



Transitional Problems in Iranian EFL Learners' Writing Process: A Think-Aloud Protocol Study

Hajar Shahhoseini¹, Reza Rezvani^{2*}, Saeed Yazdani³, Mohammad Behrouzi⁴, Akbar Molaei⁵

¹Ph.D. Candidate, Department of Foreign Languages, Bushehr Branch, Islamic Azad University, Bushehr, Iran

^{2*}Associate Professor, Department of English Languages, Department of Foreign Languages, Bushehr Branch, Islamic Azad University, Bushehr, Iran

³Assistant Professor, Department of Foreign Languages, Bushehr Branch, Islamic Azad University, Bushehr, Iran

⁴Assistant Professor, Department of Educational Sciences, Bushehr Branch, Islamic Azad University, Bushehr, Iran

⁵Assistant Professor, Department of English Language, Department of Foreign Languages, Bushehr Branch, Islamic Azad University, Bushehr, Iran

Received: February 06, 2023

Accepted: March 26, 2023

Abstract

The current study aimed to examine the process of choosing linking words and solving transitional problems in written tasks. To this end, 30 EFL learners (15 males and 15 females) from one language institute in Bushehr were selected for this study. They were asked to write an argumentative and a narrative task. To collect the data, Articulated Thoughts in a Simulated Situation (ATSS), as a think-aloud protocol, was employed. The participants' verbalizations were first recorded, then transcribed and analyzed to examine the cognitive process they engaged in during the completion of their tasks. The results of qualitative data analysis revealed that EFL learners often tended to organize their ideas and have a general plan for the written tasks. More specifically, they differed in terms of attention to different stages of writing, hesitations to monitor the information and various strategies for choosing linking words and problem-solving. This study discusses the results and implications for EFL learners and teachers.

Keywords: Linking words, Cohesion, Transition problems, Think aloud, EFL learners

INTRODUCTION

Writing is one of the most essential language skills for English as a Foreign Language (EFL) and English as a second language (ESL) learners in education (Al Khazraji, 2019). Chao (2007) explained that writing proficiency is an effective instrument that helps students to transfer their written concepts and ideas. Moreover, the writing procedure includes a comprehensive skill that enables learners to synchronize their

previous knowledge such as vocabulary, grammar, and structure with new knowledge (Azizi et al., 2017). Some researchers (e.g. Jennifer & Ponya, 2017; Mastan et al., 2017) argued that writing skill includes cognitive, cultural, motivational, and social factors.

In recent years, researchers have been trying to figure out how EFL learners write and what problems they face in the writing process (Bulqiyah et al., 2021; Chen, 2007; Dunn, 2021). Some commonly difficult aspects that language learners often encounter in the writing process

*Corresponding Author's Email:
rezvanireza@gmail.com

include vocabulary, grammar, structure, and mechanics (Ginting, 2019; Sabarun, 2019; Toba et al., 2019). In addition, writing difficulties may be due to poor learning processes and inappropriate strategies that learners use while writing (Bakry & Alsamadani, 2015).

Although writing is a complex and challenging process, learners need to be introduced to the steps of this key skill. In the writing process, they must be able to develop critical thinking skills to help them organize and generate their opinions in a meaningful context. To have comprehensible and coherent writing, learners must utilize important factors such as language skills, cohesive tools, and writing strategies to write appropriately (Aripin & Rahmat, 2019).

Among the many factors that can be considered effective in the production of successful writing, the role of cohesive devices is very significant. They are considered important words or phrases because they connect different parts of discourse to produce coherent text in the writing process (Halliday & Hassan, 1969). According to Richards and Schmidt (2002), when sentences are grammatically correct or lexically appropriate, the components of the text are coherent. Moreover, connective words are essential elements that help the writers to encode a message and transfer an idea to the readers in a written text (Sloan, 1983). Sentence coherence, through the proper use of connecting words, is one of the seven main criteria commonly used to evaluate students' writing proficiency (Neumann, 2012).

Brown (2004) states that only a small number of students be able to express their intended purpose clearly through cohesive devices and well-structured sentences. It seems that learners often do not have a clear understanding of coherent devices and are not familiar with strategies that can help them to develop their writing ability (Aguieb & Bouaziz, 2017). Thus, the use or choice of appropriate linking words is challenging for most EFL learners in the writing process. Their written text is often like a list of ideas without any appropriate connection between phrases and sentences (Suwandi, 2016). Similarly, Granger and Tyson (1996) reported that EFL students are not able to choose appropriate linking words related to

semantic and syntactic aspects in the writing process. It can be stated that novice learners often have problems with using suitable vocabulary while advanced learners face difficulty in producing a coherent organization in sentences (Boland et al., 1990).

