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The Validity and Reliability of Writing Attitude Scale for EFL Learners in the Indonesian Context

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Abstract

Having a positive attitude in writing is very important since the positive attitude will make the students approach writing in a good way and will enable them to finish the writing task well. Thus, an appropriate instrument to measure the writing attitude is needed. Yet, scarce research is dedicated to investigating the validity and reliability of the writing attitude scale. This research is intended to investigate the validity and reliability of the writing attitude scale adapted from Podsén (1997) which was originally developed from the Daly-Miller Writing Apprehension Test (Daly & Miller, 1975b). The design of this study was an observational, non-experimental study with a cross-sectional design, in which the researchers focused on analyzing Podsén's (1997) Writing Attitude Scale (WAS). The population of the study was 96 students who took the Essay Writing course in the English Department, at a public university in East Java. The data were in the form of numbers on an ordinal scale. The researchers used the Content Validity Ratio (CVR) to analyze the validity and Cronbach alpha to check the inter-item correlation coefficient in SPSS 25. The result of the study shows that the CVR analysis was 1, and all items in the questionnaire were

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valid ($p=.000\leq .000$) as shown in the Pearson product-moment analysis. Secondly, the internal consistency of Podsén's (1997) Writing Attitude Scale was high ($r>.877$). This implies that the instrument is applicable because it possesses validity and is highly reliable in measuring students' writing attitudes.

Keywords: Reliability, scale, validity, writing attitude.

1. INTRODUCTION

Writing is an activity that requires a high-level thinking skill that goes beyond sentence production and is often seen as a complex activity. Knowing writing strategies may not be sufficient to write well. Pajares and Valiante (2006) believe that the complexity of writing lies not only in the thinking process that underlies the students' composition but also in the way the students work on the text or how they engage with the text. Since writing is widely known as a difficult skill (Setyowati et al., 2018), students who excel in other skills might find difficulties when having to produce a piece of good writing because of their fear of making mistakes (Jabali, 2018). In addition, as stated by Erkan and Saban (2011), sometimes students who are excellent in other language skills, such as reading, listening, or speaking, struggle with writing because they are fearful of making mistakes and have a lack of self-efficacy. In other words, students feel that expressing themselves in written English is beyond their competence.

Therefore, if the students' writing confidence is not as high as it may be, they need to adjust their attitude toward writing. Writing attitude is an affective component of motivation (Graham, 2006; Graham et al., 2007). In other words, it is an emotional variable that influences learning. Graham et al. (2007) investigated three models of writing attitude. They were (1) a unidirectional relationship between writing attitude and achievement, (2) a unidirectional relationship between writing achievement and attitude, and (3) a bidirectional and reciprocal relationship between writing attitude and achievement. The result of their study showed that, among others, writing attitude and writing achievement were significantly correlated. Their model also showed that writing attitude and writing performance had a reciprocal influence, which means that writing attitude influences writing achievement, and the result of the writing achievement may well influence the writing attitude. They viewed the model to have 'bi-directional' influences (Graham et al., 2007, p. 519). Their study result, in fact, yields similar findings to other researchers who are interested in investigating the relationship between writing attitude and writing achievement. Hashemian and Heidari (2012) as well as Ni'mah et al. (2016) show that there is a positive correlation between students' writing attitude and their writing performance. Furthermore, Bulut (2017) and Dhadhodara and Joshi (2017) argue that one of the key factors in the success of writing achievement is writing attitude. Newer studies also confirmed that writing attitude and writing performance (Agesty et al., 2021; Wagiyo, 2021) are positively correlated.

Knowing the students' attitudes toward language, including writing, will help the teacher select suitable teaching methodologies and strategies (Jabali, 2018; Singh et al., 2021) as well as activities and tasks that can engage learners in the learning

process. To find out the students' writing attitudes, teachers, writing instructors, and researchers need to use a reliable instrument in order to measure them effectively. Additionally, having a valid and reliable writing attitude scale will also help pre-service teachers evaluate their future students' attitudes toward writing (Hall et al., 2016). Pre-service teachers can plan tasks and strategies to help their future students with low writing attitudes and strengthen those who have moderate and high levels of writing attitudes.

