Pre-service English teachers' writer's block, writing anxiety, and perceived writing competence: A longitudinal, correlation study

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Abstract

Writing is a demanding language skill to develop. Psychological factors such as writer's block and writing anxiety are most probable when writing is performed. The role played by the integration of certain means to help learners improve their writing competences and decrease their writer's block and writing anxiety deserves attention. Hence, this study reports on the implementation of synectics, as a pre-writing technique, in a year-long writing skills course in an English language teacher education programme in Türkiye. In a time-series repeated measures quasi-experimental design, we collected data regarding the pre-service English language teachers' (*N*=44) writer's block, writing anxiety, and perceived writing competence before, during, and after the use of synectics in teaching writing essays of different genres. Through descriptive and inferential tests, we examined the likely changes in the pre-service teachers' writer's block, writing anxiety, and perceived writing competence, and the correlation between them. Despite fluctuations and no statistically significant difference, the pre-service teachers' writer's block and writing anxiety decreased, and their perceived writing competence increased. However, the statistically significant relationship between writer's block, writing anxiety, and perceived writing competence could suggest the interplay between them and the likely role of synectics in the teaching of essay writing.

Keywords: *Perceived Writing Competence, Pre-writing Techniques, Pre-service English Teachers, Synectics, Writer's Block, Writing Anxiety*

INTRODUCTION

Foreign language education aims to equip learners with the knowledge and skills necessary for communicating effectively in spoken and written language. Writing, as one of those skills, is an essential means for nurturing individuals' cognitive skills, problem-solving potential, and intellectual development (Krashen & Lee, 2004).

While foreign language writing is an important skill to be acquired, it is challenging to master (Richards & Renandya, 2002) since learners need to consider several factors ranging from the audience to mechanics, or grammar (Raimes, 1983) and need to be involved in complicated

strategies like producing ideas, planning, revising, and editing. Therefore, the complicated nature of foreign language writing led to the existence of some pre-writing techniques to help learners generate ideas, revise, and edit through various means such as peer, teacher, or self-evaluation.

Strategies that learners are assumed to use in pre-writing seem essential as they might need support and guidance while they generate ideas and form the base of the main phase of the writing activity. Besides, the pre-writing stage has the potential to tackle such issues as writer's block, writing anxiety, and perceived writing competence which learners might experience and might affect their writing performance. Therefore, to increase the quality of the writing process, it is critical to address them from the beginning of the writing process.

Various studies have investigated the effects of a number of pre-writing techniques (PWTs) on different variables in foreign language writing teaching. For instance, Shirvani and Porkar (2021) reported a stronger capacity to generate new ideas, open-mindedness, and writing motivation in their study of the use of brainstorming in teaching essay writing to Iranian learners of English as a foreign language (EFL). Zaid (2011) explored the impact of web-based activities on Saudi Arabian English learners' opinion essay writing and reported significant improvement in their writing quality despite the increase in their writing apprehension. Mahnam and Nejadansari (2012) investigated the use of concept mapping, reading relevant texts, and negotiation as alternative pre-writing strategies in argumentative essay writing and reported significant effects on learners' writing achievement. The use of mind mapping technique in the pre-writing stage was also found to lead to improvement in Iraqi college students' essay writing (Khudhair, 2016). The use of brainstorming and role-playing in argumentative essay writing revealed improvement in the content of the Malaysian tertiary-level English learners' essays and played a role in idea generation (Voon, 2010). İnal (2014) studied the impact of clustering as a PWT in narrative essay writing teaching and reported improvement in the tertiary-level Turkish EFL learners' writing ability, whereas no gains in their vocabulary development and attitudes towards writing. Al-Jaro et al. (2016) investigated the effects of six different PWTs i.e., listing, clustering, wh-questions, cubing, free-writing, and outlining on Yemeni EFL learners' writing skills and reported significant improvement, particularly in the organisation of ideas and content. Finally, Shafiee et al. (2015) found that the use of a range of PWTs through different means of input delivery resulted in a significant increase in writing quantity.

As seen, studies mostly focus on the implementation of various strategies such as brainstorming (Shirvani & Porkar, 2021), concept mapping (Mahnam & Nejadansari, 2012), web-based activities (Zaid, 2011), role-playing (Voon, 2010), mind mapping (Khudhair, 2016), clustering (İnal, 2014) in genres such as argumentative (Voon, 2010), narrative (İnal, 2014), or opinion essays (Zaid, 2011). However, there seems to be a need to examine relatively new PWTs such as synectics in teaching other genres such as descriptive, comparison and contrast, or advantage-disadvantage. Additionally, despite the abundance of research on writing in tertiary-level EFL teaching (Al-Jaro et al., 2016; Beiki et al., 2020; Khudhair, 2016; Shafiee et al., 2015) and English language teacher education programs on various issues such as attitudes towards writing (Aydın & Başöz, 2010) and difficulties experienced in writing (Gümüş, 2019), to our best knowledge, there is no research yet on the likely effects of PWTs on pre-service English language teachers' (PSTs) writer's block, writing anxiety, and perceived writing competence.