When learners face problems in producing coherent sentences, they try to use guidelines to solve transitional problems. These guidelines may consist of strategies and procedures that they use to produce coherent and well-organized written text (Aripin & Rahmat, 2019). However, EFL learners are rarely allowed to use strategy in their written tasks. It is assumed that choosing appropriate linking words in sentences through the use of suitable strategies is parallel to the good quality of the writing. Moreover, there is needed to get information about the procedures that EFL learners apply to solve transitional problems, understand the text, and choose appropriate linking words. On the other hand, there is no special attention to thought procedures or cognitive processes that learners used to choose linking words and solve transitional problems in the writing process.

This hypothesis motivated the researchers in the present study to cognitively examine the processes of choosing transition words used by EFL learners in the written tasks. Specifically, this study attempted to answer the following research question:

RQ. *How do Iranian intermediate EFL learners choose linking words and solve transition problems in their writing?*

LITERATURE REVIEW

EFL Writing process

According to Fadda (2012), academic writing is a mental and cognitive process since the formation of an idea and the creation of content originated from the mind of the writers. In terms of the cognitive approach, the focus is on the writers' mental activities and how they plan, organize, draft, and modify all their stages (Bakry & Alsamadani, 2015). Besides, Ginting (2019) noted that the writing process involves several complex steps, the most important of which are goal expression, idea combination, problem-solving, and critical thinking processes.

Thus, writing skills are a challenging process, but the complexity of the process in the second language is much more dramatic than the process of writing in the native language (Al-Sawalha & Chow, 2012).

In such a complex process, suitable strategies are considered to be a significant factor in writing production. Various strategies used by students in the writing process had a positive impact on their written performance. EFL learners who used writing strategies performed much better than those who did not (Maharani et al., 2018). Common strategies usually used by EFL learners included cognitive, metacognitive, affective, compensation, and social writing strategies (O'Malley & Chamot, 1990; Oxford, 2003; Winarto, 2015). Among these strategies, metacognitive writing strategies were mostly used by language learners (Aripin & Rahmat, 2019).

Another factor that plays a significant role in the process of successful writing is focused on the coherence of sentences. As a result, a writer must carefully select and arrange words and sentences to achieve cohesion and coherence in the writing process through various semantic, syntactic, and textual connections (Kuo, 1995). It can be suggested that the coherence of the elements is necessary to create a structured and understandable written text (Hinkel, 2001). Kern (2000) argues that in the process of writing, writers must be able to organize and control their thoughts, feelings, and ideas in a coherent way that is not far from the readers' expectations. Transitive words are one of the prominent cohesive tools that should be considered in academic writing (Mahendra & Dewi, 2017).

Definition of Linking Words

Halliday and Hassan (1976), as the first pioneers to study transitive words, defined conjunctions as the important elements that produce the relationship between the various components of a text. They also added that each of the linking words contains specific meanings that provide a background in the context for the presence of other components of the text. According to Oshima and Hogue (2006), the correct use of conjunctions helps the writer to organize their ideas logically.

Linking words can be supposed as building blocks that make it easy for the reader to follow the message. Moreover, they create a coherent discourse that is considered to be the main essence of academic writing (Karaata et al., 2012). Similarly, Asassfeh (2014) argued that for all language learners, especially foreign language learners (EFL), linking words have an essential role in understanding a text. Halliday and Hasan (1976) pointed out that cohesion is achieved "when the interpretation of some elements in discourse is dependent on that of another, the one presupposes the other" (p. 4).

Classification of linking words

Quirk et al. (1985) stated that linking words can appear in more than one form of coordination such as coordinating conjunctions, subordinator conjunctions, and prepositional connectives. The phrases connected by a coordinator usually fall into a functional category (e.g. and, no, but, or, yet, therefore), while the statements made by a subordinator typically form subordinate conjunctions. (i. e. that, though, who, when, whenever, where, wherever, whether, etc.). Prepositional connectors join sentences, paragraphs, or other linguistic sections. Biber et al. (1999), expanded the classification of connectors into six categories, including counting and addition (e.g. first, second, similarly, in addition), conclusion (e.g. overall, result, total), substitute (e.g. for example, in other words), conclusion (e.g. hence, therefore, consequently), contradiction (e.g. however, on the other hand, yet, though), transfer (e.g. by the way, in the meantime).

Halliday and Hassan (1976) classified transitional words into four subcategories: additional, oppositional, causal, and sequential. These four categories are described as follows. First, the additional category pointed to additional devices (e.g. for example, in addition, moreover) that are used to connect units with similar lexical meaning while they emphasize key points. Second, the oppositional conjunctions (e.g. however, instead, yet) show that two or more sentences are contradictory or in contrast. Third, the casual devices (e. g. therefore, as a result, so) focus on the results and outcomes based on the previous information in the text.

Finally, sequential devices (e.g. first, next, after) are used to indicate the order, priority, sequence, and precedence of different units of discourse.

Use of English Linking Words by EFL Learners

Some studies have indicated that there is a positive relationship between the number of cohesive devices and good-quality writing (Chanyoo, 2018; Liao, 2020; McNamara, 2016). Surveys such as those conducted by Kalajahi, and Abdullah (2015) have shown that Malaysian students who used more discourse markers had more coherent writing patterns than those who had unrelated sentences. Similarly, Sanchez (2019) found that when Spanish language learners used diverse linking words in their argumentative essays and emphasize sentence coherence, their writing quality was much higher.