In the Indonesian context, there are a number of studies on writing attitude, yet the researchers used different kinds of writing attitude questionnaires. Setyowati and Sukmawan (2016) used Podsen's (1997) writing attitude questionnaire in their descriptive research and reported that the instrument had high internal reliability ($r=.737$). Ni'mah et al. (2016) used a questionnaire developed by Rose (1984) and Gardner (1985) and adapted their items for the research. However, no reliability of the instrument was reported in their study. Similarly, Wagiyo's (2021) research did not give an adequate explanation of what questionnaire was used for the data collection even though she reported its reliability of it. On the other hand, the study by Agesty et al. (2021) also used Podsen's (1997) writing attitude questionnaire, yet they did not report the direction and degree of its reliability.

Therefore, this study was carried out to investigate the validity and reliability of the adapted version of Podsen's (1997) Writing Attitude Scale (WAS). Even though Setyowati and Sukmawan (2016) have reported the internal reliability of Podsen's (1997) WAS, the reliability test was done more than five years ago. As Kimberlin and Winterstein (2009) point out reliability refers to the ability to replicate consistent outcomes over time and space, or between other observers. Thus, there is a possibility that the instrument either remains reliable or less reliable over time. Furthermore, more evidence is needed to verify that Podsen's (1997) WAS remains reliable.

The result of this current study is considered meaningful because it has two significances, both theoretically and practically. Theoretically, the development of this study will support the relationship between attitude in writing and writing achievement. The influence of the students' attitude toward writing might give positive development on the students' writing achievement, and vice versa. When the students have a positive attitude toward writing, they might have more confidence in themselves to write more and to write well. In the long run, there is a possible chance that they will have better writing achievement as their attitude in writing increases. As stated by Graham et al. (2007), writing attitude and writing achievement has a reciprocal or two-way beneficial relationship. The result of this current study will further support the use of Podsen's (1997) Writing Attitude Scale for pedagogical and research purposes. For pedagogical purposes, writing teachers and writing lecturers can use the results of this study to map their students' writing attitudes. Having information on the students' writing attitude can help the writing teacher and writing lecturer to select appropriate strategies to improve and strengthen those who are in need. Moreover, writing teachers and writing lecturers can do classroom-based research to solve problems that may arise in their classes as a result of the students' negative and low writing attitude. Practically, the result of this study is beneficial for future researchers and teachers who intend to use this scale to collect data concerning writing attitudes. Collecting data for research purposes without having clear information on the validity and reliability of the instrument may give a misleading

result. In light of the aforementioned considerations, it is crucial to examine the validity and reliability of [Podsen's \(1997\)](#) WAS.

To guide this study, the following research questions are formulated.

1. What is the face validity dan content validity of the adapted version of [Podsen's \(1997\)](#) Writing Attitude Scale (WAS)?
2. What is the reliability of the adapted version of [Podsen's \(1997\)](#) Writing Attitude Scale (WAS)?

2. LITERATURE REVIEW

2.1 Writing Apprehension Test

The writing composition processes, which the student-writers engage in, become the subject of many research (e.g., [Badrasawi et al., 2016](#); [Daly, 1978](#); [Daly & Miller, 1975a, 1975b](#), [Erkan & Saban, 2011](#); [Graham et al., 2007](#); [Pratama & Astuti, 2021](#)). In order to produce a good piece of composition, the students should have low writing apprehension ([Pratama & Astuti, 2021](#)). Writing apprehension is a term given by [Daly and Miller \(1975b\)](#) referring to one's tendency to avoid the process of writing because of the fear of being evaluated in some ways. Students feeling the fear of writing might find it hard to express themselves in writing, keep away from writing as much as they can, and find the writing classes undesirable. [Badrasawi et al. \(2016\)](#) argue that anxiety frequently inhibits and degrades performance; thus, people with low levels of writing anxiety should do better on writing skill tests compared to anxious writers. Their argument is confirmed by newer studies which state that there is a negative significant correlation between writing apprehension and writing performance ([Ni'mah et al., 2016](#); [Pratama & Astuti, 2021](#)). This implies that the students with low writing apprehension will write better than those with high writing apprehension.