With this gap in hand, in this study we examined the pre-service English teachers' writer's block, writing anxiety, and perceived writing competence through repeated measures during the use of synectics as a PWT for the teaching of different genres of essays in a year-long writing course. Besides, we examined the correlation between writer's block, writing anxiety,

and perceived writing competence, and the use of synectics to examine the relationship between them. Hence, we sought answers to the following questions.

1. What is the pre-service English teachers' level of writer's block, writing anxiety, and perceived writing competence in a year-long writing course during the use of synectics as a prewriting technique in teaching essay writing?
2. Is there any correlation between the use of synectics as a prewriting technique and pre-service English teachers' writer's block, writing anxiety, and perceived writing competence? If yes, how and to what extent?

LITERATURE REVIEW

Synectics as a Pre-writing Technique

Synectics means bringing diverse and seemingly unrelated ideas together (Gordon, 1961). More specifically, it is a technique based on forming a range of metaphors and analogies to join different items together to discover novel ideas or solutions to problems (Starko, 2010). Gordon and his team designed the model in the 1950s by analysing the psychological states of the creative process, which facilitated divergent and metaphorical meanings (Weaver & Prince, 1990). For Gordon (1961), creativity is an explicable process that can be understood and improved. In educational contexts, synectics is an instructional model designed to produce original ideas, solve problems, and stimulate innovation by activating psychological, conscious, and systematic mechanisms. Hence, the model is worth using as a PWT for idea generation as it improves individuals' creativity.

The literature on synectics reveals that studies employing the technique in different disciplines such as science education (e.g., Abed et al., 2015; Aiamya & Haghanib, 2012; Ercan, 2010), social sciences (e.g.,Tajari & Tajari, 2011), and EFL (Author2, 2016; Fatemipour & Kordnaeej, 2014; Yagnik, 2010) reported positive influence on problem-solving skills and creative and critical thinking potential.

However, there seems to be a gap in the implementation of synectics as a PWT in writing skills courses in English language teacher education programs whose graduates are the ones to teach writing skills upon graduation.

Writer's Block

Learner psychology in the mastery of writing skills is an issue that researchers agree upon (Dhanya & Alamelu, 2019; Han & Hiver, 2018). Emotions, attitudes, feelings, or mood are among the influential factors (Arnold & Brown, 1999) including debilitating ones like anxiety, apprehension, anger, and fear or facilitators like motivation or perceived competence.

Research investigating affective factors primarily focuses on writing attitude, motivation, and disposition, while writer's block (WB), a factor affecting success in writing (Baştuğ et al., 2017), has received little attention. WB refers to "an inability to begin or continue writing for reasons other than a lack of basic skill commitment" (Rose, 1984, p. 3). Factors like writing apprehension, general anxiety, depression, lack of correct writing rules and appropriate strategies, being guided by inappropriate criteria for evaluation of writing, low intrinsic

motivation, procrastination, etc. could be given as common causes of WB (Ahmed, 2019; Rose, 1984).

The relationship between WB and various factors is examined in some studies. For instance, Zorbaz (2015) discovered that learners who had consistent reading habits and took part in writing instruction in their former education had lower WB. Besides, the implementation of flipped classroom alleviated learners' WB levels in an Egyptian higher education English for specific context (Salem, 2018). However, peer feedback in a Turkish as a foreign language writing course yielded no considerable decrease in the students' WB (Özşavlı, 2017). Although different techniques and approaches were tried out to see if and how WB might be lowered, studies have yielded contradicting results. Therefore, further attempts are required to discover means to decrease blocking in writing that is assumed to be influencing success in writing (see Baştuğ et al., 2017).

Hence, it seems reasonable to further support learners to overcome their WB or decrease their blocking levels. For instance, learners could be guided and assisted with specific techniques in the pre-writing stage to eliminate inhibition caused by blocking. However, studies exploring the effects of PWTs on WB are quite scarce. To our best knowledge, one such study was carried out by Evdash and Zhuravleva (2020), which aimed to help Russian university researchers overcome WB through classroom intervention, including PWTs such as free writing, looping and word association, and individualised intervention. They reported that the activities relieved stress and fear of writing, and the participants gained a more positive attitude towards dealing with the problems caused by their WB. Another study implemented in a higher education EFL context showed that the use of synectics in the pre-writing stage led to an insignificant decrease in WB while qualitative findings pointed to a noticeable decrease in the participants' perceptual WB (Author2). As the prewriting stage involves activities for learners to get prepared for the composing stage, it also appears important to try out and discover other possible means to aid learners in lowering or eliminating their blocking levels in the writing process.

Writing Anxiety

Writing anxiety (WA) is concerned with "the dysfunctional anxiety that many individuals suffer when confronted with writing tasks" (Cheng, 2002, p. 647) and involves distress and a strong dislike for the writing process.

