Building up a University Students Writing Self-Efficacy Scale

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Abstract

This study aimed at developing a valid and reliable scale to determine students' levels of writing self-efficacy. The sample consisted of (208) students from Faculty of Education, Fayoum University. Experts in the field of curriculum and EFL instruction were consulted to establish content validity of the items included in the scale. In addition, a KMO (Kaiser-Meyer-Olkin) sample adequacy test was carried out in the data analysis phase; Bartlett's test was applied to specify the level of factorability for the scale; a principal components factor analysis was carried out for the items in the scale. The total correlation of the items was determined; and correlation measurements between subtitles and total points of the scale were also performed. Also, the Cronbach's Alpha coefficient test was applied to determine the scale reliability. To specify the internal consistency and reliability of the scale, the alpha test focused on

subtitles, in particular. At the conclusion of these analyses, the results indicated that the writing self-efficacy scale was accepted as a valid and reliable measurement tool.

Keywords: Self-Efficacy, Scale, Writing Self-Efficacy

Introduction

Human achievement depends on interaction between personal factors, one's behaviors and environmental conditions according to Bandura's theoretical framework of social cognitive theory in which self-efficacy was explained. Each of these factors can affect and can be affected by self-efficacy beliefs. For instance, in relation to personal influences such as thoughts and beliefs, when students accomplish a task successfully, this makes them believe that they are able to perform well; thus, their self-efficacy is enhanced.

The perceived self-efficacy in turn, if enhanced, can contribute to the students' level of motivation, aspiration and academic achievement as well as performance (Bandura, 1993). In addition, the perceived self-efficacy affects the choice of activity task perseverance, level of effort extended in addition to the degree to which success is achieved (Klassen & Georgiu, 2008). Furthermore, high levels of self-efficacy beliefs can increase achievement, improve social skills, increase tolerance, avoid fear and develop assertiveness, in addition to increasing concentrations and exerting more efforts in the task one is performing (Magogwe et al., 2015).

 Self-efficacy is a cognitive construct that was introduced and developed by Bandura (1977) as one of the main aspects of his social cognitive theory. Bandura defines it as beliefs in one's capabilities to perform a certain task. After that, many researchers introduced a variety of definitions for self-efficacy,

supporting what is mentioned by Bandura (e.g. Dellinger, Bobbette, Olivier & Ellette, 2008; Henk & Melnick, 1995; Razmjoo & Hoomanfard, 2012; Pajares et al., 2007; Tai, 2016; Tanyer, 2015)). Lin and Win (2010), for instance, defined it as people's beliefs about their capabilities, which play a crucial role in motivating their behaviors.

Based on that, Philips (2007) proposed an operational definition for self-efficacy as a "measure of both confidence in doing a particular task and the value given to engaging in that task" (p. 5). Also, beliefs can change behavior; i.e. when students believe that they can accomplish a task, they become motivated to engage in it and achieve its goals. This is also the case for personal and learning environmental factors; i.e., learning environmental conditions can be affected by self-efficacy beliefs because students with high self-efficacy work persistently to master the task. Thus, a productive learning environment in the classroom is created. On the other hand, when teachers give students encouraging feedback, students' self-efficacy is raised and they become motivated (El-Hadad, 2015& Zahran, 2015).

Furthermore, self-efficacy is described as future-oriented, concerned with cognitive judgments, task and context specific, multifaceted and multidimensional, and responsive to changes (Abd Alhaq, Al Sweedy & Al Dib, 2014). Thus, it is believed that because the beliefs of self-efficacy cannot be generalized to all areas and vary according to the task, when self-efficacy is assessed in relation to writing, it is called writing self-efficacy (Eggleston, 2017).

Sanders-Reio (2010) defines writing self-efficacy as learners' confidence in their own ability to perform writing skills and writing tasks. In addition, writing self-efficacy is defined as ones' beliefs in their ability to successfully perform writing tasks at a given level (Shell, Murphy and Brunning, as cited in Kirmizi & Kirmizi, 2015). In addition, McCarthy, Miere and Rinderer (1985) define self-efficacy as the perception and evaluation of one's own writing skills. Also, it is stated that writing self-efficacy is the belief in one's ability to write (Martinez, Kock & Cass, 2011).

Thus, Pajares et al. (2007) define writing self-efficacy operationally as judgments made by students concerning their confidence of whether they possess the various writing skills, grammar usage and mechanical skills appropriate to and suitable for their academic level. Therefore, as a result of the importance of the self-efficacy of the learner in his ability to write, in addition to the limited studies in the Arab world in this field, the current study aimed at developing a measure of students' writing self-efficacy with an acceptable degree of validity and reliability.

Statement of the Problem

Despite the large number of studies on self-efficacy, many researchers have pointed out that the methods and tools used to measure self-efficacy suffer from a lack of indications of their validity and reliability. Also, the level of generality of the measuring instruments used in the studies is still questionable (Hussien, 2014).

Study Questions

- What are the components that can be included in this scale?

- What is the degree of validity and reliability that this scale can achieve?

