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Assessing and Validating a Writing Strategy Scale for Undergraduate Students

Saeid Raoofi
Department of English Language Teaching, Farhangian University, Sanandaj, Iran

Anvar Miri
Department of Educational Science, Farhangian University, Sanandaj, Iran

Jalal Gharibi
Department of Educational Science, Farhangian University, Sanandaj, Iran

Bahram Malaki
Department of Educational Science, Farhangian University, Sanandaj, Iran

***Abstract*—Little research has been conducted to develop and validate a scale to measure L2 writing strategies. The purpose of this study was to validate a writing strategy questionnaire for English as a Second language (ESL) learners. The validation process involved both qualitative and quantitative methods. First, in the item construction stage, 30 items were constructed through a process that involved both L2 writing experts' comments and undergraduate students' interviews. Then, in the statistical analysis stage, the prepared thirty-item questionnaire was administered to 322 undergraduate students who were non-native speakers of English. The data was analyzed using Principal Component Analysis. The results showed that the writing strategies used by non-native learners of English cluster into five categories: metacognitive, cognitive, metacognitive, affective effort regulation and social strategies. Limitations of the study and directions for future research are indicated.**

***Index Terms*—validation – writing strategy scale, ESL learners, L2 writing**

I. Introduction

Strategies matters for the development of L2 writing. Investigating strategies is a main focus of many studies in the area of L2 writing. There has been a rapidly growing body of research into L2 writing strategies over the past a few decades (Arndt 1987; Chien, 2012; Mu, 2005; Raimes 1985; Sasaki, 2002, 2011; Victori 1999). Although there are many factors other than writing strategies affecting L2 writing development, writing strategies appear to be particularly important because many researchers have reported that writing strategies can distinguish less skilled writers from more skilled ones (Raimes 1985(Raimes, 1985); Sasaki, 2000, 2002, Victori 1999). As writing is normally needed for reports, papers and academic presentations and so on at educational settings such as universities and colleges, the importance of strategies for the development of L2 writing gains increasing attention in such educational settings.

Writing is difficult and challenging because it involves both language knowledge and content knowledge (Bialystok, 1978; Makalela, 2004; Nunan 1989). For students who write in a second language or who are unfamiliar with the content area of writing, writing becomes much more difficult and demands a more focused endeavor (Tedick, 1990). It has been generally accepted that since students write in a language other than their first language, their writing have many issues associated with coherence, cohesion, grammar and word choice. In addition, lack of exposure to L1 writing experiences poses problems for learners in their L2 writing endeavors. Having such awareness is conducive to the development of L2 writing ability as there is a close link between L1and L2 writing ability (Cumming, 1989; Schoonen et al., 2003; Sasaki & Hirose, 1996). It is reasonable to assume that L1 writing ability play an important role in the L2 writing development, especially when L1 writing strategies share some communalities with the strategies used in L2 writing activities. As such, for L2 learners, besides having to cope with subject knowledge, they need to develop a good command of language. L2 writing becomes extremely complicated for students who have a poor command of second language. (Beckett et al., 2004). Indeed, as far the complexity of writing is concerned, students need to manage skillful coordination of various linguistic and cognitive resources required in the writing processes (Hayes, 1996; Kellogg, 1996).

In the area of SLA, L2 writing research is rapidly expanding. The growing interest in L2 writing particularly English may result from the importance of writing in academic settings because writing in world-valued languages allows the students and scholars to place their thoughts and research findings in an international outlet. In addition, the dramatic increase in the number of universities using globally used languages as the medium of instruction has given an impetus to further research developments in the area of L2 writing (Petrić & Czárl, 2003).

Despite the rapidly increasing body of research addressing different aspects of L2 writing, little research has focused on L2 writing strategies. Furthermore, although validation of measurements for collecting data is an enormously important and essential phase in a research process, it is often inadequately or briefly reported in SLA research. In this study, a research instrument was created to measure ESL writing strategies of university students. The instrument would allow scholars and researchers from SLA and composition studies to compare findings about writing strategy use in different contexts. Both quantitative data and qualitative data were used to validate the scale of writing strategy use.