Back then, [Daly and Miller \(1975a\)](#) believed that there should be an empirical-based and standardized instrument that measures the students' writing apprehension. [Daly and Miller \(1975a\)](#) claim that the Writing Apprehension Test, known as WAT (henceforth DM-WAT), has a predictive validity for language intensity. They used WAT to find out ninety-eight undergraduate students taking Basic Educational Psychology at West Virginia University in the summer term of 1974. They found out that individuals with high writing anxiety produce less writing as compared to those with low writing anxiety. Since then, many other researchers who were interested in writing apprehension studies used WAT to collect the data. To get more evidence, [Richmond and Dickson-Markman \(1985\)](#) investigated the writing apprehension test created by Daly and Miller for its predictive validity. [Richmond and Dickson-Markman's \(1985\)](#) study shows two important findings. Firstly, the Daly-Miller Apprehension Test is a useful predictor of the students' overall American College Test scores, specifically their English scores. Secondly, their finding also reveals that writing anxiety strongly predicted the writing quality, although exam anxiety did not, and students who received high scores in writing apprehension were predicted to have more writing anxiety than those who received moderate or low scores. [Richmond and Dickson-Markman's \(1985\)](#) research further confirms the predictive validity of DM-WAT, but they raise doubts about the test construct validity.

DM-WAT was quite popular and many researchers in the L2 field used it to measure the students' apprehension level in writing. However, reports on its validity remain unpopular (Cornwell & McKay, 2000). Cornwell and McKay (2000) investigated the validity of DM-WAT when it was translated into Japanese. They found out that DM-WAT was valid to measure Japanese college students' English writing apprehension. Furthermore, Cheng (2004) claimed that DM-WAT has a satisfactory internal consistency reliability with concurrent and predictive validity, yet it has to be modified to be used to examine writing in a second language context. Furthermore, Erkan and Saban (2011) who investigated the validity-reliability of DM-WAT state that their analysis was similar to the one conducted by Daly and Miller (1975b). Despite the limited research on the validity of DM-WAT in recent years, the original DM-WAT, which was then modified by Podsen (1997), has evidence of predictive validity aside from the lack of evidence in its construct validity.

2.2 Writing Attitude Scale

Until today, DM-WAT is still widely used by researchers to measure students' apprehensiveness in writing. Daly and Miller's (1975b) Writing Apprehension Test had 26 items in its scale consisting of 13 positive items and 13 negative items. However, in 1997, Podsen modified the DM-WAT and presented it in her book entitled *Written Expression: Principal's Survival Guide*, using only 20 items under the name of Writing Attitude Scale (henceforth WAS). Podsen's (1997) WAS is not the only writing attitude scale in the literature. Dhadhodara and Joshi (2017) investigated the writing attitude of postgraduate students in Gujarat Vidyapith by using the writing attitude they developed themselves. The questionnaire had 10 items for measuring four factors. Unfortunately, they did not explain further the factors and the items in the questionnaire to measure the writing attitude. Within these items, five questions were positive, and the other five were negative. The options in each item ranged from 'strongly agree to strongly disagree'. The result of the reliability coefficient by using Cronbach's alpha value was .68 indicating a sufficient unidimensionality. In the Indonesian context, many researchers are also interested in investigating EFL writing attitudes, for example, Ni'mah et al. (2016) investigated the students' writing attitudes, writing apprehension, and writing performance. In their research, they adapted the attitude questionnaires developed by Rose (1984) and Gardner (1985). Unfortunately, Ni'mah et al. (2016) did not report the reliability coefficient of the writing questionnaire they used in the research.

Podsen's (1997) WAS is widely used thus far by many researchers (Agesty et al., 2021; Setyowati & Qibtiyah, 2017; Setyowati & Sukmawan, 2016). Even though Podsen's (1997) WAS is quite popular in measuring the students' writing attitude, not many researchers report the reliability of the instrument. Two of the few researchers are Setyowati and Sukmawan (2016). They reported that the coefficient reliability of this questionnaire was .737 which indicates a high internal consistency.

3. METHODS

This study was an observational, non-experimental study with a cross-sectional design in which its main attempt was to investigate the validity and reliability of an

instrument to measure the writing attitude. Creswell (2012) as well as Wang and Cheng (2020) state that this design examines a cross-section (or a sample) of a population at one particular time. In a cross-sectional study, participants are simply taken from an accessible population that may be relevant to the research question (Wang & Cheng, 2020). In a cross-sectional study, the researcher simultaneously assesses the participants' exposures and outcomes (Setia, 2016; Wang & Cheng, 2020). Since they are measured at the same time, drawing causal relationships is relatively impossible to establish (Wang & Cheng, 2020). This cross-sectional design could be carried out either as a planning step for a randomized trial or as a baseline. Setia (2016) further states that researchers can use this design to learn more about the prevalence of outcomes or exposures, which will help them conduct longitudinal research (Setia, 2016). The design was considered appropriate because it enabled the researchers to answer the research questions in terms of the face validity of the questionnaire, the content validity, as well as the reliability of the instrument. Furthermore, the design helped the researchers to get a 'general picture' of the population in which they are potentially relevant to the research question. This current study was part of a larger study to investigate the reliability of Podsen's (1997) WAS. The scale will be used to collect the survey data for 2022 batch students in an English Department at one of the public universities in East Java, Indonesia.