Study Purpose

The aim of the study was to develop a valid and reliable measurement tool that will help to determine the self-efficacy levels of the students' writing in light of the literature review.

Significance of Study

The importance of the current study may lie in providing a scale with an acceptable level of validity and reliability that can be used to measure the students' writing self-efficacy. Specifically, the present study may help in:

- Identifying the perceptions of EFL students of their own abilities to write, which can be used by educational decision-makers in planning training programs

- Using this measure to evaluate the effectiveness of university programs in enhancing students' writing self-efficacy.

- Providing a measurement tool with an acceptable level of validity and reliability that can motivate researchers in the Arab world to study the variables related to students' writing self-efficacy.

Definition of Terms

Writing Self-Efficacy

- Writing self-efficacy is defined as "the belief in one's ability to write regardless of students' actual writing ability" (Martinez, Kock & Cass, 2011).

- Another definition is also introduced by Pajares, Johnson and Usher (2007) who defined writing self-efficacy as "students' judgments of their confidence that they possessed the various composition, grammar, usage, and mechanical skills appropriate to their academic level." (p.111).

- Additionally, Stewart, Seifert and Rolheiser's (2015) definition of writing self-efficacy is "in terms of student writing, self-efficacy centers on whether or not students believe they can accomplish a given writing task, and whether or not they are confident that their chosen strategies will be effective." (p.4).

- In the current study, writing self-efficacy is defined as "English majors' beliefs about their confidence, stamina, self-regulation and competence to organize and execute the courses of action required for doing writing tasks". This study adopted the components of self-efficacy mentioned in the literature (e.g. Abdul Azeez, 2017; Ali, 2008) and adapted them to be the components of writing self-efficacy:

Confidence: It refers to the learner's beliefs about himself as a writer and how well he/she can organize and execute writing tasks, as well as an evaluation of his/her ability to do what it takes to accomplish a task at a particular level of quality, achieve

positive outcomes and pursue goals with vigor (Abd Alhaq et al., 2014; Bandura, 1997)

Stamina: refers to the learner's beliefs about his ability to invest a high level of effort in what he/she does and heighten his/her effort in the face of difficulties, in addition to approaching difficult writing tasks as challenges to be mastered rather than as threats to be avoided, showing a high level of commitment towards the writing task and persisting on relevant tasks even when he/she does not enjoy them (Bandura 1997; Blasco, 2016; Jones, 2008).

Self-regulation: refers to the learner's beliefs about his ability to diagnose writing task demands, plan and evaluate alternative strategies, set proximal goals to guide one's efforts toward a selected goal, and create self-incentives to sustain engagement in taking writing activities, resist interference from irrelevant stimulation and to manage stress and overcome disturbing thoughts (Bandura, 2006; Jones, 2008; Pajares, 2003).

Competence: refers to the learners' beliefs about their ability to plan, organize, and revise their writing, generate good topics, introductions, and conclusions as well as manage their own behavior to produce writing (Jones 2008).

Review of Literature

Writing can mainly be considered as an expressive skill of language. However writing is not only a tool of expression but also a tool for critical thinking, learning, expanding thinking, organizing and enriching knowledge and using language (Buluta,

2017). But, despite the large number of benefits achieved by writing, it is one of the most complicated skills for both children and adults (Troia & Graham, 2003). This complexity comes as a result of the factors that affect students' writing. These factors can be cognitive, affective or physical ones. Among these factors, the cognitive aspects have received particular attention in writing context for the past two decades in an attempt by the researchers to understand the thought processes underlying students' writings (Setyowati, 2016).

However, Setyowati (2016) stated that from the writing models introduced, motivation also found to have its own place because most researchers believe in the essential role that motivation plays in individuals' learning achievement. This importance of motivation can be due to the elements inspiring the writer within this motivation. Goals, attitudes and beliefs about the topic are some of these elements. Therefore, the beliefs of self-efficacy have been found to be essential for activating students to engage in learning behaviors in a wide range of academic areas, including writing.

Therefore, in addition to having this complicated nature that cause foreign language learners face problem in writing, there are other factors which affect their writing ability such as lack of confidence, low self-efficacy and motivation (Kirmizi and Kirmizi, 215). Consequently, to meet the challenging demands of the writing task, students must be motivated to engage with and continue it. That's why; research has been done in the field of motivation which in turn has identified a very important

component of academic motivation. This component is self-efficacy (Holmes, 2016) which interacts with writing motivation and achievement as well as with performance. For this reason, students must engage with the writing task behaviorally, cognitively and motivationally. This engagement is facilitated by increased writing self-efficacy. Writing self-efficacy, in turn, can be defined as "the individual's perception and evaluation of his or her writing skills" (McCarthy, Meier & Rinderer, 1985, p.58).

Thus, to be able to know about the students' beliefs of their own capabilities in writing, there should be a scale that can measure their self-efficacy. Unfortunately, in Egypt, the development of writing self-efficacy scale is given little attention. In addition, most researchers use scales made by other researchers and some other researchers use general self-efficacy scales which sometimes did not measure writing self-efficacy at all (Setyowati, 2016).