Although WA has a rich body of literature (see Genç & Yaylı, 2019; Huerta et al., 2017; Öztürk & Saydam, 2017; Quvanch & Si Na, 2022), if and how it is affected by particular PWTs requires further examination. Tzima and Andreou (2021) examined the influence of freewriting on writing apprehension levels in an English for Academic/Scientific Purposes course and reported no significant decrease. Zaid (2011) sought the impact of web-based PWTs on EFL learners' essay writing and reported that despite an increase in writing apprehension, learners' writing quality enhanced significantly. Huang et al. (2021) reported that the use of DingTalk, an online collaborative pre-writing tool, lowered junior high school students' overall WA. In another study implemented by Uzun and Zehir Topkaya (2018) in an English literature course, pre-service English teachers were instructed on how to write literary analysis texts. The findings indicated that there was a statistically significant decrease in their WA levels, which the PSTs attributed to various reasons such as the feedback they received or continuous writing practice among many others. Furthermore, WA is reported to have a link to writing self-efficacy (Kırmızı & Dağdeviren Kırmızı, 2015), which might suggest that learners with WA might have lower self-efficacy levels that could result in lower writing performance.

It appears to be difficult to generalize the results of the studies on WA as in the case of the WB studies. Therefore, WA needs to be further investigated to consider the ramifications of various practices and to get a clearer understanding regarding if PSTs have WA, how their WA level could be lowered, and if and how much it affects their perceived writing competence.

Perceived Writing Competence

Perceived writing competence (PWC) (commonly referred to as writing self-efficacy) refers to the "assessment of one's ability to write effectively" (McCarthy et al., 1985, p. 465). McCarthy et al. state that it is a form of self-evaluation that manifests a high correlation between writers' beliefs in their writing skills and the quality of their written works.

Research reported that PWC had a positive and significant relationship with writing complexity, accuracy, and fluency (Zahibi, 2018). A positive and moderate correlation between PWC and writing skills was also reported in a meta-analysis conducted by Atasoy (2021). Besides, PWC was also found to strongly predict higher levels of motivation and achievement in writing courses (Yeşilyurt, 2008). Moreover, learners' PWC appears to be a stronger predictor of their WA compared to writing achievement (Cheng, 2002). Both theoretical basis and empirical evidence carry implications for providing student writers with opportunities to develop positive writing competence perceptions.

However, there are few studies investigating if and how PWTs affect PWC. For example, the implementation of concept mapping in expository essay writing had positive effects on the participants' self-efficacy (Nobahar et al., 2013). In a recent study, both peer-led and teacher-led collaborative prewriting groups outperformed the individual pre-writing group with respect to writing self-efficacy (Mohammadi et al., 2023). However, the use of clustering was found to make no considerable change in the participants' writing self-efficacy level (Al Samman & Kürüm, 2021). A conflicting result was also attained by Fathi et al. (2019), who reported that blog-mediated writing reduced writing self-efficacy despite an improvement in writing motivation and writing self-regulation. Therefore, it necessitates future research to investigate the possible effects of different PWTs.

RESEARCH METHODOLOGY

Research Design

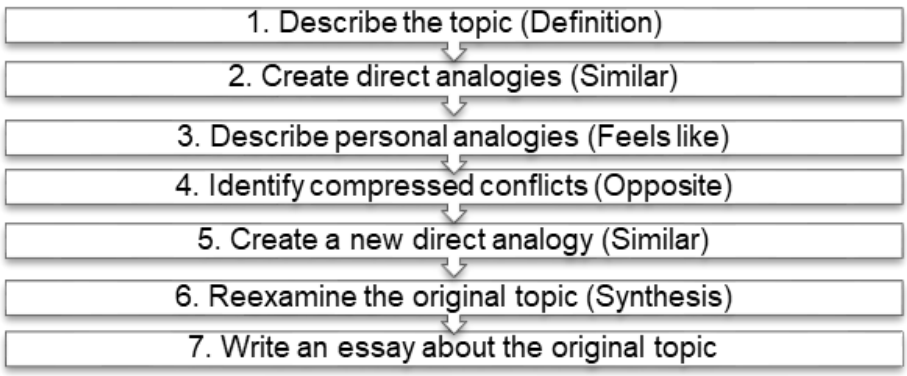
We adopted a quasi-experimental, time-series repeated measure design (see Nunan & Bailey, 2009) and employed quantitative methodology to examine if and how the PSTs' writer's block, writing anxiety, and perceived writing competence changed during the use of synectics as a pre-writing technique for the teaching of different genres of essays in a year-long writing skills course (see Figure 1).

Figure 1
Research Design

BEFORE	DURING			AFTER
26 October 2021	***1 November-7 January***	***12 January***	***21 February -3 June***	**8 June 2022**
Implementation of the WB, WA, and PWC scales (*N*=37)	Teaching *Descriptive and Compare & Contrast* essays through synectics as a PWT	Reimplementation of the WB, WA, PWC Scales (*N*=41)	Teaching *Advantage & Disadvantage and Argumentative* essays through synectics as a PWT	Reimplementation of the WB, WA, PWC Scales (*N*=44)

Before the study, we elicited the PSTs' evaluations regarding their WB, WA, and PWC via the scales. This was to capture their perceptions of these variables before being engaged in the learning of essay writing through synectics. During the study, which took from November to June, the third researcher used synectics as a PWT to teach how to write essays of different genres, namely descriptive, comparison and contrast, advantage-disadvantage, and argumentative. The purpose was to enable the PSTs to brainstorm for idea generation about the topic before they began writing. The figure below presents an example of the stages of deriving new phrases and ideas regarding the topic via the technique.