However, the proper use of transition words is often a challenge for EFL learners. Problems with linking word usage and employment are mentioned by several empirical studies in the writing of EFL learners. For example, Lai (2008) reported that inexperienced Taiwanese undergraduate English learners wrote long sentences using various types of linking words. But, the coherent writing of skilled learners indicated that they used fewer conjunctions in their writing. In another major study, Sadighi and Heydari (2012) found that the most common types of transitional problems in the narrative composition of Iranian undergraduate EFL students of Shiraz Azad University were the misuse of references, and lexical and conjunctive devices, respectively. According to Al Mughrabi (2017), additive, contradiction, and chronology transitional words were the most frequent errors in the writing of Arab EFL learners.

Thus, EFL Learners often face difficulty in producing coherent sentences and appropriate use of linking words. They might write long or short sentences without being able to express their meaning clearly. Sometimes, while writing, they forgot something and could not follow the correct way to relate the concepts of the sentence. There was not enough opportunity to go

back to previous sentences to review or correct paragraphs. Thus, this study focuses on learners' thought processes in completing a task.

METHODOLOGY

This paper used a qualitative approach to describe the findings of the study. The current study aimed to investigate how Iranian intermediate EFL learners choose linking words and solve transition problems in their writing. The Paradigm of Articulated Thoughts in Simulated Situations (ATSS) a think-aloud protocol, was used to encourage the participants to express their thoughts verbally while performing their written tasks.

Participants

The sample in the current study was thirty EFL learners (15 males and 15 females) selected purposefully from among learners of one language institute in Bushehr, Iran. All of them had passed the placement test before starting the research to be at the same level of proficiency. They were intermediate EFL learners with at least 3 years of English experience at English institutes. Their age ranged between 14 and 17.

Instruments

In the current study, the researchers used ATSS to collect qualitative data. The think-aloud approach was a useful instrument to understand cognitive processes. Since think-aloud protocol usually evaluates cognition at the same time as they occur, they may be more suitable for using the actual content of thought than other methods (Davison et.al., 1997). Moreover, the advantage of using TA is that it allows data related to thought processes to be recorded in real-time and reduces the risk of memory loss and bias in the information collected (Folkman & Moskowitz, 2004; Smith et.al., 1999; Stone et al., 1998). In the think-aloud approach, such as ATSS, the learners were asked to express all their thoughts orally while performing given tasks. Thus, all verbalization during the selection of linking words was recorded by a tape recording for subsequent analysis. The ATSS paradigm is an approach to assessing the cognitive and emotional responses of experimenters in controlled situations during completing a task (Davison et

al., 1983; Zinov & Davison, 2010). In this study, the non-metacognitive verbalization model of Erickson and Simon (1993) was used to show the cognitive process of how learners completed their tasks without the need to ask for an explanation or justification of their thought process. Kopriva (2004) argued that this method provides valuable insights into the students' understanding of topics and their level of proficiency.

In this study, of two types of think-aloud protocol (retrospective and concurrent), concurrent think-aloud was employed to get information about participants' verbalizations while performing a written task, although there were some reports of retrospective think-aloud after doing the task of a video recording. The concurrent think-aloud protocol is a mirror of the cognitive process of individuals that are not separated from their natural state. This feature makes it a great research method to understand human cognition (Ericsson and Simon, 1993). The researchers, in the current study, used ATSS to obtain reliable information about the participants thinking about choosing linking words in the writing tasks. Thus, two types of writing tasks, an argumentative task, and a narrative task were given to the EFL learners. The argumentative task was selected from a writing textbook (Jordan, 1990) in which participants were asked to express their idea about whether "The biggest problem that the world will face in the 21st century will be related to sources of energy. Do you agree or disagree? In the narrative task, learners were asked to write about their own experiences less formally.

For the content validity of the linking words tasks, prepared topics were given to two language testing experts for critical evaluation before implementation. They verified the content validity of the tasks. To ensure the consistency and reliability of the idea units, the reliability of the data was calculated. Cronbach's alpha

coefficient was 0.88, which showed a significant agreement for coding.

Data Collection

To understand the procedures that learners used in the writing tasks and choosing linking words, learners' verbalization was recorded during the two writing tasks sessions (The argumentative task in one session and the narrative task in the second session). Each writing session was held after normal classes. Before the first writing session, the learners were instructed to verbalize everything, either in Persian or in English while they were writing. Then, they were asked to write on a suggested topic in a normal way. All the EFL learners needed to write two writing tasks while talking aloud. In both tasks, the learners were asked to write about 150 words in 25 minutes with a focus on choosing the appropriate linking words. During the writing sessions, all the learners' verbalizations were recorded using a tape recorder. Moreover, the researchers chose a place to sit that would both monitor the whole class and not disturb the students.