This comes in contrast with what is mentioned by Bandura (1997) who stated that "efficacy beliefs should be measured in terms of particularized judgments of capability that may vary across realms of activity, under different levels of task demands within a given activity domain" (p.42). In addition, there is no measure of perceived self-efficacy that can be used for all purposes (Bandura, 2006). This means that a general self-efficacy scale cannot be used to fit all purposes because its items may be not relevant to the domain under investigation. Thus, in order to develop a sound self-efficacy scale, the researcher must

put into consideration the properties of self-efficacy, performance demands and expert knowledge.

The properties of self-efficacy were summarized by Abd Alhaq, et al. (2014) in five main ones; i.e., self-efficacy is described as future-oriented, concerned with cognitive judgments, task and context specific, multifaceted and multidimensional, and responsive to changes. The first characteristic, which is future-orientedness, means that the self-efficacy beliefs 'are about the level of expected success in executing a specific task'. Also, self-efficacy is described as being concerned with cognitive judgments which depend primarily on mastery experiences. In addition, describing self-efficacy as being task and context specific means that it is not a generalized expectancy, but it must be related to a specific domain. Thus, the perceived self-efficacy scales must be tailored to the domain in which the researcher is interested. Therefore, in order to construct a sound scale of self-efficacy, the researcher has to specify which aspects of personal efficacy need to be measured. This specification depends on the knowledge of activity domain that comes through a conceptual analysis of this domain (Bandura, 2006).

Moreover, self-efficacy is multifaceted; i.e. it operates within the domain of interest in various ways. Thus, these ways must be assessed by the scale. In addition, self-efficacy is multi-dimensional, which means that the scales of efficacy must be linked to factors that shape the quality of performance in the domain chosen as suggested by Bandura (2oo6). The last characteristic of self-efficacy is responding to the changes in

personal context and outcomes. This is because efficacy is not just linked to the activity domain, but is also judged according to the challenges which vary in nature depending on the field of the activity. And according to Bandura (2006), level of ingenuity, exertion, accuracy, productivity, threat, or self-regulation required are a few dimensions of performance demands that these challenges may be graded in terms of.

Furthermore, as for the performance demands, Bandura (1997) stated that personal efficacy is a multifaceted phenomenon rather than a context global disposition. That is, the perceived self-efficacy is judged in light of performance requirements. These performance requirements are, in turn, represented in the situational conditions. Thus, the measures of efficacy beliefs should be in terms of the task demands of a certain domain, particularized judgments of capability that may vary under the levels of these demands and the different situational circumstances. This requires defining of capabilities it calls upon.

In addition to what is mentioned, Bandura (1997) also suggested that researchers must rely on conceptual analysis and expert knowledge of what it is required to succeed in a given task when they develop scales for self-efficacy. Therefore, it becomes evident that if the researcher is about to develop a sound self-efficacy scale, it must be tailored to the domain of interest, be linked to factors shaping the performance in that domain, assess the various ways in which efficacy beliefs work, and rely on

conceptual analysis, expert knowledge and performance demands.

Moreover, Pajares (2003) discussed three popular ways of measuring writing self-efficacy used in a variety of studies. The first way focuses on assessing students' confidence; that is, whether the students are confident that they have specific writing skills and have the ability to perform or display these skills. For example, assessing students' confidence in their ability to successfully perform mechanical writing skills grammar, usage and/or to display specific skills related to writing a story such as expressing the feelings of the main character and telling about the setting.

The second way is also assessing students' confidence of their ability to complete writing tasks such as writing a letter, a short story or a term paper (Pajares & Johnson, 1994; Shell et al., 1989, 1995). The last way of measuring self-efficacy is through providing students with a scale including a number of items to answer and rate their confidence that they can earn either an A, B, C, or D in their language class. Then, their confidence judgments are compared with actual grades obtained (Pajares, 1999; Pajares, Britner, & Valiante, 2000).

Thus, Pajares (2003) concluded that for any measure of writing self-efficacy to be evaluated in terms of adequacy and appropriateness, there should be a kind of judgment which has a theoretical and empirical basis. Therefore, it also requires understanding the features, capabilities and situations (in which these capabilities applied) of the domain being investigated, and

then, this measure is evaluated by "the level of specificity of its items, the range of task demands that it includes, and the correspondence between the beliefs that are tapped and the outcome that is measured" (p.144).

Due to this, developing a scale to measure writing self-efficacy of English majors who study English as a foreign language requires a theoretical examination of writing self-efficacy measures developed by other research. The work of Meier, McCarthy and Schmeck (1984), for example, introduced one of the earliest measures of writing self-efficacy which intended to demonstrate students' self-efficacy in regard to certain writing skills. This measure contains 19 items, asking students to rate their confidence on a 100 point scale.

After that, in 1989, Shell, Murphy and Bruning constructed a scale to measure college students' writing self-efficacy. Two subscales constituted this scale in which the first included 16 writing task items (e.g. list instructions for how to play a card game) and the second included 8 writing skills items (e.g. correctly use words in a one page passage). A 100 point scale (ranging from 'no chance' to 'complete certainty) was used. Later, this scale was adapted to be used with secondary and elementary students with a 5 point response scale instead of a 100 point (i.e. from 'I am sure I cannot' to 'I am sure I can').