3.1 Population and Sample

The study was conducted at an English Department of a public university in East Java, Indonesia. The targeted population for the instrument tried out in the present study was all batch 2021 students who took an Essay Writing course, in the academic year 2021/2022. There were four parallel classes in the English Education study program and two parallel classes in the English Language Literature study program. The total number of the targeted population was 150 students. The researchers used all the available populations to test the instrument. However, the total number of students who filled out the WAS questionnaire was only 96 students, which was equal to 65% of the total population of the 2021 batch students. The participants consisted of 13 male and 83 female students whose ages varied from 18 to 19 years old.

3.2 The Writing Attitude Scale

The researchers did a large-scale pilot test of the Writing Attitude Scale (WAS) questionnaire developed by Dally and Miller (1975b) which was then adapted by Podsen (1997). The questionnaire was written in the Google Form and distributed in the WhatsApp group of Essay Writing classes. As stated previously, there were 26 items in the Daly-Miller questionnaire. Yet, in 1997, Podsen adapted the Daly-Miller Writing Apprehension Scale and used only 20 items which had five points scale ranging from (A) Strongly Agree with 5 points, (B) Agree with 4 points, (C) Neutral with 3 points, (D) Disagree with 2 points, and (E) Strongly Disagree with 1 point. The highest score on this scale is 100, and the lowest score is 20.

Dally-Miller Writing Apprehension Test (DM-WAT), as reported in their research paper, only has one factor analysis (Dally & Miller, 1975b). Later, Cornwell and McKay (2000) arranged the items into four factor analysis. Taken into this study,

the researchers adapted Cornwell and McKay's (2000) factor analysis into the adapted version of Podsén's (1997) WAS.

Table 1. Questions arranged according to factors (cited from Cornwell and McKay, 2000).

Q no.	Likert scale items	Purpose
	<i>Factor One: Enjoyment in Writing</i>	To find out students' enjoyment in writing.
13.	I enjoy writing.	
20.	Writing is a lot of fun.	
3.	I look forward to writing down my ideas.	
8.	I like to write my ideas down.	
1.	I avoid writing whenever possible.	
6.	Expressing my ideas through writing is a waste of time.	
	<i>Factor Two: Fear of Evaluation</i>	To find out students' fear of writing evaluation.
2.	I have no fear of my writing being evaluated.	
4.	I am afraid of writing when I know it might be evaluated.	
	<i>Factor Three: Negative Perceptions about Writing Ability</i>	To find out students' negative perceptions about their writing ability.
15.	I am not a good writer.	
9.	I feel confident in my ability to express my ideas in writing.	
5.	My mind seems to go blank when I start writing.	
11.	I am nervous about my writing.	
14.	I never seem to be able to write down my ideas clearly.	
18.	It is easy for me to write good letters.	
19.	I do not think I write as well as most people.	
	<i>Factor Four: Showing My Writing to Others</i>	To find out students' feelings about showing writing to other people.
10.	I like to have my friends read what I have written.	
12.	People seem to enjoy what I write.	
16.	I like seeing my thoughts on paper.	
17.	Discussing my writing with others is an enjoyable experience.	

3.3 Research Procedure

The research procedure comprised several steps. The first step was instrument validation. The researchers sent the instrument to three experts who were known for their experience in teaching writing in a foreign language context and for their writing research and publication. The validation was for the face validity and the content validity. The validators were asked to give comments on the cover or the 'face' of the Google Form. After the instrument was confirmed for its face validity, the researchers then asked the validators to give comments on the scale's content validity. After the content was confirmed for its validity, the researchers wrote all items of the questionnaire in the Google Form and conducted a small-scale tryout for 10 students in the English Department in the university to find out whether there were problems in the wording, numbering, and meaning. After having the information that there were no issues with the face and content validity in the small-scale tryout, the researchers

distributed the questionnaire to larger scale tryout to students in the 2021 batch to find out the internal reliability. The researchers asked the help of the Essay Writing lecturers to distribute the WAS to their classes. The Essay Writing lecturers and the students were informed that the writing attitude survey was for a research project, and it would not affect the students' grades. As reported previously, there were 96 students willingly filled out the questionnaire for the second tryout.