In this study, writing strategies referred to the techniques and operations that students employ to write more effectively or to produce better writings. This is in congruence with the definitions of language learning strategies proposed by Oxford (1989, 1990) and Cohen (1998). Oxford's (1990) Strategy Inventory for Language Learning (SILL) has been widely used to measure language learning strategies in the L2 research. However, this scale measures strategies used in generic language learning rather than those employed in a specific language domain. Although, there are some specially- designed scales for L2 writing strategies (He 2005, Petrić & Czárl, 2003), these scales have some limitations. For example, He's (2005) L2 writing strategy scale was designed only based on evidence from think aloud interview, and no quantitative data was used to validate the scale. Unlike He (2005), Petrić and Czárl (2003) used both qualitative and qualitative approaches in validating the scale, but one of the limitations of the scale is that it has classified writing strategies into three broad categories rather than more specific classification. Another limitation of the Petrić and Czárl's (2003) scale is that the writing strategies have not been classified based on the type of writing strategy, instead they have been categorized according to the writing processing stages namely pre-writing, during writing and post-writing strategies. In the current study, the categorization of the items is based on an empirical approach that involves principal component analysis. This method is able to cluster the writing strategies by assessing the correlations among them.

II. Construction of the Scale

Writing strategy items were drawn from a writing strategy questionnaire developed by Petrić and Czárl (2003), He's (2005) writing strategy questionnaire, Oxford's (1990) Strategy Inventory for Language Learning, and Pintrich et al.'s (1993) Motivated Strategies for Learning Questionnaire (MSLQ). Modifications were made to items in order to specifically focus on ESL writing strategies.

The items were primarily adapted from He's (2005) writing strategy questionnaire which contained 20 items in five subscales: retrieving (memory), compensating, evaluation (monitoring), planning and revising. He (2005) developed and identified 20 different strategies used by learners when writing in L2 by focusing on the data collected through stimulated recalls, think aloud protocols, interviews and the observation of students' activities and behavior during their writing. Indeed, a majority of the items clustered into the metacognitive category asking students about how they plan, monitor and revise their writing. On the whole, 12 items, mostly on metacognitive strategies, were adapted from He's (2005) writing strategy survey. Sample strategies include" *When I write in English I organize my ideas prior to writing*" and "*When I write in English I have my teacher, classmates or other readers in mind as an audience".*

The items were also taken from Petrić and Czárl's (2003) writing questionnaire. This questionnaire consisted of 48 items about L2 writing process divided into three sections corresponding to three stages in writing: pre-writing stage (before starting writing) comprising 8 items, drafting stage (when writing draft) consisting of 14 items and revising stage (post-draft writing) encompassing 16 items. The items assess learners' strategy use in their writing process on a five –point Likert scale with 1 representing *never or almost never true of me* and 5 indicating *always or almost always true of me*. Although, most of the items of the all subscales of the questionnaire are intended to tap into different types of metacognitive strategies such as planning, monitoring, revising and evaluation, the questionnaire includes some items assessing other strategies including social, affective, compensatory and cognitive strategies. *"After revising and editing my essay thoroughly, I ask a friend or my classmate to read and comment on it"* and *"I evaluate and re-evaluate the ideas in my essay"* were derived from Petrić and Czárl's (2003) writing strategy scale.

SILL is one of the most reliable measures for strategy use in the field of second language learning. It contains 50 items classified into six subscales: three in direct and three direct strategies namely affective, social, metacognitive, cognitive, memory and compensation strategies. The SILL items are rated on a five-point Likert scale from1 (Never true of me) to 5 (Always true of me). The reliability of the whole scale of SILL indicated by Cronbach alpha coefficient has been reported to range from .91 to .94 (Oxford & Burry-Stock, 1995). It is a strongly reliable scale and is largely employed in the area of language learning. However, it needs to be adapted when it is intended to be used for measuring a specific language domain.

Grainger (2005) recommended that SILL need to be adapted appropriately to suit specific second and foreign language contexts. Grainger also (2005) stated that only 13 out of 80 items of the original SILL are related to writing, and argued that since SILL is not task based, some items can be interpreted in different ways. In addition to the items drawn from the scales specifically designed for writing, several items were drawn from SILL. Items derived from SILL were mainly concerned with affective strategies and they were modified so that they reflect L2 writing strategies other than strategies employed in other language domains (e.g. **"***I encourage myself to write even when I am afraid of making mistakes").*

Effort regulation strategies were adapted from the Motivated Strategies for Learning Questionnaire (MSLQ) ((Pintrich et al. 1993). The description of the MSLQ survey had been presented above. In this study, 5 items from the MSLQ assessing effort regulation strategies were added to the writing strategy questionnaire in order to evaluate how students' regulate their effort strategies in writing and to what extent they exert regulation on their effort for L2 writing skills. Effort regulation strategies consist of 5 items asking students whether they maintain their effort and concentration when they encounter uninteresting tasks. In this study, effort regulation strategies focus on how L2 learners, maintain their concentration and effort for the development of ESL writing skill, especially when the tasks are dull and uninteresting for them. Examples of effort regulation strategies include *"I often work hard to do well in my writing even if I don't like English writing tasks"* and *"I put in my best effort in completing writing tasks".*