Then, Graham, Schwartz and MacArthur (1993) constructed a writing elf-efficacy scale for fourth to eighth grade for both learning disabled and normal achieving students. This scale consisted of 7 items to measure executing composing processes

(e.g., when writing a paper, it is easy for me to get ideas) and 3 items to measure common school writing tasks (e.g., when my class is asked to write a story, mine is one of the best). In addition, In 1994, Zimmerman and Bandura developed an instrument to measure students' perceptions about their writing abilities. The scale consisted of 25 statements with a 7 point response scale, ranging from 'strongly disagree' to 'strongly agree'.

Prickel (1994) also developed a questionnaire of 25 questions to measure adult writers' writing self-efficacy. The responding scale was a 5 point Likert scale (i.e. from strongly disagree to strongly agree). Moreover, Pajares and Valiante (1997) developed another scale for measuring upper elementary students' writing self-efficacy which consisted of 10 items about specific mechanical, grammatical and composing skills (e.g., write a strong paragraph that has a good topic sentence or main idea).

Most recent research adopted these instruments (e.g. Al-Mekhlafi, 2011; Khojasteh, Shokrpour & Afrasiabi, 2016; Plakhotnik & Rocco, 2016; Setyowati, 2016). However, a number of recent studies developed their own scales such as the study conducted by Bruning, Dempsey, Kauffman, McKim and Zumbrunn (2013) in which they developed an instrument to examine high school students' writing self-efficacy in relation to their liking writing, self-reported writing grades and writing assessment scores. This instrument included three factors: writing ideation, writing conventions and writing self-regulation.

In addition, Hussein and Al Ashri (2013) developed 11-item scale to identify secondary stage students' writing self-efficacy in relation to writing performance.

Additionally, a number of studies were conducted with the aim of developing an instrument for measuring writing self-efficacy. Frank (2007), for instance, examined the properties of a scale assessing students' writing self-efficacy from grade 4 to 11. The scale consisted of two factors; basic grammar skills and advanced composition skills. In addition, Büyükikiz, Uyar and Balcı (2013), in an attempt to measure non-native students' writing self-efficacy, constructed a scale with 2 factors (i.e. general composition efficacy and using grammar and spelling rules efficacy) and 17 items. Burrows (2014) also developed a scale with six items to assess writing self-efficacy within the context of English as a foreign language.

Based on what is discussed above, it becomes evident that although many instruments have been developed in different geographical regions to measure students' writing self-efficacy, most of research is well-documented in the literature in western societies. In addition, most of the instruments were developed for different levels other than the college level and were not for the Arab context. This supports the need for developing a scale that measures writing self-efficacy of Arab students who study English as a foreign language.

Method of the study

Method

The study was carried out according to two dimensions in terms of (1) the application of the scale and (2) the analysis of the data obtained. The survey model was used in terms of applying the scale, and a methodological model was used in conducting the analyses.

Participants

The sample group itself consisted of 208 students studying at English Department in Faculty of Education of Fayoum University. Regarding the size of the population to be determined, Tavşancıl (2014) asserts that the sample size must be at several times (at least five) higher than the number of items (questions) on a scale.

Instrument

The WSES consists of 4 main factors including 34 items to measure students' writing self-efficacy scale. This scale is considered a self-reporting tool as students are asked about their beliefs about themselves as writers in light of a five-point Likert scale. Following the guidelines outlined by Bandura (2006) for constructing self-efficacy scales, the components suggested by Ali (2008) and as a result of investigating the writing self-efficacy scales, a total of 62 items were created.

Then, the content validity of the scale items was ensured through submitting the scale to a number of TEFL specialists to validate. Twenty two items were eliminated, and a total of 40 items were

selected for the application by the experts in accordance with issues such as expressibility, comprehensibility, suitability to the concept to be measured. The relationship of the items to the concept to be measured was established, and the options for answers were formed.

Additionally, as for phrasing the scale items, the researcher made use of the clear guidelines introduced by Bandura (2006) concerning how the beliefs of self-efficacy should be operationalized. So, this construct should be reflected accurately through the items. Therefore, the items phrased using "can do" to express capability.

In this case, five Likert-type answer options were preferred for the scale. The options for responses were determined as " 'Never true of me'; 'usually not true of me'; 'sometimes true of me'; ' Usually true of me'; or 'Always true of me'" from negative to positive. The items, which were designed to determine the self-efficacy levels of students towards self-confidence, stamina, self-regulation and competence, were administered to 208 students, and the data obtained from the application were analyzed.

The scale that initially consisted of 40 items was reduced to 34 by removing 6 items that were found to have low levels of factor load. So, the responses to the items are summarized across respondents, yielding a score between 34 and 170; with higher scores indicate higher self-efficacy. That is, the final form of the scale consisted of 4 main factors that include 34 items to which

the answers were classified according to a five-point Likert scale.