Besides, whenever the learners stopped thinking aloud, they would be reminded to think aloud and do their tasks in a loud voice. Also, researchers took observational notes of the EFL learners' utterances in Persian and English, gestures, hesitations, repetitions, and length of pauses while they were writing.

Data analysis

The main purpose of this study was to examine the learner's thinking process on how to choose the appropriate linking words. To attain this aim, procedures techniques like ATSS were used in this study. In this study, ATSS reports contain some conventions to transmit and interpret the findings accurately. The following table (Table 1) enlists the transcription conventions employed in this study.

Table 1
Transcription conventions

Convention	Definition
Word/sentence	Deletion of a word or sentence
CAPITAL	Emphasis or attention
Underlined word	Alternative written text
(Number)	Number of seconds of the pause during the writing task
	3-second pause
[]	Paralinguistic behavior.
<i>Boldface italics sentences</i>	Translated utterances from Persian

After all the ATSS were transcribed, they were coded through an emphasis on dividing the statements into idea units, identifying the sequences of writing, categorizing the process of writing, and choosing the type of linking words according to learners' verbal reports. In this study, to divide the verbal statements into units of ideas, the criteria of Chafe (1985) were employed. Thus, the idea units were separated into intonational and hesitational patterns. In the first step of coding, to determine the sequences of selecting linking words throughout the writing tasks, the idea units were analyzed carefully to focus on the participants' mental operations while they were doing a writing task. During the coding process, the participants' repetition of the same words was supposed to be one conceptual unit of an idea. Moreover, to have a clear explanation and understanding of the data, their verbalizations which were only related to the writing task were considered in the coding. However, the verbalization of irrelevant words was very rare in the process of writing.

The second step of coding consisted of identifying all sequences of idea units in the writing process, during the thinking aloud protocol, especially selecting appropriate linking words. At this stage, data coding focused on assigning codes to different parts of the task that were related to strategies, problems, and solutions to choose connecting words. Also, there was a focus on the learner's strengths and weaknesses in the writing procedure.

In the third step of coding, the idea units were categorized based on the purpose of the study (Davison et al. 1983). To identify units of ideas and categorize them, the researchers must examine the initial data and review the transcribed data. Thus, all learners' verbalization during the writing processes was examined

carefully, then categorized to identify their thinking processes. Examples of learners' verbalizations, pauses, and expressions were discussed in these categories.

RESULTS

The results of this study showed the different stages of choosing linking words in the process of writing among EFL learners. When asked to write a narrative or argumentative task, it was noted that very often the participants generally first thought about how they could organize ideas and have a general plan for writing in their mind. Participants' verbalization generally indicated that they brainstormed the ideas they wanted to put into their tasks. As soon as they generated some intended ideas, the first challenge they often faced was, "now I should think about where to put them" (Ali's thought/ Narrative Task).

It seemed that they often had many ideas but a repetition of some words and long pauses showed that they faced challenges and tried to solve them. Sometimes, they could not organize their ideas or arrange their thought for writing. They said "how can structure my idea? How can I arrange them? how can begin it". They frequently repeated the words and phrases such as "structure", "coherence", "Uh", "the first thing", "the second thing", "at the end.". A strategy some of the participants used was to ask themselves questions and then try to answer them, all concerned with how to start, what to put first, and what to do before. Sometimes they think or write down what they have in mind. For example, Hosein asked himself multiple questions (.....mmm. How can I begin this sentence? How can I write my idea about the "biggest problem of the world"? How can I formulate my statements? Can I transfer my mean?) and answered them with long pauses

and hesitantly (Uh . I should focus on content, ... also formulation,. transfer of meaning,) and as if he is writing in his mind, order his writing and delete them and start it again. In contrast, some participants had no special plan before or during their writing. On the other hand, they didn't try to have a pre-plan for their writing. They employed a variety of strategies and had fewer unresolved problems. They expressed that " it doesn't need to plan about a topic....Umm... that OK... it good sentence... now I continue it I just write everything I can remember".

A remarkable point in most verbal reports was that participants tried to recognize the keywords of the writing task. After identifying the keywords semantically, they thought about how can structure and arrange them into simple sentences. Then, they faced challenges because most of them could not decide on writing. As the following example shows, while one of the participants identified the appropriate structures to write a paragraph, she paused silently because she was not sure about his decision on an answer to the topic of writing. ("what the biggest problems in the world were"). Hence, they used the word "think", which indicated their hesitance. For example, " I think ... (5-second pause) the biggest problem in the world is lack of energy".... (Mahsa, Argumentive Task). The participant's written sentences indicated that the pauses could not be due to a lack of lexical or grammatical knowledge, as the sentences did not have a serious grammatical or semantic problem, but he was not sure what he wanted to say or how to connect the sentences.

