. Instructors who are attuned to these factors are better equipped to support their students' development as confident and capable writers in an L2.

This study had several limitations in terms of the small and limited number of participants, who were all freshmen EFL students at the University of Karbala, English Department. Thus, it seems important to conduct more future studies in this regard. Further studies can be conducted to answer the research questions of this study using other instruments, like observations and interviews, in order to determine and get accurate and trustworthy findings. Moreover, future research can be conducted to investigate how other personal characteristics correlate with writing anxiety. Furthermore, further research can be done to investigate the impact of anxiety on several aspects of writing.

Conflict of Interest

The author(s) certify/certifies that they have no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-

financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in the present research paper.



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