Findings and Discussion

1. Statistical Analysis

For the statistical analysis, The SPSS (Statistic Package for Social Science) software was used. First, to test the adequacy of the data, the KMO (Kaiser-Meyer-Olkin) test for sample adequacy was performed and the result was (0.848) which is a very good value because Sharma (1996, as cited in Çelik, 2012) stated that if the value in the KMO test is below 0.50, it is unacceptable, 0.50 is weak, 0.60 is medium, .70 is good, .80 is very good, and .90 is perfect. Also, Bartlett's test was performed to determine the level of factorability by scale, and the level of significance in this test was measured at $p < .001$. In addition, the principal components of factor analysis measurements were made regarding the scale items. The correlation measurements were made between the sub-factors and the total scores of the scale and the item total correlations were determined.

1.1. The psychometric proprieties of the scale

The psychometric proprieties were determined as the following:

1.1.1. Content Validity

To ensure validity of the scale, it was submitted to specialized jury members in the field of curriculum and EFL instruction. The jury members were asked to judge it regarding the following:

1. Relatedness of the dimensions to the general term (writing self-efficacy).

2. Relatedness of sub-items to each general dimension.

3. Clarity and wording of the statements.

4. The suitability of the scale as a whole for assessing EFL pre-service teachers' writing self-efficacy.

The first version of the scale consisted of 62 items, but, based on the jury members' suggestions, 22 items were removed and the rest were 40 items.

1.1.2. Factor validity

Before analyzing the data, it was ensured that the factor analysis can be used by examining the correlation coefficients between scores on the scale items and the adequacy of the sample size. The correlation coefficient matrix of the students' responses on the scale indicated that the correlations were statistically significant and most of the correlations had values more than (0.30) in addition to the absence of complete correlation coefficients between them. Also, the KMO (Kaiser-Meyer-Olkin) test for sample adequacy was performed to test the adequacy of the data and it was ensured that its value is not less than (0.50). In addition, Bartlett's test was performed to determine the level of factorability by scale, and the level of significance in this test was measured at $p < .001$. The correlations of the anti-image matrix were also revised to make sure that each item has an MSA (Measure of Sampling Adequacy) value that is not less than (0.50), so the items (20, 27,

28, 38, 39) were deleted. Moreover, the communalities of the items were revised to delete the items with a value less than (0.50).

Therefore, the factor analysis was conducted to ensure the validity of the writing self-efficacy scale after administering the scale to 208 students at Faculty of Education, Fayoum University. The principal components of factor analysis measurement were made regarding the scale items. The item total correlations were determined, and correlation measurements were made between the sub-factors and the total scores of the scale. The analysis yielded 12 factors, according to the inclusion of factors with the Eigenvalue of (1) as it is widely used. Then, these factors were rotated using the Varimax technique and four factors were reached. Thus, the items were distributed under these factors after rotation.

The Eigenvalues of these factors ranged from (2.78) to (3.89). Hence, the four factors were classified as factors from the first grade (because Eigenvalue is > 1). On that basis,.30 was taken as the lower limit for the factor load values and factor common variance (commonalities), which is a statistically acceptable value and the item total correlation lower limit, was taken as.30 in the factor analysis measurement (Teghza, 2012).

The following tables provide the scale items load for each factor:

Table (1): the factor loading values on the first factor of writing self-efficacy scale- the first factor: self-confidence

Item No.	Item content	Loading
21	I enjoy writing because I trust my writing skills.	0.685
22	I do my best to avoid writing.	0.655
24	I feel comfortable when I write in English.	0.562
37	When I write in English, I know the form and content of what I am going to write.	0.443
23	I expect to get an average very good if my English composition is assessed.	0.340
35	When I plan to write an assignment, I feel sure I can do it successfully.	0.336

Table (1) shows that all the loading values of the items are positive. So, the first factor is pure and its percentage of variance is (10. 527%) from total variance of the matrix. Also, its eigenvalue is (3.895).

Table (2): the factor loading values on the second factor of writing self-efficacy scale- the second factor: stamina

Item No.	Item content	Loadings
36	I can avoid distractions when I write.	0.506
18	I can usually find several solutions when I face a problem in writing.	0.502
4	Failure to write well just makes me exert more efforts.	0.446
12	I can keep writing even if the task is difficult.	0.422

Item No.	Item content	Loadings
40	Writing under time pressure in the English writing class does not frustrate me or distract my attention.	0.404
29	When I have an unattractive written task to do, I keep working on it until I complete it.	0.394
6	When I deal with a writing assignment, I imagine myself completing it successfully.	0.370
25	I find it difficult to complete the writing task within the time limit.	0.363

Table (2) shows that all the loading values of the items are positive. So, the second factor is pure and its percentage of variance is (9. 024%) from total variance of the matrix. Also, its eigenvalue is (3.339)

Table (3): The factor loading values on the third factor of writing self-efficacy scale- the third factor: competence

Item No.	Item content	Loadings
19	I can write a text without any spelling mistakes.	0.668
13	I can make the text clearer by adding examples and details.	0.569
10	I can avoid the grammatical mistakes	0.518
5	I can select the words suitable for the topic.	0.517
16	I can produce error-free structures	0.506
9	I can generate many ideas for any topic.	0.465
8	I can follow the rules of capitalization correctly.	0.462