All the items pertaining to writing strategies were prefaced with the phrase (heading) *When I write in English* and respondents rated their usage of strategies by selecting a choice on a five-point Likert scale from *never or almost never true of me* to *always or almost always true of me*. These items were intended to evaluate ESL writing strategies rather than general language learning strategies. After the strategy items were selected and modified, they were sent to the other experts for final review, comments and critique. The scale was verified by expert researchers with specialization in L2 education with two of them having more than 25 years of experience in second language teaching. They reviewed the items and provided comments and feedback on the scale, regarding its relevance to the writing strategies and its congruence with the tenets of L2 learning. The items were modified based on their feedback and recommendations; some words and phrases were singled out as they were perceived to be ambiguous or difficult for the participants and hence replaced with more appropriate words.

Next, eight students were invited for the cognitive interview in order to know to what extent their interpretation and understanding of the items was in line with writing strategy construct, Furthermore, the cognitive interview was carried out to address the problems associated with the comprehension of the items. These students were asked to explain the meaning of the items and mark the items perceived as problematic, confusing, or unclear. Moreover, the students were prompted to explain the response they chose for the items. Minor modifications such as providing more details and more clarity were also made to the scale after getting feedback from the cognitive interviews.

After cognitive interviews and expert review, the scale was pilot-administered in order to examine its reliability, assess respondents' understanding of the items, evaluate respondents' comprehension of the instructions and prompts, and identify and sort out issues associated with its feasibility. The participants for the pilot study were 48 students studying in the Environmental Health and Biomedical Science program from the Faculty of Medicine at a Malaysian national university. The analysis of the pilot results revealed that the scale had a good reliability Cronbach's $\alpha = .91$) to permit employing as a writing strategy measure. Overall, the writing strategy scale in this study contained 30 items in different categories as follow: metacognitive strategies (planning, monitoring and revising), cognitive, retrieving (memory), compensation, affective, social and effort regulation. Appendix A shows all of the items and the prompts of the writing strategy scale used in this study. Finally, the scale was tested with 322 undergraduate students to validate the scale. The items were given to students in both Malay and English as there is a need for a bilingual version especially for those students who had low English proficiency level.

III. Methodology

A. Participants

Three hundred and twenty eight university students majoring in different fields of study participated in the present study. The participants were all from Malaysia representing three different languages, Malay, Chinese and Tamil. Malay was the first language of the overwhelming majority of the participants (73%). Chinese and Tamil speakers comprise 20% and 9% of the sample respectively. The age of the participants ranged from 19 to 22. The sample of the study was dominated by females and this is representing gender ratio in Malaysian tertiary education as females dominate in Malaysian public universities.

B. Data Analysis

After testing the reliability of the questionnaire, Principal Component Analysis (PCA) was conducted to check the construct validity of the scales. PCA is used to detect the latent variables by assessing the correlations among them. It is a multivariate statistical technique which is widely used for identifying dimensionality and extracting underlying latent components. PCA reduces the items and variables to basic or principal components underlying a construct. It provides clear description and better understanding of complex constructs by identifying their components. Furthermore, PCA is one of the most frequently used methods for extracting factors in social sciences and, it is psychometrically clear and sound (Steven, 2009).

In the current study, Principal component analysis (PCA) was performed with 30 writing strategy items on 322 questionnaires to determine (a) the validity of the writing strategy questionnaire, (b) the appropriate number of reliable factors in the data, (c) the characteristics and loading patterns of the factors and (e) and the size of the variance explained by the factors. PCA is computed based on the correlations among variables and the method becomes less reliable when it is administered with small samples. Hence a relatively large sample size is required for PCA. According to guidelines suggested by Tabachnick and Fidell (2001) and Comrey and Lee (1992), 322 cases can be

considered as a good sample size for PCA as they class 300 and 500 cases as good and very good sample sizes respectively.

IV. Results and Discussion

The main purpose of this study was to validate a writing strategy scale that can be used for future writing research in the area of second/ foreign language learning. The study used both qualitative and quantitative methods for evaluating the scale. In the first phase, the items were constructed and developed through a process that considered both experts comments and students' interviews, in the second phase, the students' responses to the items were analysed using PCR.