Some participants often completed their writing tasks with a filled pause (um), but their pauses didn't indicate a lack of knowledge in choosing the linking words since participants wrote coherent sentences focusing on organizational units that showed interrelationships between different sections of text such as introduction, paragraph, example, and conclusion. For example: " Um Um..um... *the most fundamental problem that can be seen in many areas is water scarcity* y ... **But** ... (7- second pause)(Mahsa, ArgumentiveTask). These

filled pauses suggested that they tried to organize their ideas logically and clearly on their mind or a piece of paper. Sometimes, they tended to change linking words to find the appropriate sequence for their idea.

Sometimes participants tried to start their writing without any planning. Thus, they immediately decided on the organization of their written task. In this case, they did not change their sentences or use alternative linking words. They write everything that came to mind without being sensitive about what they write, whether it was true or false. When writing, they never go back to the previous sentence and they did not doubt whether it is meaningful or not. For example, " ... Uh. (3-second pause) now I want to write about "largest problem of the world ' and... that is certainly political problems....or I can say political problems disturb everyone's lives ... overall this is a huge problem".(Mina, ArgumentiveTask). In this example, as shown above, the verbalization of the participants used local planning and just thought about the next sentences. Also, they immediately decided on the content of their writing and used conjunctions such as "and", "or", " overall' to have interconnected sentences with a minimum of pause.

When participants faced challenges in choosing linking words or arranging their sentences, their verbalization indicated more long pauses. They repeated the special conjunctions to improve the content of their tasks which could be accompanied by long pauses. " *Although I have different trips to many cities in Iran, visit many beautiful places, 'but I can't say which is best* . 'but ... I can't say which is best ... [stopped writing and thought for a moment with repetition of sentence] (10-second pauses), *ultimately... traveling to Teheran is best...* (Maryam, Narrative Task). Participants' verbal expressions indicated that the length of the pauses in some sentences was increased to 10 seconds and then the re-reading strategy was widely used when they decided to contact new sentences with previous sentences, as shown in the example above. To have a coherent task and produce a connection between sentences, they tried to recall appropriate linking words that lead to long pauses.

Participants sometimes tended to maintain greater coherence of sentences, which led to improved sentences. They attempted to check and manipulate sentences frequently while engaging in a writing task. When they got stuck, they tried to keep thinking without going back and reviewing the previous sentences. This was accompanied by pauses, repetition, questions, and hesitations about their idea. The following example illustrates the manipulation and evaluation process, which emphasized metacognitive strategies as a unit of ideas. For example, *Such as problems . ~~such as~~...* (10-second pause ...) [*delete such as*] (*self-correction*) ... (Ahmad, Argumentative Task). The participant decided to use an illustrative linking word ("such as"), but after a 10-second pause, he changed it to a contrastive linking word ("although") that led to different content from the one. In this case, the participant selected the appropriate linking word by manipulating it.

Similarly, there was also verbalization of some participants that indicated the recognition of problems (inappropriate linking words choice, phrases errors) with a focus on revision through self-correction that lead to improvement of the text. For example, *"Although I have different trips to many cities in Iran, visit many beautiful places, 'but I can't say which is best ... (7-second pauses), I can't say which is best here? no ...no ... [recognition of problems] I should use better words "I must delete " BUT".* (Maryam, Narrative Task). This example indicated that learners evaluate their writing process which points to metacognitive strategies. In this task, metacognitive strategies such as self-correction were used to correct sentences. The verbalization indicated that as the problem was identified, she tried to elaborate the structure of their sentences, analyze the problems, and find the suitable solution. Thus, after a 7-second pause, she repeated the linking words ("but") several times because she found that the association of linking words "but" with "although" was unexpected in English. Thus, she decided to delete the linking word "but" ("*No this linking word is not right here ... I must delete " BUT*").

Participants' "self-verbalization" indicated that, apart from the focus on planning and organizing

ideas, sometimes they cannot remember some special linking words or face problems in choosing linking words in the writing tasks. During this time, they were more tended to use their native tongue, which was accompanied by short pauses to complete some sentences. As the following examples suggested, in their "self-talk", they repeated special linking words frequently or try to recall Persian equivalence to develop more ideas in English writing. For instance, *"Uh (3-second pause) ...last year My family and I had a good journey to Shiraz whereas... while ...while ... Last year's trip was better than this year's trip...* (Hadi, Narrative Task). As highlighted parts revealed most think-aloud utterances were in Persian during the writing tasks. Participants' verbalization showed that, when they put together their ideas using their native language or wrote keywords in their native language, then changed them to a second language, their sentences were more accurate and precise.

More analysis of verbal reports revealed that the participants had good knowledge of the writing process stages as well as the usage of transitional words to construct coherent sentences. In particular, their verbal reports indicated that in addition to knowing the writing process (implicit knowledge), the participants were able to arrange their sentences in a logical order using appropriate linking words. Therefore, explicit (verbalization) and implicit (coherence writing) knowledge were observed in the students' written tasks. Thus, "knowledge of linking words" was recognized as the "idea unites" that had a direct relationship with sentence coherence in their written tasks. For example, some participants verbalized *"mmm... (5-second pause) it's a yes/no question.... So, I m agree that the biggest problem that the world will face in the 21st century will be related to sources of energy... (5-second pause) ... while... on the other hand ...there are other important problems..."* (Amin, Argmatative Task). This verbalization indicated that participants focused on the topic and tried to begin their writing with the correct answer to the question. Then, they use linking words to expand their sentences and express their attitudes.