Item No.	Item content	Loadings
15	I can organize the ideas chosen.	0.437
11	I can improve the style of my writing (e.g. making changes in sentence structure and vocabulary).	0.372

Table (3) shows that all the loading values of the items are positive. So, the second factor is pure and its percentage of variance is (8. 883%) from total variance of the matrix. Also, its eigenvalue is (3.287)

Table (4): The factor loading values on the fourth factor of writing self-efficacy scale- the fourth factor: self-regulation

Item No.	Item content	Loadings
32	When I am given a writing assignment, I ask myself how the topic of writing is related to what I have already known.	0.612
30	I make sure I understand just what has to be done and how to do it.	0.593
14	I can eliminate any negative feelings when I start writing.	0.486
1	After finishing the writing task, I think about what I've written to evaluate my writing performance.	0.446
3	I practice self-reflection on my writing to monitor my progress.	0.438

Item No.	Item content	Loadings
33	When I have a pressing deadline on a paper, I can manage my time efficiently	0.435
25	I usually think of the purpose of writing before I write.	0.434
2	Before I start writing, I plan my topic by making an outline and brainstorming ideas.	0.428
7	I can motivate myself to write even if the topic is not attractive or interesting.	0.421
17	I can refocus my attention on writing when I find myself thinking about other things.	0.411
26	I keep track of my progress and, if necessary, I change my techniques and/ or strategies.	0.347

Table (4) shows that all the loading values of the items are positive. So, the second factor is pure and its percentage of variance is (7. 516%) from total variance of the matrix. Also, its eigenvalue is (2.781). Thus, the final form of the scale consisted of 34 items with loadings belong to four factors of the scale.

1.1.3. Scale Reliability

The term reliability is one of the essential criteria judging the quality of a study. It is concerned with whether the measurement tool can consistently and accurately measure the quality to be measured, and it is among the necessary criteria for assessing the quality of a study (AL Mohazie, 2018). The reliability of the scale was determined by calculating the reliability coefficient of Cronbach's Alpha. Also, the Alpha test was performed on the

dimensions of the scale to determine the internal coherence coefficients of the scale.

Table (5): The reliability values of the four dimensions and of the scale itself

No.	Dimension	Reliability level
1-	Self-confidence	0.62
2-	Stamina	0.64
3-	Self-regulation	0.78
4-	Competence	0.75
	Self-efficacy scale as a whole	0.88

Table (5) shows that the Alpha internal consistency coefficient is between 0.60 and 0.80, so it is quite reliable.

The results presented above show that the scale has an acceptable degree of validity and reliability. The results of the analysis have shown that the scale includes factors that explain (35.9) of total variance of the responses of students on writing self-efficacy scale items with regard to the following dimensions: self-confidence, stamina, competence, and self-regulation. Also, the results showed that all the items of the scale were saturated significantly on the dimensions to which they belong. In addition, the results revealed that the scale has a high degree of internal consistency according to Cronbach's Alpha results. That is, the series of procedures followed in developing the scale and the results achieved support the validity and reliability of the scale in measuring the students' writing self-efficacy.

1.1.4. Internal Consistency

The internal consistency of the scale was tested by calculating the correlation between the score given to each statement and the whole score given to the dimension to which the statement belongs and it has been found that there is a significant correlation between the dimensions and related statements. Below a detailed description of the correlations between the total score of each dimension and related statements is given.

Table (6): the correlation between the "self-confidence" dimension and related statements

No	Statement	Correlation value	Sig. level
21	I enjoy writing because I trust my writing skills.	0.833	0.01
22	I do my best to avoid writing.	0.693-	0.01
24	I feel comfortable when I write in English.	0.645	0.01
37	When I write in English, I know the form and content of what I am going to write.	0.422	0.01
23	I expect to get an average very good if my English composition is assessed.	0.644	0.01
35	When I plan to write an assignment, I feel sure I can do it successfully.	0.593	0.01

The table above shows that the correlations between the dimension of self-confidence and the statements that belong to it are all significant at (0.01) level.

Table (7): the correlation between the "stamina" dimension and related statements

No.	Statement	Correlation value	Sig. level
36	I can avoid distractions when I write.	0.763	0.01
18	I can usually find several solutions when I face a problem in writing.	0.626	0.01
4	Failure to write well just makes me exert more efforts.	0.642	0.01
12	I can keep writing even if the task is difficult.	.893	0.01
40	Writing under time pressure in the English writing class does not frustrate me or distract my attention.	0.535	0.01
29	When I have an unattractive written task to do, I keep working on it until I complete it.	0.711	0.01
6	When I deal with a writing assignment, I imagine myself completing it successfully.	0.500	0.01
25	I find it difficult to complete the writing task within the time limit.	0.600	0.01

The table above shows that the correlations between the dimension of stamina and the statements that belong to it are all significant at (0.01) level.