Before conducting PCA, the normality and linearity of the data was checked because the use of PCA is more suitable when the data is normally distributed and items are correlated. The distributions of all the variables were assessed using Kurtosis and Skeweness measures. It was found that all of the items of each scale were within the acceptable range of normality (Skewness of the items ranging from .05 to .44) and all of them had reasonable and acceptable Kurtosis. The items had positive Kurtosis smaller than one (ranging from .01 to .61). Furthermore, a sample size above 200 is considered as a large sample (Field, 2009) and with that sample size, minor amounts of variance associated with Kurtosis and skewness would fade away.

Overall, data was normally distributed. It was also found that the variables were not multicollinar, that is, the variables were not highly (r =.90 or above) correlated. Strong correlation between two variables (r =.90 or above) suggest that the two variables are about the same construct rather than two distinct ones. Since the matrix inversion is not required in PCA, the multicollinarity among the variables was checked before conducting PCA. Investigation of the correlations between the variables revealed no multicolliniarity issue.. The first PCA was run on the five-point likert scale writing strategy scale.

The type of rotation is an important factor in conducting PCA. There are two rotations used in PCA: oblique and orthogonal. Oblique rotation is generally used when there is a correlation exceeding .32 (Tabachnick & Fidell, 2001) among the factors while orthogonal rotation is employed when it is believed that the factors are not correlated. In this study, the orthogonal rotation was used for writing strategy items because most of the factors were not correlated as high as .32. Furthermore, the extracted factors would be used as either independent variables (IVs) or mediators in the analyses, and an increasing orthogonality of IVs was desirable. Among the different types of orthogonal rotations, varimax, the most frequently used type of rotation, was chosen for writing strategies. This technique makes clear patterns of factor loadings, and provides a simple structure in determining each item has a high loading on one factor or low loadings on the other factors.

A principal component analysis (PCA) was conducted on a 30-item writing strategy scale to derive the underlying factors and to assess the internal structure. Prior to carrying out PCA, two statistical techniques, namely Kaiser–Meyes–Oklin (KMO), and Barlett's Test of Sphericity (BTS) were used to assess the factorability of the writing strategy data. The KMO value was .89 considerably above the recommended value of sampling adequacy (0.6) and BTS was statistically significant (χ^2 (435) = 3836.09, $p < .05$), supporting the appropriateness of writing strategy data for exploratory factor analysis. In an initial run, a PCA with varimax rotation was performed. The initial analysis showed seven factors with eigenvalues higher than 1.00 (a commonly used criteria in factor analysis).

The results revealed that 7 factors had an eigenvalue greater than 1.00, with a range from 1.02 to 8.52, while 22 factors fell below Kaiser' criterion eigenvalue of 1.00, with values ranging from .93 to .22. The seven factors with eigenvalues greater than 1.00 accounted for 60.26% of the total variance extracted by all of the 30 items (see Appendix B). All of the 30 items had a communality value greater than .40 and hence no items were removed. It is worth mentioning that the first five factors represented approximately 53% of the total variance. There are several criteria and parameters employed to determine the appropriate number of factors (components) in factor analysis. The commonly used methods for factor retention are parallel analysis and scree plot. In this study, based on scree plot (See Appendix C), Kaiser' criterion eigenvalue, interpretability of the components, and variance extracted by the factors, it was decided to extract five factors.

In the subsequent analysis, PCA with varimax rotation was performed with fixed five factors. Factor loading values that exceed .32 (Tabachnick & Fidell, 2001) are considered as good loadings in the interpretation of the components. In this study, only factor loading values greater than .45 were chosen for the interpretation of the factors because loading values at <.45 (below .45) yielded confusing items which loaded on two components. That is, for factor loading values at <.45 (below .45), several items had moderate loadings on two components rather that one single strong loading on one component. Any item that had a loading value less than .45 was dropped. Consequently, 4 items (*When I write in English … 1. I have my teacher, classmates or other readers in mind as an audience, 2. I write down my feelings about writing in a language learning diary, 3. I translate my thoughts from my mother tongue into English, and 4. I put in my best effort in completing writing tasks*) were removed.

After the five factor solution, the 30-item writing strategy scale was refined into 26-item scale (see Appendix D). The reliability of the scale after removing the four complex items using Cronbach's alpha was 0.90. The results of PCA revealed that the five factors explained 52.74% of the total variance. Table 1 shows the writing strategy scale items according to the extracted factor (five components). Factor 1 received high loadings from 8 items and accounted for

9.07% of the total variance, all of the items were concerned with metacognitive awareness and metacognition strategies. Therefore factor one was labeled as metacognitive strategies.