DISCUSSION

The use of linking words in the written discourse is very significant since they play an important role in creating logical cohesion. EFL learners are required to write cohesive sentences and understandable text in academic writing. But most learners are not able to select appropriate cohesive devices and create a well-constructed writing. They often faced problems in connecting their ideas in sentences.

The results of this study were based on the analysis of think-aloud data to focus on the learners' thought procedures in the appropriate choice of linking words. Moreover, strategies that EFL learners used when they planned, generated, and organized their idea in a task were examined. An important strategy that participants frequently used during completing their tasks was considered a metacognitive strategy. It included three main components of planning, monitoring, and evaluation (Aripin & Rahmat, 2019). As the results of this study showed, most participants initially tried to think about the topic and had a well-planned in mind to use as a guide for accurate writing. They might draw diagrams that were consists of relevant keywords or purposes during the task. Moreover, the mind-mapping strategy (Ramadhanti & Mana, 2018) helped them to organize their ideas before starting the work, which led to the development of their confidence and competence (Thongchalerm & Jarunthawatchai, 2020).

Also, the results indicated that EFL learners use different strategies to choose appropriate linking words or problem-solving. While some participants had pre-planned or exact plans for their tasks, others began writing without a prior plan. They wrote what came to their minds regardless of the correct grammar and content. They just noticed the next sentences that might lead to cluttered text (Arifin, 2020). The findings of this study were in the line with some studies such as Bosher (1998) who reported that the results of participants' verbalization revealed that they differed in terms of the level of metacognitive awareness, writing procedure, recalling materials, and problem-solving strategies. Raoofi et al. (2017) argued that skilled writers emphasized planning, monitoring, and reviewing their ideas before transmitting them,

while inexperienced writers only conveyed their ideas immediately without planning or organizing the idea.

Analysis of verbalization showed that the EFL learners differed in generalizing and organizing their tasks. Some learners focused on generalizing their ideas and superficial features of the task, whereas others noticed the organizing content to develop their idea and produce a coherent and meaningful writing sample. In this process, they might delete, add, or repeat specific linking words to make well-structured sentences. Al-Khatnai (2016) reported that EFL students paid attention to generating or organizing their ideas in the complex process of paragraph writing to convey their ideas accurately.

Moreover, participants' verbalization along with pauses revealed that they reread their tasks to evaluate coherence, identify problems and select appropriate linking words. They often apply self-correction strategies to make changes or solve transitional problems in their tasks. Goctu (2017) mentioned that in the evaluating phase, learners focused on the task revision to make changes as needed. They also used self-editing strategies to perform tasks. This strategy had a positive impact on the development of writing performance (Varier et al., 2020).

Participants' verbal expressions indicated that they took long pauses when trying to think about a new subject, process information, and encounter problems while performing their tasks. It can be argued that difficult tasks create a "high cognitive load" that interferes with verbal expressions (Ericsson & Simon, 1980), and are very effective in producing long pauses while doing tasks. Sometimes, short pauses or hesitations in completing a task indicated that participants were not sure about the words and phrases. They might repeat the topic but easily reach a correct decision that shows their awareness of the process of written performance. These short pauses helped them to easily restructure and arrange the text to show connected sentences in narrative and argumentative tasks. If EFL learners were familiar with the topic there would be minimal information load. When a topic was new, it produced a higher information load that leads to slower action (Rabbitt, 1968;

Robinson, 2001). Thus, a high information load affected the writing process, resulting in lower coherence and longer writing time (Penningroth & Rosenberg, 2008).

The learners' verbalization also showed that EFL learners used both L1 and L2 in the writing. During the writing process, low-proficiency learners tended to think in Persian, create meaning in the first language, then translate it to English. During this process, most of these learners tended to use Persian in choosing a topic and arranging their ideas in the writing task. The findings were in line with the result of previous studies (e.g., Alhaisoni, 2012) that reported using the first language could be beneficial for EFL learners with a low - level of language proficiency. In contrast, higher proficiency learners rarely used the first language because they had more language knowledge and they were more proficient in using a second language.

CONCLUSION

The finding of the verbal data revealed that EFL learners used different strategies to choose linking words and solve transition problems in the writing process. Most of them usually thought about the topic and organized their ideas effectively. Successful writers, in the first stage, often focused on a plan for doing their tasks (Tabari, 2019). Some learners did not use special plans properly; they often changed their plans when recalling new ideas or facing difficulties. These learners just emphasized editing their sentences. Thus, skilled and unskilled writers were distinguished through writing strategies (Khongput, 2020).