Table (8): the correlation between the "competence" dimension and related statements

No.	Statement	Correlation value	Sig. level
19	I can write a text without any spelling mistakes.	0.520	0.01
13	I can make the text clearer by adding examples and details.	0.676	0.01
10	I can avoid the grammatical mistakes	0.513	0.01
5	I can select the words suitable for the topic.	0.830	0.01
16	I can produce error-free structures	0.734	0.01
9	I can generate many ideas for any topic.	0.726	0.01
8	I can follow the rules of capitalization correctly.	0.602	0.01
15	I can organize the ideas chosen.	0.643	0.01
11	I can improve the style of my writing (e.g. making changes in sentence structure and vocabulary).	0.771	0.01

The table above shows that the correlations between the dimension of competence and the statements that belong to it are all significant at (0.01) level.

Table (9): the correlation between the "self-regulation" dimension and related statements

No.	Statement	Correlation value	Sig. level
32	When I am given a writing assignment, I ask myself how the topic of writing is related to what I have already known.	0.604	0.01
30	I make sure I understand just what has to be done and how to do it.	0.944	0.01
14	I can eliminate any negative feelings when I start writing.	0.804	0.01
1	After finishing the writing task, I think about what I've written to evaluate my writing performance.	0.764	0.01
3	I practice self-reflection on my writing to monitor my progress.	0.434	0.01
33	When I have a pressing deadline on a paper, I can manage my time efficiently	0.520	0.01
25	I usually think of the purpose of writing before I write.	0.512	0.01
2	Before I start writing, I plan my topic by making an outline and brainstorming ideas.	0.912	0.01
7	I can motivate myself to write even if the topic is not attractive or interesting.	0.954	0.01
17	I can refocus my attention on writing when I find myself thinking about other things.	0.773	0.01
26	I keep track of my progress and, if necessary, I change my techniques and/ or strategies.	0.905	0.01

The table above shows that the correlations between the dimension of self-regulation and the statements that belong to it are all significant at (0.01) level.

Also, the correlation between the scores given to each of the four dimensions (self-confidence, stamina, self-regulation and independence) and the total score of the scale was calculated.

Table (10): the correlation between the scale's total score and its four dimensions.

No.	Dimensions	The correlation value	Sig. Level
1	Self-confidence	0.740	0.01
2	Stamina	0.734	0.01
3	Competence	0. 805	0.01
4	Self-regulation	0.914	0.01

The table shows that there is a strong correlation between the four dimensions of the scale. The values given are all significantly related to the total of the scale at (0.01) level.

Discussion

It is stated that constructing a self-efficacy scale requires tailoring it to the domain of interest, and be linked to factors shaping the performance in that domain. Thus, as Eggleston (2017) stated that because "self-efficacy beliefs vary according to the task and cannot be generalized to all areas …when self-efficacy is assessed in relation to writing, it is called writing self-efficacy" (p.21). In this study, the scale developed to determine the self-efficacy levels of students towards writing in a writing training program, is referred to as writing self-efficacy scale.

Also, the validity and reliability analyses that were carried out have demonstrated that this scale can be used to measure the following aspects of students' writing self-efficacy; their self-confidence, stamina, competence and self-regulation.

First, surveying the previous studies conducted in writing domain, writing self-efficacy is found to be measured using scales at the level of three areas; skills scales (Bruning et al. 1987; Johnson, 1996; Pajares & Valiante, 1999; Shell et al., 1995, Jones, 2008), task scales (Bruning et al. 1987; Shell et al., 1995; Zimmerman and Kitsantas, 1999, Jones, 2008) and approach scales (Jones, 2008). The skills scale assesses self-efficacy for a variety writing skills (Klassen, 2002) which are covered with the competence factor. Also, task scales were used with purpose of assessing perceived capability to complete a certain writing task (Zimmerman and Kitsantas, 1999) that are covered with confidence factor. In addition, approach scale was used to assess students' writing approach "did not focus on specific writing tasks or skills but rather on how students responded to the challenges that writing assignments provide" (Jones, 2008, P. 218) which is implied in two factors; stamina and self-regulation.

Writing is described by McLeod (1987; cited in jones, 20088) as a cognitive and emotional construct. In addition, although Bandura (1986) contended that students' academic performance; such as writing performance should not be told more about by using the measures of global personal (i.e. individuals' confidence in their general abilities), the results of Pajares and

Johnson's study (1994) revealed that personal self-efficacy had a.41 correlation with writing performance. Then, Jones (2008) added that "it may be that, with writing in particular, students' confidence levels are closely tied to a more generalized construct such as academic self-concept" (p. 230). As a result, the factor of confidence is added to the scale, but, at the same time, in relation to writing ability.

Moreover, the researcher developed a writing self-efficacy scale following the criteria of accurate efficacy scales, mentioned in literature. Therefore, this writing self-efficacy scale linked to some factors that reflect the writing performance requirements and express the particularized judgments of students' capabilities. These factors included confidence about writing, stamina, self-regulation, and competence which depended on the theoretical foundation of the construct and the experts' knowledge in the field of both self-efficacies in general and writing self-efficacy in particular.