Factor two obtained meaningful and high loadings for five items. Four items that loaded on this factor were previously assumed to be indicative of effort regulation strategies. An item that was thought to be indicative of cognitive strategy loaded on factor 2. A close examination of the item *(I write a lot to develop my writing skills)* showed that the communality of the item might reflect the effort strategy. Thus, factor two was referred to as effort regulation strategies of writing. Six items loaded on factor three. All of the six items were closely associated with direct writing strategies. These items mainly concerned the strategies learners use in manipulating the language materials in direct ways such as practicing, synthesizing, and activating knowledge. These items loaded on this factor were related to cognitive strategies, and hence the construct underlying this factor was described as cognitive strategies.

Factor four was composed of four items, all of which were related to help-seeking strategies that learners use for their writing development. The items were designed to assess how students seek help from others in performing a writing task. All of the four items loaded heavily on factor 4. Given the characteristic of the items, factor 4 was labeled as social writing strategies. The fifth factor had a high loading for three items. These items reflected the regulation of motivation and emotional states. The items that loaded on factor five described student writers' strategies for self-encouragement and anxiety-reduction and hence this factor five was termed as affective writing strategies.

The results of the study showed that the writing strategies used by non-native learners of English cluster into five categories which are clearly distinguished from each other. The results from qualitative and quantitative analyses showed that the participants reported employing 26 distinctive writing strategies. This result implies that L2 learners apply different tactics and techniques in order to overcome the challenges and problems they face when they write in a language other than their mother tongue. As displayed in Appendix D, the strategies that the participants reported using in their ESL writing consist of five categories namely, metacognitive, effort regulation, cognitive, social and affective strategies.

Combining qualitative techniques with quantitative data helped to gain a better understanding of the strategies used by ESL university students in their writing endeavors. In this study, the qualitative data collected from SLA experts as well as students' interviews was very instrumental in ensuring the initial validity of the items. The quantitative data collected from a large sample was also needed not only to further assess the validity of the items but also to stymie the threats to the reliability of the scale. During the construction procedure of the items, the student interviews helped to identify the confusing items and to modify the items which interviewees perceive as unclear or ambiguous. However, it is noteworthy to mention that self-report instruments including both interview and questionnaire have some limitations as the validity of the self-report data mainly relies on the participants' honesty. One of the main limitation with self-report data is that individuals tend to give socially acceptable responses, and thus provide desirable answers to show a good picture themselves (Hakkarainen et al., 2001; Rosenfeld et al., 1996).

Another factor that seems to affect the validity of the scale is the context of learning. In this study, the participants reported using a variety of strategies, but their responses may differ depending on the type of writing tasks and the context of learning. It can also be assumed that the strategies which they reported may not be indicative of their actual use of writing strategies under different circumstances. Therefore, a question may be posed as to how useful and valid the results of a writing strategy scale for the writing classroom if participants were to answer differently in different learning contexts. It seems reasonable to assume that respondents in the foreign language context may use writing strategies that are different from those employed by learners in second language learning contexts. As a result, interpretation of the findings may be different because of the students being in different learning contexts.

In this study, stringent techniques such as cognitive interviws, during the item construction phase, were used in order to identify lexical issues and misinterpretation of the item meaning. However there are many uncontrollable factors that may have affected the way the students responded to the questionnaire items. Thus, the validity and reliablity of the scale may have been negatively affected. Some of the factors affecting the validity of the data can be controlled by rewording, using parrallel forms and pilot-testing, wheras some others can not be adequetly controlled. Issues associated with idiosyncractic perspective of the respondents towards the items, and issues concerning responsents' experiences and reasons for selecting a particlular writing strategy can not be fully approached. Culture, attitudes, percieved task difficullty (Petrić and Czárl (2003), the adequate number of the items (Phakiti, 2003), and learning context (DeCapua & Wintergerst, 2005) all affect the validity of a questionnaire. although some of these issues seem to be the inherent limitations of scale items, perhaps in future research, more stringent techniques can be employed to develop, field test and validate writing statrgy scale items. Nevetheless, the validation process of writing strategies presents useful informantion about revealing various factors involved in writing strategy use, and also provides valuable insight into the complicated nature of L2 writing. The types and categories of writing strategies found in this study, shed light on how ESL university students do academic writing tasks, regardless of their motivational and cognitive differences.

APPENDIX A. WRITING STRATEGY SCALE

Please tick (√) the option chosen that best describes your writing experience. There are no right' or wrong' writing techniques; all that is required is that you give honest responses that best describe your personal writing experience or strategy use.