Figure 2
Stages of the Synectics Technique



As the study was going on, the PSTs had their winter break, which meant that they would be away from instruction for some time. Therefore, considering the likely role of forgetting in learning, we elicited their evaluations of WB, WA, and PWC to capture any likely fluctuations from the beginning to the mid and from there to the end. Once the break was over, the third researcher continued teaching. When the entire instruction ended, we implemented the scales to capture the state of WB, WA, and PWC again.

Setting and Participants

The study was carried out at a state university in northeastern Türkiye. The writing skills course (Advanced Writing) which is offered in the freshman year for two class hours in fall and spring terms (30 weeks in total) in the English language teaching programme constituted the main context. We adopted convenient sampling (Dörnyei, 2007) based on our easy access to the PSTs (*N*=44). Of the participants, 24 were females while 20 were males. Their ages ranged between 18 and 37, with 21 as the average. Great majority (*n*=37) had preparatory language education, while seven did not, as they had performed very well in the preparatory year diagnostic test and jumped into the freshman year. Those who had preparatory language education had taken a writing course where they learned the basic principles of writing, plus how to write various types of paragraphs.

Instruments

We used three, 5-point Likert scales. The blocking dimension of the WB scale was created by Rose (1981) and adapted into Turkish by Zorbaz (2010). The dimension which included nine items was expanded into ten as Zorbaz considered it necessary to determine if students experienced blocking in every type of writing (item 10) (see Özbay & Zorbaz, 2012). The items ranged from always to never. Zorbaz reported the Cronbach-alpha coefficient as .84. In this study, we found it as .89. WA scale was originally developed by Cheng (2004), adapted into Turkish by Ateş (2013) and used in various studies (Genç & Yaylı, 2019). The scale has 22 items. Genç and Yaylı reported the Cronbach-alpha coefficient as .89, and in this study, it is .77. Lastly, the PWC scale with ten items was developed by Yeşilyurt (2008), who reported the Cronbach-alpha coefficient as .89. In the current study, we found it as .81. Both WA and PWC scales ranged from strongly agree to strongly disagree.

As for the reliability of the scales, our interpretation of their Cronbach alpha coefficient is informed by Taber (2018) who concluded that it is common "to consider alpha reaching the somehow arbitrary value of .70 as a sufficient measure of reliability or internal consistency of an instrument" (1295). Hence, all scales could be interpreted as sufficiently reliable to collect data.

Data Analysis Procedures

We firstly ran descriptive tests to find out the PSTs' overall level of WB, WA, and PWC throughout the study. As we collected the data via multiple measures, to see if there was any statistically significant difference between all measures, we ran inferential statistics. Before we did so, we ran the normality test to see if the data required parametric or nonparametric tests for further analysis. Based on the Shapiro-Wilk test for normality which showed that the data obtained through the scales in all three measures were normally distributed and required parametric tests (see Field, 2018) (*p*.>.05) (see Table 1), we ran one-way repeated measures of ANOVA to see if the changes across the three measures were statistically significant. For the relationship between the use of synectics and the PSTs' WB, WA, and PWC throughout the study, based on the normality test we ran the Spearman correlation test.

Table 1
Shapiro-Wilk Test of Normality of the Scales

Scale	Pre-test	Mid-test	Post-test
Writer's Block	.095	.052	.322
Writing Anxiety	.452	.166	.128
Perceived Writing Competence	.589	.107	.505

FINDINGS

The PSTs' Writer's Block, Writing anxiety, and Perceived Writing Competence throughout the Study

In this section, the PSTs' WB, WA, and PWC levels before, during, and after the use of synectics as a pre-writing technique in essay writing are reported. We first present the PSTs' WB throughout the study (see Table 2).

Table 2
The PSTs' Writer's Block throughout the Study

No	Item	Pre-test		Mid-test		Post-test	
		M	***SD***	***M***	***SD***	***M***	***SD***
1	I have to hand in assignments late because I can't get the words on paper.	2.19	1.13	2.10	1.11	2.20	1.23
2	There are times when I sit at my desk for hours, unable to write a thing.	2.59	1.12	2.76	1.16	2.50	1.21
3	While writing a paper, I'll hit places that keep me stuck for an hour or more.	3.00	.88	3.07	.91	2.93	.97
4	There are times when it takes me over two hours to write my first paragraph.	3.16	1.14	2.93	1.03	2.91	1.07
5	I run over deadlines because I get stuck while trying to write my paper.	1.57	.73	1.54	.74	2.09	1.14
6	I find myself writing a sentence then erasing it, trying another sentence, then scratching it out. I might do this for some time.	2.81	1.08	2.76	1.07	2.82	.87