Participants' verbalization indicated that during the tasks they frequently paused to repeat words or sentences to change, improve, produce, and revise ideas. Thus, they tried to select and use appropriate strategies (Macaro, 2006) in choosing linking words. Self-correction strategy was a common metacognitive strategy that EFL learners used in problem-solving. Their monolog revealed that they tried to recognize the errors in the content and structure to produce coherent tasks. Monitoring, reviewing, and revising tasks helped them take more responsibility for their writing and solving transitional problems.

The results of the present study can help educators to be aware of the different strategies that EFL learners used in their tasks. The empirical findings in this study provided detailed information on the learners' writing processes, the way of organization of their ideas, and the procedures for solving problems. Thus, instructors can design syllabus plans to introduce these strategies to the students and provide the opportunity to use them in the writing class. This also helps students to figure out their idea and be able to make decisions about the organization and content of their sentences, which increases their self-confidence and makes them more active in writing.

The current investigation was limited by a small number of participants which could not show a general pattern of strategies in the writing class. Further investigation with larger participants is strongly recommended. Moreover, this study focused on choosing linking words and solving transition problems in the writing process, further research needs to examine closely other aspects such as propositions and adverbs in the written tasks.

References

- Aguiab, F., & Bouaziz, S. (2017). Investigating EFL students' problems in using coherent and cohesive devices in academic writing from a discourse analysis perspective. *Education Journal (LICEJ)*, 1(4), 211-221.
- Alhaisoni, E. (2012). A think-aloud protocols investigation of Saudi English major students writing revision strategies in L1 (Arabic) and L2 (English). *English Language Teaching*, 5(9), 144-154.
- Al Khazraji, A. (2019). Analysis of discourse markers in essay writing in ESL classroom. *International Journal of Instruction*, 12(2), 559-572. <https://doi.org/10.29333/iji.2019.12235a>
- Alkhatnai, M. (2016). Use of think-aloud protocols: Investigating the writing Habits of Saudi EFL/ESL learners. *International Journal of Linguistics*, 8(4), 1-5.
- Alkhatnai, M. (2016). Use of think-aloud protocols: Investigating the writing Habits

- of Saudi EFL/ESL learners. *International Journal of Linguistics*, 8(4), 1-5.
- Alkhatnai, M. (2016). Use of think-aloud protocols: Investigating the writing Habits of Saudi EFL/ESL learners. *International Journal of Linguistics*, 8(4), 1-5.
- Alkhatnai, M. (2016). Use of think-aloud protocols: Investigating the writing Habits of Saudi EFL/ESL learners. *International Journal of Linguistics*, 8(4), 1-5.
- Al Mughrabi, F. M. (2017). Arab learners of English and the use of discourse markers in writing. *Journal of Language Teaching and Research*, 8(4), 715-721. <http://dx.doi.org/10.17507/jltr.0804.10>
- Al-Sawalha, A. M. S., & Chow, T. V. V. (2012). The effects of writing apprehension in English on the writing process of Jordanian EFL students at Yarmouk University. *International Interdisciplinary Journal of Education*, 1(1), 6-14.
- Arifin, S., (2020). The Exploration of Skilled and Less-Skilled EFL Graduate Students' on L1 and L2 Writing Strategies. *Jurnal Pendidikan Indonesia*, 9(3), 51-67. <https://doi.org/10.23887/jpi-undiksha.v9i3.28496>
- Aripin, N., & Rahmat, N. H. (2019). Exploring Metacognitive Writing Strategies in the Writing Process using Think aloud Protocol: A Study across Gender. *American Journal of Social Sciences and Humanities*, 4(1), 178-187. <https://doi.org/10.20448/801.41.178.187>
- Asassfeh, S. (2014). Corrective Feedback (CF) and English-Major EFL Learners' Ability in Grammatical Error Detection and Correction. *Language Teaching Research*, 6(8), 85-94. <https://doi.org/10.5539/elt.v6n8p85>
- Azizi, M., A. Nemati and N. Estahbanati, 2017. Meta-cognitive awareness of writing strategy uses among Iranian EFL learners and its impact on their writing performance. *International Journal of English Language & Translation Studies*, 5(1), 42-51.
- Bakry, M. S., & Alsamadani, H. A. (2015). Improving the persuasive essay writing of students of Arabic as a Foreign Language (AFL): Effects of self-regulated strategy development. *Procedia - Social and Behavioral Sciences*, 182, 89-97. <https://doi.org/10.1016/j.sbspro.2015.04.742>
- Biber, D., S. Johansson, G. Leech, S. Conrad & E. Finegan. (1999). *Longman Grammar of Spoken and Written English*. Longman.
- Boland, R.J. (193). "The information of information systems", in Boland, R.J. and Hirschheim, R.A., Eds. Critical Issues in Information Systems Research. Oxford University Press.
- Bosher, S. (1998). The composing processes of three southeast Asian writers at the post-secondary level: An exploratory study. *Journal of second language writing*, 7 (2), 205-241.
- Brown, H. D. (2004). *Language assessment: Principles and classroom practices*. New York, US: Pearson Longman.
- Bulqiyah, S. Mahbub, M.A. & Nugraheni, D.A. (2021). Investigating writing difficulties in essay writing: Tertiary students' perspectives. *English Language Teaching Educational Journal*, 4(1), 61-73. <https://doi.org/10.12928/eltej.v4i1.2371>
- Chao, J. (2007). Student Project Collaboration Using Wikis. Proceedings of the 20th Conference on Software Engineering Education and Training (CSEE&T). Dublin, Ireland, pp. 255-261. IEEE Press
- Chanyoo, N. (2018). Cohesive Devices and Academic Writing Quality of Thai Undergraduate Students. *Journal of Language Teaching and Research*. 9(5). 9-19. <https://doi.org/10.17507/jltr.0905.13>
- Davison, G. C., Vogel, R. S., & Coffman, S. G. (1997). Think-aloud approaches to cognitive assessment and the articulated thoughts in simulated situations paradigm. *Journal of consulting and clinical psychology*, 65(6), 950-958.
- Davison, G. C., Robins, C., & Johnson, M. K. (1983). Articulated thoughts during simulated situations: A paradigm for studying cognition in emotion and behavior. *Cognitive Therapy and Research*, 7(1), 17-39.