(Sila tanda (√) pada skala yang dapat memberikan penjelasan terbaik tentang pengalaman penulisan anda. Tiada jawapan 'betul atau salah' dalam teknik penulisan; anda hanya perlu jujur dalam memilih jawapan yang paling tepat yuntuk menerangkan pengalaman dan strategi penulisan anda.)

Never or Almost Never true of me	Generally Not True of Me	Somewhat True of Me	Generally True of Me	Always or Almost Always True of me
1	2	3	4	5
(Tidak atau hampir tidak)	*(Secara amnya tidak benar tentang saya)*	*(Hampir benar tentang saya)*	*(Secara amnya benar tentang saya)*	*(Selalu atau hampir selalu benar tentang saya)*

When I write in English …

(Apabila saya menulis dalam bahasa Inggeris…)

1. I organize my ideas prior to writing.

(Saya mengatur idea saya sebelum menulis.)

1 2 3 4 5

2. I have my teacher, classmates or other readers in mind as an audience.

(Guru, rakan sekelas saya dan pembaca yang lain berada dalam minda saya sebagai pembaca.)

1 2 3 4 5

3. I revise my writing to make sure that it includes everything I want to discuss in my writing.

(Saya menyemak penulisan saya dan memastikan bahawa saya telah memasukkan setiap perkara yang hendak saya bincangkan.)

1 2 3 4 5

4. I check my spelling.

(Saya menyemak ejaan saya.)

1 2 3 4 5

5. I check my writing to make sure it is grammatically correct.

(Saya menyemak penulisan saya untuk memastikan tiada kesilapan dari segi tatabahasa.)

1 2 3 4 5

6. I evaluate and reevaluate the ideas in my essay.

(Saya menilai berkali-kali idea dalam karangan saya.)

1 2 3 4 5

7. I write a lot to develop my writing skills.

(Saya menulis dengan banyak untuk mengukuhkan kemhiran penulisan saya.)

1 2 3 4 5

8. I monitor and evaluate my progress in writing.

(Saya memantau dan menilai kemahiran penulisan saya.)

1 2 3 4 5

9. I revise and edit an essay two or more times before I hand it in to my teacher.

(Saya menyemak dan membaiki karangan saya lebih daradai dua kali sebelum saya menghantarnya kepada guru saya.)

1 2 3 4 5

10. I use memorized grammatical elements such as singular and plural forms, verb tenses, prefixes and suffixes, etc. in my writing.

(Saya menggunakan unsur tatabahasa yang telah dihafal dalam penulisan saya, umpamanya bentuk tunggal dan jamak, kala kata kerja, imbuhan awalan dan akhiran, dalam sebagainya)

1 2 3 4 5

11. I put newly memorized vocabulary in my sentences.

(Saya menggunakan perkataan yang baharu sahaja saya hafal.)

1 2 3 4 5

12. In order to generate ideas for my writing, I usually engage myself in brainstorming.

(Untuk menjanakan idea bagi penulisan saya, saya biasanya akan melibatkan diri dalam aktiviti sumbang saran.)

1 2 3 4 5

13. I use different words that have the same meaning.

(Saya menggunakan perkataan yang berlainan tetapi mempunyai maksud sama.)

1 2 3 4 5

14. I use my experiences and knowledge in my writing.

(Saya menggunakan pengalaman dan pengetahuan saya dalam penulisan saya.)

1 2 3 4 5

15. I try to use effective linking words to ensure clear and logical relationship between sentences or paragraphs.

(Saya cuba menggunakan kata penghubung yang berkesan untuk memastikan hubung kait yang jelas dan logik antara ayat atau antara perenggan.)

1 2 3 4 5

16. I translate my thoughts from my mother tongue into English.

(Saya menterjemahkan pemikiran saya dari bahasa ibunda saya ke bahasa Inggeris.)

1 2 3 4 5

17. In order to generate ideas for my writing, I usually discuss the writing topic with a friend or classmate.

(Untuk menjanakan idea untuk penulisan saya, biasanya saya akan berbincang dengan kawan atau rakan sekelas saya.)

1 2 3 4 5

18. After revising and editing my essay thoroughly, I ask a friend or my classmate to read and comment on it.

(Selapas menyemak dan membaiki karangan saya sebaik mungkin, saya akan meminta seorang kawan atau rakan sekelas untuk membaca dan memberikan ulasan.)

1 2 3 4 5

19. I try to identify friends or classmates whom I can ask for help in my writing.

(Saya mengenal pasti kawan atau rakan sekelas yang saya boleh memndpatkan bantuan untuk penulisan saya.)