3.4 Data Analysis

To analyze the face validity, the validators examined the front page of the Google Form which was about the title, the respondent's identity, the instruction, the descriptions, and the layout of the questions. The validators relied on the judgment of the appropriateness of the 'face' of the WAS. Expert judgments provide valid and qualified analysis of the instrument (Escobar-Pérez & Cuervo-Martínez, 2008). Meanwhile, to analyze the content validity, the researchers used the content validity ratio proposed by Lawshe (1975). Content Validity Ratio (CVR) refers to a technique for validating the content of an instrument (a checklist, questionnaire, or scale) which seeks to guarantee that the instrument evaluates the specific topic area it is intended to measure (Frank-Stromberg & Olsen, 2004 as cited in Ayre & Scally, 2014). To achieve content validity, a panel of subject matter experts was invited to evaluate the significance of each specific item within an instrument. They would classify the instrument items into one of three categories: 'essential', 'useful, but not essential', or 'not necessary' using a panel of subject matter 'experts', and the final instrument only contained items judged as 'essential' by the panel members; those that fall short of this requirement were eliminated (Ayre & Scally, 2014). Lawshe (1975) further states that CVR is a linear transformation of a proportional degree of agreement on how many 'experts' inside a panel agree on an item as 'essential', and a level of 50% (and above) agreement suggests that the content is valid (Ayre & Scally, 2014).

The formula of CVR is $CVR = (N_e - N/2) / (N/2)$. N_e is the number of panelists that marked an item as 'essential', and N is the total number of panelists. CVR computation above zero indicates that more than half of panel members consider an item to be essential, and CVR values range from -1 (complete disagreement) to +1 (perfect agreement) (Ayre & Scally, 2014). For example, if the number of panelists is 5, and the CVR score is $\geq .50$, it means that the items in the instruments are within the acceptable level. In this research, three experts were invited to judge whether the items of the WAS were valid or not. All experts were majoring in English from two private universities. Two of them were writing lecturers majoring in English Language Teaching, and the other one was an associate professor whose dissertation project was on writing style.

To obtain the questionnaire's validity, the researchers used Pearson's product moment correlational analysis. According to Taherdoost (2016), correlational analysis is one method for obtaining proof of a scale's validity. The researchers correlated each item score with the overall score derived from the respondents' responses in order to determine the validity. Furthermore, to analyze the internal consistency, the researchers used the Cronbach alpha statistical tool of SPSS 25. Cronbach alpha is an internal consistency measurement that shows how closely the set of items are related as a group (Tavakol & Dennick, 2011). Some questions in the questionnaire, somehow, did not go in a positive direction. Therefore, to analyze the data, the researchers did

reverse coding. According to [Sujarweni \(2014\)](#), the scale instrument is said to have internal reliability if the Cronbach alpha value is $>.60$. However, [Taber \(2018\)](#) states that the alpha value of $.70$ is more acceptable to show the instrument's reliability or internal consistency. In this current study, to determine the internal consistency scale, the researchers used [Taber's \(2018\)](#) criteria for the Cronbach alpha value.

4. RESULTS AND DISCUSSION

4.1 The Validity of Writing Attitude Scale (WAS)

Validity is a criterion for selecting techniques for collecting data sources through testing. The researchers used face validity and content validity to validate the Writing Attitude Scale (WAS). Three lecturers from private universities have verified the Writing Attitude Scale (WAS). For the face validity, the three experts agreed that the questions were simple and easy to understand. The result of the small-scale tryout with ten students also confirmed the face validity of the Writing Attitude Scale (WAS). The result of the face validity indicates that issues in wording, numbering, and meaning were not found. The experts also confirmed the result of the face validity when the questionnaire was written for a Google Form. They said that the face validity of the WAS written in the Google form was sufficient and good.