7	It is awfully hard for me to get started on a paper.	2.65	1.08	2.63	.97	2.80	.87
8	There are times when I find it hard to write what I mean.	2.97	1.01	3.02	.85	2.91	.98
9	Some people experience periods when, no matter how hard they try, they can produce little, if any, writing. When these periods last for a considerable amount of time, we say the person has a writing block. Estimate how often you experience writer's block.	2.65	1.01	2.63	.94	2.39	.84
10	While writing, I get stuck at some points for a long time.	2.86	.82	2.88	.87	2.84	.83
Total		**2.65**	**.73**	**2.63**	**.67**	**2.64**	**.78**

A closer examination of the items shows that WB was experienced the highest *if there are times when it takes the PSTs over two hours to write their first paragraph* (item 4), which was perceived stronger in the pre-test (*M*=3.16, *SD*=1.14) and decreased in both the mid-test (*M*=2.93, *SD*=1.03) and the post-test (*M*=2.91, *SD*=1.07). Another item with a similar mean (*M*=3.00, *SD*=.88) showed that *while writing a paper, they would hit places that kept them stuck for an hour or more*. Thus, these two items with the highest mean values indicated that it took some time for the PSTs to start writing, which was supported by items 6 and 10. Besides, in all measures, the PSTs were consistently found to be challenged for writing what they meant (mean values between 2.91 and 3.02). Almost all items on the scale revealed that they experienced WB to some extent. Except for items 4 and 9, the PSTs' WB fluctuated across the three measures. However, the PSTs were found to spend less time to start writing their first paragraph (item 4), which indicated less and an occasional WB. In item 9 which asked the PSTs to have a critical look at how often they experienced WB, the PSTs' perceptions were seen to decrease consistently from the pre-test (*M*=2.65, *SD*=1.01) to the post-test (*M*=2.39, *SD*=.84). Therefore, they experienced WB less often.

The overall mean values of the PSTs' WB across the three measures were also examined (see Table 2), which showed that they *rarely or slightly occasionally* experienced a fluctuating WB. To further understand if this fluctuation was statistically significant, we ran one-way repeated measures of the ANOVA test. The Mauchly's test revealed that the variances of differences were roughly equal and the sphericity assumption was met (p=.441>.05) indicating that the PSTs' WB displayed no statistically significant difference throughout the study (F(2, 72)=.024, p=>.05).

Additionally, we examined the PSTs' WA throughout the study. Item-based results for the three measures are presented below (see Table 3).

Table 3
The PSTs' WA throughout the Study

No	Item	Pre-test		Mid-test		Post-test	
		M	***SD***	***M***	***SD***	***M***	***SD***
1	While writing in English, I am not nervous at all.	2.84	1.14	3.37	1.16	3.32	1.12
2	I feel my heart pounding when I write English compositions under time constraint.	3.00	1.27	3.07	1.25	2.55	1.13
3	While writing English compositions, I feel worried and uneasy if I know they will be evaluated.	3.65	1.18	3.46	1.27	3.16	1.18
4	I often choose to write down my thoughts in English.	3.00	.91	3.34	1.13	3.16	.94
5	I usually do my best to avoid writing English compositions.	2.11	.99	2.22	.99	2.36	.94
6	My mind often goes blank when I start to work on an English composition.	2.49	1.19	2.66	.91	2.43	1.04
7	I don't worry that my English compositions are a lot worse than others.	2.89	1.20	2.88	1.38	2.73	1.21
8	I tremble or perspire when I write English compositions under time pressure.	2.43	1.19	2.56	1.27	2.27	1.09
9	If my English composition is to be evaluated, I would worry about getting a very poor grade.	3.54	1.28	3.46	1.19	3.25	1.10
10	I do my best to avoid situations in which I have to write in English.	2.11	.94	2.20	1.05	2.39	1.04
11	My thoughts become jumbled when I write English compositions under time constraint.	3.08	1.21	3.17	1.12	2.93	1.13
12	Unless I have no choice, I would not use English to write compositions.	2.35	1.06	2.54	1.23	2.52	1.25
13	I often feel fear when I write English compositions under time.	3.00	1.15	2.98	1.24	2.89	1.19

14	I am afraid that the other students would laugh at my English composition if they read it.	2.22	1.29	2.17	1.34	2.36	1.31
15	I freeze up when unexpectedly asked to write English compositions.	2.78	1.38	2.88	1.19	2.61	1.20
16	I would do my best to excuse myself if asked to write English compositions.	2.32	.91	2.29	.84	2.22	.99
17	I don't worry at all about what other people would think of my English compositions.	3.27	1.28	2.98	1.35	3.11	1.22
18	I usually seek every possible chance to write English compositions outside of class.	2.70	.97	2.98	.79	2.75	.89
19	I usually feel my whole body rigid and tense when write English compositions.	2.08	.92	2.34	1.13	2.23	1.03
20	I am afraid of my English composition being chosen as a sample for discussion in class.	2.78	1.27	2.78	1.33	2.61	1.15
21	I am not afraid at all that my English compositions would be rated as very poor.	2.68	1.29	2.51	1.12	2.86	1.27
22	Whenever possible, I would use English to write compositions.	3.16	1.01	3.27	1.07	3.18	1.06
Total		**2.75**	**.48**	**2.82**	**.45**	**2.72**	**.47**