1 2 3 4 5

20. When I have trouble writing my essay, I try to do it with my classmates or friends.

(Apabila saya menghadapi masaalah dalam menulis kasangan saya, saya akan cuba menulis dengan bantuan rakan sekelas atau kawan kawan saya .)

1 2 3 4 5

21. I try to write an essay in class with confidence and ease.

(Saya menulis karangan dengan penuh keyakinan dan tanpa seberang kemusykilan.)

1 2 3 4 5

22. I write down my feelings about writing in a language learning diary.

(Saya menulis isi perasaan saya tentang penulisan dalam diari pembelajaran bahasa saya.)

1 2 3 4 5

23. I try to relax whenever I feel afraid of writing.

(Saya menenangkan diri saya abapbila saya rasa takut untuk menulis)

1 2 3 4 5

24. I encourage myself to write even when I am afraid of making mistakes.

(Saya mendorong diri saya untuk menulis walaupun saya berasa takut untuk membuat kesilapan.)

1 2 3 4 5

25. I often work hard to do well in my writing even if I don't like English writing tasks.

(Saya selalunya berkerja keras untuk menulis dengan lebih baik walaupun saya tidak menyukai tugasan menulis dalam bahasa Inggeris.)

1 2 3 4 5

26. Even if the writing activities are difficult, I don't give up but try to engage in them.

(Walaupun aktiviti penulisan sangat susah, saya tetap tidak putus asa tetapi terus mencuba.)

1 2 3 4 5

27. I concentrate as hard as I can when doing a writing task.

(Saya memberikan tumpuan sepenuhnya apabila menyiapkan tugasan penulisan.)

1 2 3 4 5

28. I put in my best effort in completing writing tasks.

(*Saya mencuba sedaya upaya untuk menyiapkantugasan penulisan.)*

1 2 3 4 5

29. I spend a lot of time and energy on writing good English assignments.

(Saya meluangkan masa dan tenaga yang banyak untuk menyiapkan tugasan penulisan bahasa Inggeris saya)

1 2 3 4 5

30. I go through the following stages in my writing:

(Saya menggunakan tahap berikut untuk penulisan saya)

A) planning.

membuat perancangan

1 2 3 4 5

B) drafting.

mendraf

1 2 3 4 5

C) revising.

menyemak

1 2 3 4 5

D) editing.