Table 2 shows the summary of the Content Validity Ratio. The Content Validity Ratio (CVR) by [Lawshe \(1975\)](#) model was applied and yielded a value of 1.0 . It is quite evident from this that all items were required and valid. The content was validated, and every item was positive.

Table 2. The Content Validity Ratio (CVR).

Q no.	Items	Expert 1	Expert 2	Expert 3	Ne	CVR
1.	I avoid writing whenever possible.	1	1	1	3	1
2.	I have no fear of my writing being evaluated.	1	1	1	3	1
3.	I look forward to writing down my ideas.	1	1	1	3	1
4.	I am afraid of writing when I know it might be evaluated.	1	1	1	3	1
5.	My mind seems to go blank when I start writing.	1	1	1	3	1
6.	Expressing my ideas through writing is a waste of time.	1	1	1	3	1
7.	I would enjoy submitting my writing to magazines for evaluation and publication.	1	1	1	3	1
8.	I like to write my ideas down.	1	1	1	3	1
9.	I feel confident in my ability to express my ideas in writing.	1	1	1	3	1
10.	I like to have my friends read what I have written	1	1	1	3	1
11.	I am nervous about my writing.	1	1	1	3	1
12.	People seem to enjoy what I write.	1	1	1	3	1

Table 2 continued...

13.	I enjoy writing.	1	1	1	3	1
14.	I never seem to be able to write down my ideas clearly.	1	1	1	3	1
15.	I am not a good writer.	1	1	1	3	1
16.	I like seeing my thoughts on paper.	1	1	1	3	1

17.	Discussing my writing with others is an enjoyable experience.	1	1	1	3	1
18.	It is easy for me to write good letters.	1	1	1	3	1
19.	I do not think I write as well as most people.	1	1	1	3	1
20.	Writing is a lot of fun.	1	1	1	3	1
	Overall	1	1	1	3	1

Furthermore, the researchers also checked the validity of the Writing Attitude Scale (WAS) by using *Pearson* product moment analysis. As stated by [Taherdoost \(2016\)](#), one technique to gain evidence of validity for a questionnaire is by using correlational analysis. In this study, to obtain validity, the researchers correlated each item score with the total score obtained from the respondents' answers by using Pearson's product moment analysis. The result is presented in Table 3.

Table 3. The analysis results of Pearson's product moment of 20 questionnaire items (n=95).

Item no.	r	p	Item no.	r	P
1	.505	.000	11	.665	.000
2	.509	.000	12	.602	.000
3	.555	.000	13	.593	.000
4	.556	.000	14	.469	.000
5	.697	.000	15	.613	.000
6	.456	.000	16	.610	.000
7	.472	.000	17	.510	.000
8	.579	.000	18	.481	.000
9	.649	.000	19	.483	.000
10	.509	.000	20	.526	.000

The data shows that all items in the WAS were valid items ($p=.000 \leq .000$). The correlation coefficient of all items was positive and moderate. Thus, no changes were needed, and the WAS can be used for the actual data collection.

In short, the result of analysis by using CVR shows that [Podsen's \(1997\)](#) WAS, a modified version of DM-WAT, has a high content validity. All items in the scale yielded a value of 1.0 which showed high and positive validity. The result of the content validity check by using Pearson's product-moment also resulted in a similar finding. There is a significant correlation when each item score was correlated to all item scores obtained from the respondents' answer ($p= .000 \leq .000$). The result of this research support [Conrwell and McKay \(2000\)](#) as well as [Erkan and Saban \(2011\)](#) in which they stated that DM-WAT was valid to measure the students' writing apprehension level. In other words, the result of this research supports [Daly and Miller's \(1975a\)](#) argument in relation to the need for empirical-based evidence for the standardized scale to measure the students' writing apprehension level. Even though this research did not investigate its predictive validity, the result of the content validity check by using CVR and Pearson's product-moment correlation has shown that the items in the modified version of DM-WAT are valid to use for data collection, either for research or pedagogical purposes.

4.2 The Reliability of Writing Attitude Scale (WAS)

The researchers also checked [Podsén's \(1997\)](#) WAS to find out its reliability by using Cronbach alpha analysis. Cronbach alpha is the measure of internal consistency, or how closely connected a set of items are as a group. It is regarded as an indicator of scale reliability. For a scale, possessing reliability is important because it is one of the crucial traits of a good instrument ([Mohajan, 2017](#)). The researchers found out its reliability through a series of tests.