A close examination of the items shows that the PSTs' WA fluctuates over the three measures in many items (1, 2, 4, 6, 8, 11, 12, 14, 15, 17, 18, 19, 21, 22). The highest mean value of all was 3.37, while the lowest was 2.08, suggesting that they were in between having no idea of their WA or disagreeing with the idea that they had writing anxiety. However, a consistent decrease was observed in some items. For instance, the PSTs' perceptions regarding *feeling worried or uneasy if they knew their compositions would be evaluated* (item 3) decreased from the pre-test (*M*=3.65, *SD*=1.18), to the post-test (*M*=3.16, *SD*=1.18) suggesting that it became more obvious that the PSTs' perceptions shifted towards having no idea if they would feel worried or unease which was more likely to agree with in the beginning. The decrease in the mean values of item 7 suggested that there was a shift towards disagreeing with the item, which means that they would worry if their compositions were a lot worse than those of their friends. The PSTs' WA regarding *they would worry about getting a very poor grade if their English compositions are to be evaluated* (item 9) decreased

to 3.25 in the post-test from 3.45 in the mid-test, and 3.54 in the pre-test, which indicates that in the beginning, they were more likely to disagree with the item. However, having been through the entire process, they became more likely to have no idea if they would feel so. On the other hand, the PSTs became less uncertain regarding if they would be anxious *writing English compositions under time* (mean value decreased from 3.00 to 2.89). Moreover, they were seen to shift towards disagreeing that *they would do their best to excuse themselves if asked to write English compositions* (item 16), suggesting that they would not avoid doing so. Item 10, which is more like a cross-check of item 16, displayed a minor increase indicating that they do their best to avoid situations in which they have to write in English. Consequently, the items in the scale were found to display obvious fluctuation across the three measures.

Despite fluctuations, their overall WA (see Table 3) showed that the PSTs had, to a large extent, no idea or were not certain if they had WA at all. To further understand if this fluctuation was statistically significant, we ran one-way repeated measures of the ANOVA test. The Mauchly's test revealed that the variances of differences were roughly equal and the sphericity assumption was met (p=.591>.05) indicating that the PSTs' WA displayed no statistically significant difference throughout the study (F(2, 72)=.0381, p=>.05).

Lastly, we examined the PSTs' PWC, which increased constantly across all measures suggesting that the PSTs had an obvious partial agreement with such positive ideas that *"they feel competent …", "they are able to meet the challenge of …", "they are capable of …", "they are able to achieve …", or "they are satisfied with …"* etc. regarding their writing competence. Table 6 shows further details.

Table 4

The PSTs' Perceived Writing Competence throughout the Study

No	Item	Pre-test		Mid-test		Post-test	
		M	***SD***	***M***	***SD***	***M***	***SD***
1	I feel competent while writing in English.	3.54	.87	3.61	.86	3.66	.94
2	I am capable of meeting the requirements of the writing classes.	3.46	.77	3.68	.90	3.73	.85
3	I am able to achieve my goals in the writing classes.	4.05	.70	3.83	.86	3.91	.74
4	I feel able to meet the challenge of performing well in the writing classes.	4.03	.76	3.88	.93	3.84	.89
5	I think I am very good at writing.	2.86	.71	3.37	1.01	3.34	.99
6	I think I do pretty well at writing compared to other students.	2.68	.91	2.95	.89	3.36	1.08
7	After working at writing for a while, I	3.81	.66	3.80	.84	3.86	.73

	feel very competent.						
8	I am very satisfied with my performance at writing.	3.03	.93	3.41	.97	3.41	.87
9	I can get the marks that I expect from writing examinations.	3.00	.75	3.10	.92	3.50	.76
10	This is an activity that I cannot do very well.	2.13	.86	2.22	.99	2.32	.98
	Total	**3.26**	**.48**	**3.39**	**.58**	**3.49**	**.59**

In many items, their PWC increased across all measures. However, their perceptions regarding achieving their goals in the writing class decreased in the mid-test (*M*=3.83, *SD*=.86), which then increased in the post-test (*M*=3.91, *SD*=.74). Still, none were higher than their perceptions in the pre-test (*M*=4.05, *SD*=.70). The only item with a consistent decrease over the three measures was item 4, which states that "*I feel able to meet the challenge of performing well in the writing classes"*. On the other hand, item 10, which says that *"This is an activity that I cannot do very well",* shows otherwise, which means that the PSTs disagreed with the statement. However, a slight increase across the measures suggests a minor shift towards being partially agree. In this regard, despite a consistent increase in many items, there was still some "gap" for a tentative scepticism towards their competence.

Lastly, to further examine if the increase in the overall mean values of the PSTs' PWC was statistically significant, we ran one-way repeated measures of the ANOVA test. The Mauchly's test revealed that the variances of differences were roughly equal and the sphericity assumption was met (p=.795>.05) indicating that the increase in the PSTs' WC was not statistically significant (F(2, 72)=2.034, p=>.05).