mengedit

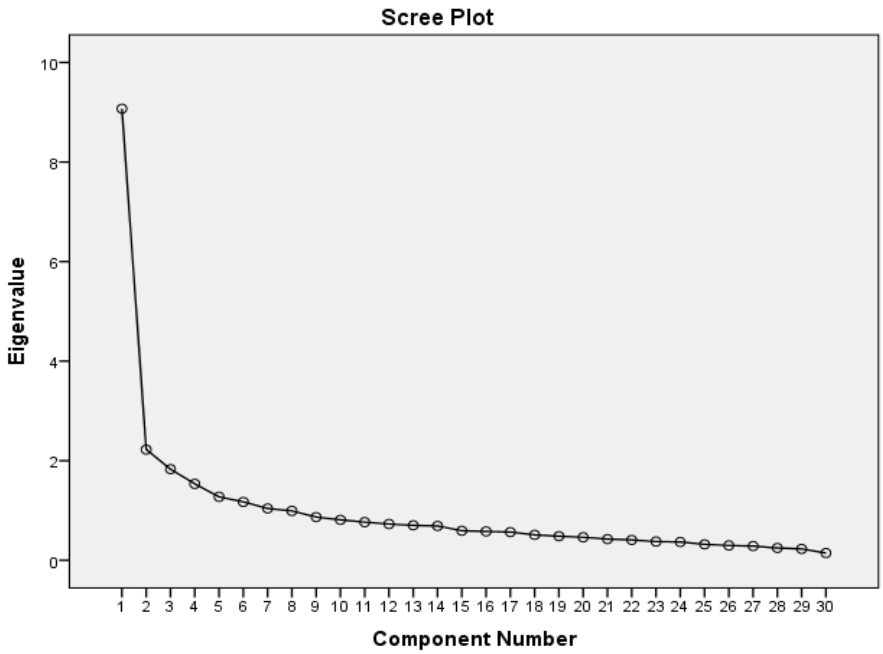
1 2 3 4 5

APPENDIX B. PRINCIPAL COMPONENT ANALYSIS WITH 30-ITEM WRITING STRATEGY SCALE

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.071	30.235	30.235	9.071	30.235	30.235	3.622	12.072	12.072
2	2.224	7.414	37.649	2.224	7.414	37.649	2.780	9.265	21.338
3	1.829	6.098	43.747	1.829	6.098	43.747	2.765	9.217	30.555
4	1.535	5.116	48.863	1.535	5.116	48.863	2.454	8.181	38.735
5	1.275	4.249	53.112	1.275	4.249	53.112	2.257	7.524	46.259
6	1.172	3.906	57.017	1.172	3.906	57.017	2.250	7.499	53.758
7	1.040	3.467	60.485	1.040	3.467	60.485	2.018	6.726	60.485
8	.991	3.304	63.788						
9	.868	2.892	66.680						
10	.813	2.709	69.389						
11	.766	2.554	71.943						
12	.728	2.425	74.368						
13	.701	2.338	76.706						
14	.689	2.298	79.004						
15	.594	1.980	80.984						
16	.580	1.932	82.917						
17	.567	1.889	84.806						
18	.511	1.702	86.508						
19	.484	1.614	88.121						
20	.461	1.538	89.659						
21	.425	1.417	91.077						
22	.409	1.365	92.442						
23	.376	1.252	93.693						
24	.367	1.224	94.917						
25	.321	1.069	95.986						
26	.298	.993	96.978						
27	.284	.948	97.926						
28	.248	.827	98.753						
29	.228	.761	99.514						
30	.146	.486	100.000						

Extraction Method: Principal Component Analysis.

APPENDIX C. SCREE PLOT FOR WRITING STRATEGY SCALE



APPENDIX D. WRITING STRATEGY CATEGORIES

Metacognitive

When I write in English …

1. I organize my ideas prior to writing.
2. I revise my writing to make sure that it includes everything I want to discuss in my writing.
3. I check my spelling.
4. I check my writing to make sure it is grammatically correct.
5. I evaluate and re-evaluate the ideas in my essay.
6. I monitor and evaluate my progress in writing.
7. I revise and edit an essay two or more times before I hand it in to my teacher.
8. I go through the planning, drafting, revising and editing stages in my writing.

Effort regulation

9. I write a lot to develop my writing skills.
10. I often work hard to do well in my writing even if I don't like English writing tasks.
11. Even if the writing activities are difficult, I don't give up but try to engage in them.
12. I concentrate as hard as I can when doing a writing task.
13. I spend a lot of time and energy on writing good English assignments.

Cognitive

14. I use memorized grammatical elements such as singular and plural forms, verb tenses, prefixes and suffixes, etc. in my writing.
15. I put newly memorized vocabulary in my sentences.
16. In order to generate ideas for my writing, I usually engage myself in brainstorming.
17. I use different words that have the same meaning.
18. I use my experiences and knowledge in my writing.
19. I try to use effective linking words to ensure clear and logical relationship between sentences or paragraphs.

Social

20. In order to generate ideas for my writing, I usually discuss the writing topic with a friend or classmate.
21. After revising and editing my essay thoroughly, I ask a friend or my classmate to read and comment on it.
22. I try to identify friends or classmates whom I can ask for help in my writing.
23. When I have trouble writing my essay, I try to do it with my classmates or friends.

Affective

21. I try to write an essay in class with confidence and ease.
23. I try to relax whenever I feel afraid of writing.
24. I encourage myself to write even when I am afraid of making mistakes.

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Saeid Raoofi is currently a senior lecturer of English language education at Farhanginan University Sanandaj, Iran. He received his PhD in Teaching of English as a Second Language (TESL) from the Universiti Putra Malaysia (UPM). He has published a number of articles in international peer-reviewed journals, and has presented several papers in international conferences. His research interests and expertise include SLA, testing and assessment, academic writing, and research methodology.

Anvar Miri is currently teaching at the Department of Educational Sciences at Frhanigian University Sanandaj, Iran. He earned his PhD in Health Psychology from the Islamic Azad University (Science and Research Branch, Tehran). He has published a lot of papers in international journals.

Jalal Gharibi is attached to the Department of Educational Sciences at Farhangian University, Sanandaj, Iran. He holds a PhD in Philosophy from Islamic Azad University (Isfahan Branch, Isfahan). He has published extensively on issues concerning primary and secondary education.

Bahram Malaki teaches undergraduate students in elementary teacher education at the Farhanginan University, Sanadaj, Iran. He holds a PhD in Psychology from Payamnoor University, Tehran, Iran. He has had more than 20 years of teaching experience. He has authored or co-authored a number of publications.