Self- Confidence:

Depending on what believed by Bandura (1986, 1992), the individuals with high self-efficacy are more confident about finding the solution to a problem or in their ability to execute a behavior because they have created an idea of problem solving depending on past accomplishment (Hashemnejad, 2014 &Tola and Sree, 2o16). So, confidence is what makes the difference between students with high self-efficacy and those with low self-efficacy. Also, Abd Alhaq, et al. (2014) added that "Self-efficacy may be a mediating tool that enables students to have

more confidence, and more willingness to implement strategies that will help them be better writers" (p.8). This goes in line with the conclusion drawn by Jones (2008) as he concluded that education researchers are required to measure the confidence that students have in relation to a particular set of tasks if they want to measure the self-efficacy construct. Blasco (2016) also added, "high achievers seem to be more confident with their writing plans, have less tendency to procrastinate, and show a higher level of commitment towards the task"

Self-regulation:

In explaining what self-efficacy is, Bandura (1977) stated that people have some abilities that enable them to determine their own destiny. These abilities can be summarized in five main ones which are the abilities to symbolize, learn through vicarious experience plan alternative strategies or use forethought, self-regulate, and self-reflect. However, in order that people can use these abilities or do an action, they must have within themselves a belief about them and about their human functioning. So, Bandura (1995) defined self-efficacy as "people's beliefs about their capabilities to produce performances that influence events affecting their lives" (p. 434).Thus, self-regulation is one of the components included in human self-efficacy beliefs.

Also, Jones (2008) mentioned that self-efficacy approach scale measures a type of self-regulation. In addition, according to Bandura (2006), self-regulatory skills contribute partly in proficient performance. Hence, they are a main part of self-efficacy beliefs because despite of the multifaceted of efficacy

beliefs, there are several conditions under which they may co-vary even across distinct domains of functioning according to the social cognitive theory. Thus, Bandura stated that:

> *"Many areas of functioning are primarily concerned with self-regulatory efficacy to guide and motivate oneself to get things done that one knows how to do. In such instances, self-regulation is the capability of interest. The issue is not whether one can do the activities occasionally, but whether one has the efficacy to get oneself to do them regularly in the face of different types of dissuading conditions" (P.311).*

Furthermore, any effort a person makes to alter his or her own responses is and manage his behavior toward a selected goal is referred to as self-regulation, and the beliefs in one's capabilities to exercise control over challenging demands and over their own functioning is referred to as self-efficacy. Hence, persons with high self-regulation are expected to be highly self-efficacious (Luszczynska, Scholz & Schwarzer, 2005). All this was supported by some studies that mentioned some characteristics of self-believers (e.g. Jones, 2008; Williams and Takaku, 2011 & Blasco, 2016). Among these characteristics are goal setting and determination in spite of difficulties.

Competence:

Luszczynska, Scholz and Schwarzer (2005) described self-efficacy as being competence-based, prospective, and action-relatedp. Also, Pajares et al. (2007) define writing self-efficacy as "students' judgments of their confidence that they possessed

the various composition, grammar usage and mechanical skills appropriate to their academic level" (p.11). In addition, McCarthy, Miere and Rinderer (1985) define self-efficacy as the individuals' perception and evaluation of their writing skills.

Consequently, the performance of the individuals with similar skills, and even the same individual under different circumstances, may be poor, adequate, or extraordinary, due to the changeability in their beliefs of personal efficacy. Thus, what affects performance is the belief about what a person can do under different sets of conditions with whatever skills he/ she possesses (Bandura, 1997). Due to this fact, Jones (2008) stated, "successful students' efficacy for writing includes one's perceived capability to plan, organize, and revise their writing, generate good topics and introductions, and manage their own behavior to produce writing" (p. 215). Therefore, for students' achievement in school to increase, altering their beliefs of their competence should be the focus of the educational efforts.

Stamina:

The characteristics shared by individuals with high self-efficacy mentioned in literature provide evidence that stamina is a main component of self-efficacy. For instance, it was mentioned that determination and persistence in addition to exertion of effort and perseverance when obstacles arise are some of their characteristics (Abdel-Haq, etal. 2014). That's why, "high self-efficacy not only improves goal setting, but it also leads to more persistence in pursuing the goal. Therefore, self-efficacious

individuals have stronger intentions" (Luszczynska, Scholz & Schwarzer, 2005, p. 441).

Study Implications

The present study provides a measure that can be used to:

1. Study variables related to writing self-efficacy

2. Identify the skills that need to be mastered by students to write effectively

3. Raise students' awareness of their level of self-efficacy and how much it is important to enhance their performance.

4. Address areas of deficiency in programs of academic study and professional development.

Study Recommendations

The researcher recommends studying the following:

1. The extent of variation of university students' perception of writing for their self-efficacy according to the level of education.

2. The relationship between students' gender and their perception of their writing self-efficacy.

3. The relationship between the instructors' perception of their self-efficacy and the achievement of students and their psychological adjustment.

4. Self-efficacy measures related to students' writing experiences and to interventions targeted at specific dimensions of the writing process are also needed.

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