Correlation between the PSTs' levels of Writer's Block, Writing anxiety, and Perceived Writing Competence and the Use of Synectics

Additionally, we ran the Pearson correlation test (based on the normality assumption) to examine the likely relationship between WB, WA, PWC, and the use of synectics throughout the study. The table below shows the results.

Table 5

Correlations between Writer's Block, Writing Anxiety, Perceived Writing Competence and Synectics as a Pre-writing Technique

	WB	**WA**	**PWC**	**PWT**
Writer's Block (WB)				
Writing Anxiety (WA)	.516**			

Perceived Writing Competence (PWC)	-.408**	-.492**	
***Synectics (PWT)**	-.004	-.028	.170

**Correlation is significant at the 0.01 level (2-tailed).
*Based on time series repeated measurements

As the correlation matrix shows, the PSTs' overall WB throughout the study has a positive and moderate correlation with WA (*r*= .516), which is statistically significant and means as one increases, the other does too. Moreover, WB (*r*= -.408) and WA (*r*= -.492) have a statistically significant, negative and moderate correlation (see Schober et al., 2018) with PCW, which indicates that as the PSTs' WB and WA go up, their PWC goes down. Therefore, their writing is most likely to result in poor performance. What deserves more attention in this matrix is the relationship between the PSTs' WB, WA, PWC, and the use of synectics as a PWT throughout the study. As the correlation coefficient shows (*r*= -.004), the PSTs' WB goes down throughout the study as synectics was used. Even if the correlation could be regarded as negligible (Schober et al., 2018), what it indicates is very important and might suggest that the longer use of the technique could result in a stronger correlation. Besides, the correlation between the use of synectics and WA is in the same direction. It is negative and weak (*r*= -.028) and suggests as the synectics was kept being used, the PSTs' WA decreased. Lastly, despite being weak, the positive correlation between PWC and synectics (*r*= .170) shows that as the use of synectics continued, the PSTs' perceptions regarding their writing competence increased.

DISCUSSION

This study examined pre-service English teachers' writer's block, writing anxiety, and perceived writing competence throughout the implementation of synectics as a pre-writing technique for the teaching of essay writing in a year-long writing course and its likely effects on the pre-service English language teachers' writer's block, writing anxiety, and perceived writing competence. Despite a very slight fluctuation, using synectics as a PWT was found to result in a decrease in the PSTs' levels of WB. The PSTs were found to experience the block, particularly when they started writing, such as feeling stuck at some points, spending a few hours writing the first paragraph, or conveying what they meant. Although their WB did not display any statistical difference throughout the study, the PSTs were found to start spending less time writing their first paragraph and experiencing blocking less often.

Despite the lack of studies to compare the results of the present study, which is a limitation, a similar finding was obtained by Author2 (2016), who reported a slight decrease in EFL learners' blocking levels when synectics was used. Another study implementing synectics as a means of creative writing also reported improvement in undergraduate EFL students' attitudes towards writing and growth in their writing skills (see Seidinejad & Nafissi, 2018). It is also worth stressing that while the PSTs in the current study had occasional blocking, we need to highlight the relationship revealed through the correlation test between WB and synectics based on time-series measures. This indicates that a longer and continuous implementation of synectics in teaching essay writing can result in a further decrease in WB and a further increase in PWC and writing performance as found in the current study. The review of research also reveals that similar implementations decrease WB. For instance,

university researchers having a moderate level of WB were also found to relieve stress and fear of writing and gain a more positive attitude towards dealing with the problems caused by blocking in writing when such activities as freewriting, looping, and word association were used (see Evdash & Zhuravleva, 2020). Another recent study carried out with teachers reported that they suggest brainstorming as one of those techniques that could help EFL students overcome anxiety, challenges, and difficulties they face in writing (see Sogutlu & Veliaj-Ostrosi, 2022). At this point, the observations of Author3, who observed that the PSTs started creating more new and rare phrases, could help us make more sense of the implementation of synectics and its likely contributions to the decrease in the PSTs' WB.