Table 4. Valid cases.

		N	%
Cases	Valid	95	99.0
	Excluded ^a	1	1.0
	Total	96	100.0

^aListwise deletion based on all variables in the procedure.

The data shows that there were 95 valid cases and one excluded case from a total of 96 respondents who filled out the questionnaire. The listwise deletion based on all variables in the procedure means that there was a missing value for a participant when filling out the questionnaire. This indicates that there was a participant who did not fill the WAS completely and that it made him/her omitted from the Cronbach alpha computation. Table 4 shows that there was only one participant excluded from the Cronbach alpha calculation because of the missing value in the scale. Therefore, the valid case was only from 95 participants.

Table 5. The reliability statistics.

Cronbach's alpha	Cronbach's alpha based on standardized items	N of items
.877	.880	20

The reliability statistics showed a high internal consistency. As stated by [Cortina \(1993\)](#), the Cronbach alpha value of more than .8 is considered good. Furthermore, as stated by [Taber \(2018\)](#), the Cronbach alpha value from .84 to .90 shows high reliability. In the current study, the reliability test shows that [Podsén's \(1997\)](#) Writing Attitude Questionnaire was highly reliable. As shown in Table 5, the Cronbach alpha computation result is (<.877) which is closer to 1.

Table 6. Descriptive statistics.

	Mean	Minimum	Maximum	Range	Maximum /minimum	Variance	N of items
Item means	3.363	2.516	4.295	1.779	1.707	.252	20
Inter-item correlations	.269	-.011	.626	.637	-58.436	.014	20

Table 6 shows the summary of the descriptive statistics. It shows that the mean for all items was 3.363, the minimum mean was 2.516, and the maximum mean was 4.295, with a range of means of 1.779 from the total of 20 items. This shows that many of the participants chose 'unsure/neutral' from items provided in the scale. The mean of the inter-item correlation was quite low because it was below .5. But, [Pallant \(2016\)](#) says that if the Cronbach alpha computation is high, the mean of inter-item correlation should not be taken seriously, especially when the items in the scale are many. With

20 items on the scale, the researchers decided to ignore the mean of inter-item correlation.

Table 7. Inter-item correlation matrix.

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Q1	1	.167	.223	.268	.135	.479	.269	.205	.204	.086	.357	.360	.303	.338	.370	.151	.198	.063	.271	.272
Q2		1	.188	.373	.234	.217	.205	.257	.167	.226	.348	.172	.299	.131	.139	.307	.395	.104	.120	.320
Q3			1	.165	.267	.272	.273	.626	.508	.218	.228	.363	.321	.167	.261	.411	.305	.183	.177	.251
Q4				1	.450	.273	.237	.162	.208	.123	.457	.272	.229	.267	.225	.229	.239	.302	.234	.171
Q5					1	.306	.238	.356	.380	.350	.512	.353	.381	.323	.435	.507	.294	.377	.275	.349
Q6						1	.095	.302	.236	.067	.341	.161	.312	.176	.153	.241	.092	-.011	.074	.386
Q7							1	.235	.259	.244	.165	.417	.167	.077	.176	.324	.165	.236	.269	.177
Q8								1	.496	.227	.188	.244	.413	.163	.322	.412	.237	.292	.167	.302
Q9									1	.433	.374	.389	.338	.262	.385	.383	.342	.511	.216	.236
Q10										1	.234	.323	.288	.189	.190	.345	.424	.291	.201	.147
Q11											1	.369	.264	.349	.494	.247	.245	.196	.450	.332
Q12												1	.400	.278	.331	.354	.323	.354	.135	.274
Q13													1	.052	.201	.451	.357	.281	.082	.595
Q14														1	.510	.130	.040	.170	.425	.017
Q15															1	.337	.065	.321	.584	.186
Q16																1	.311	.240	.096	.381
Q17																	1	.195	.088	.346
Q18																		1	.191	.059
Q19																			1	.096
Q20																				1

Table 7 shows how every item correlated with each other. For example, how item 1 correlated with 2 and how item 2 correlated with item 3. The expected correlation was the positive one in which all the items went in the same direction. The larger the value of the inter-item correlation, the stronger the relationship between the responses because it was closer to 1. The data shows that most of the items had a positive-inter-item correlation. However, item 18 and item 6 did not show a positive correlation (-.011). This means that some respondents answered the questions in reverse. For example, in item 6, the question in the scale was ‘Expressing my ideas to writing is a waste of time’. To go in the positive direction, the participants should answer ‘strongly disagree’ which weighs 5 points. However, many of them answered

‘strongly agree’ which weighs only 1 point. This might be the cause of why the inter-item correlation for these two items was negative. The negatively worded questions in a Likert scale questionnaire sometimes had a weakness (Suárez-Alvarez et al., 2018). They further stated that reversed items could have negative consequences. The consequences among others were a potential misunderstanding on the part of the respondents and the reduced precision of instrument measurement.