Despite being low, the PSTs' WA displayed minor fluctuations throughout the study. Noticeable decreases were observed regarding how anxious they would feel when they knew their compositions would be evaluated. This could be interpreted as, either resulting from the use of synectics or some other interfering variables such as the contributions of other courses that they were taking at the time of their involvement in the study, the PSTs seemed to become relatively more competent in writing and less anxious when their essays were evaluated. The findings of the correlation test were also in the same direction, which proved that as the WA increased, the WB did too, and as the WA decreased, the PSTs became more and statistically significantly competent in writing. Similarly, they were found to become less concerned regarding if their writings would be a lot worse than those of their friends. This could also result from the growth in their writing competence. Although the PSTs' overall WA did not yield a statistically significant change throughout the study, these deserve further attention and interpretation. Research carried out in a similar context with PSTs and assessing their WA as they were being taught how to write literary analysis reported a statistically significant decrease, which the PSTs attached to various reasons including the feedback they received or continuous writing practice among many others (see Uzun & Zehir Topkaya, 2018). Additionally, in their study of the relationship between WA, writing motivation, and writing self-efficacy (PWC as we regarded in this study), Sabti et al. (2019) reported similar results which showed that as the WA increased, the EFL learners' writing performance and self-efficacy decreased. A closer review of the related body of literature revealed various issues regarding the decrease in WA, or no decrease, even some increase in it. For instance, similar to the current study, research has also shown that the use of specific PWTs, ranging from choosing a topic through brainstorming to gathering and organizing ideas through story-mapping or comparing and contrasting did not result in a significant decline in the participants' WA or apprehension levels (see Schweiker-Marra & Marra, 2000; Tzima & Andreou, 2021). Contrarily, the EFL students' writing apprehension was reported to increase after the implementation of web-based re-writing activities (see Zaid, 2011). However, Huang et al. (2021) reported that the use of an online collaborative pre-writing tool decreased the students' overall WA. In this regard, both the current study and other studies indicate the complex nature of WA on its own and how various factors could cause a decrease or increase in it. For instance, in the current study, the genre of the essay was observed to make a difference in if and how anxious the PSTs were. The observations of Author3 throughout the study revealed that while the PSTs seemed to have more WA when they studied argumentative essays, they seemed to be more at ease, and thus had less WA in writing descriptive essays.

As for the PSTs' PWC, a steady increase was observed throughout the study, despite no statistically significant difference throughout the study and relationship with synectics.

However, PWC had a statistically significant correlation with WB and WA, which is important to interpret the likely role of the interplay between these factors. Despite lack of research examining the direct link between synectics and PWC, research exploring similar concepts such as verbal creativity in writing in such aspects as fluency, flexibility, and originality also report the positive impact of synectics on these variables (Damayanti et al., 2018). Another study carried out with relatively younger group of students, compared to those in the current study revealed the impact of synectics on free writing ability particularly when learners wrote poetry (Magdalena et al., 2020). Ruhama and Purwaningsih (2018) also reported improvement in writing descriptive text writing skills when synectics is used. The findings align with those of Nobahar et al. (2013), who reported that using concept mapping as a PWT in expository writing led to a significant improvement in writing self-efficacy. Similarly, Mohammadi et al. (2023) reported the use of peer-led and teacher-led PWTs improved learners' writing self-efficacy. Think-aloud, as a writing strategy, was also found to result in improvement in EFL students' writing performance (Chen, 2022). Additionally, concept mapping was reported to result in better performance when EFL learners wrote argumentative essays (Al-Shaer, 2014). Conversely, Fathi et al.'s (2019) study revealed that blog-mediated writing instruction led to a decline in writing self-efficacy. As for the likely relationship between PWC, WB, and WA, research also reveals similar results supporting those of the current study. For instance, Blasco (2016) reported a negative correlation between EFL students' writing self-efficacy, as we refer to as perceived writing competence, and writing anxiety. Research carried out in the Turkish context with EFL students also revealed the role of various factors such as apprehension and attitudes on writing competence (Yavuz Erkan & İflazoğlu Saban, 2011). In this regard, despite the lack of a statistically significant increase in the PSTs' writing competence, the role of WB and WA on it is obvious.

CONCLUSION

This study reported on the use of synectics as a pre-writing technique for teaching different genres of essays to pre-service English teachers in a year-long writing course. The PSTs' writing block, writing anxiety, and perceived writing competence were closely tracked throughout the study. Despite fluctuations and no statistically significant difference or change, a slight decline in their WB and WA and an increase in their PWC were observed. However, one of the biggest conclusions of this study is the statistically significant interplay revealed between WB, WA, and PWC via the correlation test, which showed that writing competence is significantly affected by WB and WA. Besides, despite not being statistically significant, the negative correlation between WB, WA, and synectics suggests the likely role of synectics in the decrease. Moreover, the positive correlation between synectics and PWC is another important finding of this study. In this regard, this study suggests the need to implement certain measures such as synectics or others that could decrease or eliminate WB and WA so that PWC can increase.

In this vein, due to the difficulty of writing which has already been agreed upon (Mante-Estacio & Ugaligan, 2018), researchers highlight the need to train EFL students through certain PWTs and activities to decrease their WB and WA and increase their writing performance, competence, and self-efficacy (Aunurrahman, 2019; Hurst, 2017; Schweikker-Marra & Marra, 2000). Studies also emphasize the role of anxiety-provoking personal and environmental factors in writing (see Blasco, 2016). Therefore, as employed in this study, certain measures, techniques, or means should be integrated into classroom teaching to

decrease or eliminate writing anxiety or block of prospective English teachers who are the ones to teach writing skills.

Based on the findings of this study, several implications for future research are possible to draw. First, WB and WA are seen to be persistent and hard to eliminate issues even in longitudinal research. Therefore, further and longer research through a range of practices in various contexts is obviously needed. By doing so, researchers could arrive at more definite conclusions and shed light on these important constructs which have been displayed to influence writing competence and performance.

Lastly, the role played by responsive foreign language writing instructors or teachers becomes evident as they are the ones to take certain measures such as synectics or others as pre-writing activities as commonly employed to decrease the students' (both EFL and PSTs) WB and WA and increase their PWC.

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