Table 8. Cronbach alpha value of each item.

Item-Total Statistics					
Q no.	Scale means if an item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if the item deleted
Q1	63.4211	84.374	.441	.500	.873
Q2	63.8211	81.638	.415	.362	.875
Q3	63.3263	83.946	.498	.519	.871
Q4	64.1263	81.409	.474	.408	.872
Q5	64.3368	77.779	.630	.578	.865
Q6	62.9684	85.456	.392	.447	.874
Q7	63.9789	83.744	.391	.377	.875
Q8	63.3158	83.538	.523	.531	.870
Q9	63.9158	81.738	.595	.566	.868
Q10	63.9474	83.199	.433	.371	.873
Q11	64.7368	80.047	.603	.564	.867
Q12	64.0842	84.355	.557	.485	.870
Q13	63.6211	82.855	.535	.531	.870
Q14	64.1579	83.879	.390	.406	.875
Q15	64.5474	81.016	.544	.609	.869
Q16	63.5895	83.223	.558	.478	.869
Q17	63.4526	83.761	.441	.426	.873
Q18	64.4211	84.629	.413	.444	.873
Q19	64.7474	83.787	.406	.501	.874
Q20	63.4842	83.529	.457	.484	.872

Table 8 shows the correlation of each item with all items combined. The correlation of each item with all other items combined should be above .40 (>.40). Table 8 also shows the value if the item is deleted from the computation. If one of the items in the scale had a low Cronbach alpha (<.70), it was suggested that the item was removed or deleted. The removal of the item with a low Cronbach alpha value can improve the overall alpha computation significantly. But none of the values in the column of Cronbach's alpha if the item deleted was below .70. Therefore, no item in the scale needed to be revised or deleted. The deletion of any item in the questionnaire will result in a lower Cronbach alpha value. The current study has similar results to the study conducted by Setyowati and Sukmawan (2016) who explored the university students' writing attitude in STKIP PGRI Pasuruan. They reported that the Coefficient reliability of this questionnaire is .737 indicating a high degree of internal consistency.

5. CONCLUSION

Having sufficient information about the students' writing attitudes is needed to help students write better. Research reports that attitude plays a role in the success of

one's writing performance. However, to measure the students' writing attitude, writing instructors/teachers, and writing researchers need a reliable instrument. The result of this current research has shown that Podsén's (1997) Writing Attitude Scale possessed face validity, and content validity, and is highly reliable to collect the data ($r = 0.877$). This implies that Podsén's (1997) WAS is valid and reliable to measure the students' writing attitudes.

This current study, however, has some limitations. First, the study did not address the construct and the predictive validity of the scale. The information about the construct validity and the predictive validity of the scale is also beneficial for the researchers to ensure that the instrument has fulfilled the basic criteria of good measurement. Second, the scale used in the study only applies to the students of the English Department. As a result, the result of this current study cannot be used as a generalization as it was a pilot test of the writing attitude scale.

Regarding the limitation of the current study, some recommendations are addressed for future research. Future researchers may investigate the construct and predictive validity of the adapted version of DM-WAT as in Podsén's (1997) WAS, and they may check the validity of this instrument by using a wider population. This information will ensure the writing lecturers, writing teachers, and EFL writing researchers that the adapted version has the principal criteria of a good instrument. Additionally, future researchers can investigate the validity and reliability of the instrument when applied to non-English major students. Moreover, future researchers can investigate whether the scale remains valid and reliable when translated into other languages. Finally, future researchers may examine the reliability of the adapted version of DM-WAT as in Podsén's (1997) WAS when applied to a lower level of education such as in elementary and secondary school students. Having more information about the validity and reliability of this scale in different levels of education is beneficial for teachers/writing instructors as well as writing researchers in the first, second/or foreign language context.

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