- Ericsson, K. A., & Simon, H. A. (Eds.). (1993). *Protocol analysis: Verbal reports as data*. Cambridge University Press.
- Fadda, H. (2012). Difficulties in Academic Writing: From the Perspective of King Saud University Postgraduate Students. *English Language Teaching*, 5(3), 31-37 <http://dx.doi.org/10.5539/elt.v5n3p123>
- Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promises. *Annual Review of Psychology*, 55(4), 745–774.
- Ginting, S. A. (2019). Lexical formation error in the descriptive writing of Indonesian tertiary EFL learners. *International Journal of Linguistics, Literature, and Translation*, 2(1), 5-16 <https://doi.org/10.32996/ijllt.2019.2.1.11>
- Goctu, R. (2017). Metacognitive strategies in academic writing. *Journal of Education in Black Sea Region*, 2(2), 82-96.
- Granger, S & Tyson, S. (1996) Connector Usage in the English Essay Writing of Native and Non-Native EFL Speakers of English. *World Englishes*, 15(1), 17 – 27. <https://doi.org/10.1111/j.1467-971X.1996.tb00089.x>
- Halliday, M. A. K., Hasan, R. (1976). *Cohesion in English*. Longman.
- Hinkel, E. (2001). *Building awareness and practical skills for cross-cultural communication in ESL/EFL*. In M. Celce-Murcia (Ed.), *Teaching English as a Second or Foreign Language* (3rd ed., pp. 443-458). Random House.
- Jennifer, J.M. and R.J. Ponniah. (2017). Investigating the levels, types, and causes of second language writing anxiety among Indian freshmen. *The Journal of Asia TEFL*, 14(3), 557-563. <https://doi.org/10.18823/asiatefl.2017.14.3.13.557>.
- Jordan, R.R. (1990). *Academic writing course*. Wiley Blackwell.
- Kern, R. (2000). *Literacy and language teaching*. Oxford University Press.
- Kalajahi, A.R., & Abdullah, A. N. (2015) Discourse connectors and cohesion in writing. *Mediterranean Journal of Social Sciences*, 6(3), 21-32. <https://doi.org/10.5901/mjss.v6n3s2p441>
- Karaata, C., Çepik, Ş., & Çetin, Y. (2012). Enhancing the use of discourse markers in academic writing: The combination of incidental acquisition and explicit instruction. *Electronic Journal of Social Sciences*, 11(40), 35-42.
- Khongput, S. (2020). Metastrategies Used by EFL Students in Learning English Writing: LEARN Journal: *Language Education and Acquisition Research Network Journal*, 13(2), 93–104.
- Khongput, S. (2020). Metastrategies Used by EFL Students in Learning English Writing: LEARN Journal: *Language Education and Acquisition Research Network Journal*, 13(2), 93–104.
- Khongput, S. (2020). Meta strategies used by EFL students in learning English writing: *LEARN Journal: Language Education and Acquisition Research Network Journal*, 13(2), 93–104.
- Kopriva, R. (2001). *ELL validity research designs for state academic assessments: An outline of five research designs evaluating the validity of large-scale assessments for English language learners and other test takers*. De Gruyter.
- Kuo, C. H. (1995). Cohesion and coherence in academic writing: From lexical choice to the organization. *RELC Journal*, 26(1), 47-62.
- Liao, X. (2020). Secondary school students' discourse synthesis performance on Chinese (L1) and English (L2) Integrated *Reading and Writing*, 34(5), 49–78. <https://doi.org/10.1007/s11145-020-10065-x> writing assessments. Vol. (0123456789)
- Lai, Y. (2008). *A Corpus-based Investigation of Conjunctive Use in the Taiwanese students' writing*. Ming Chuan University.
- Macaro, E. (2006). Strategies for language learning and for language use: Revising the theoretical framework. *The Modern Language Journal*, 90(3), 320-337
- Macaro, E. (2006). Strategies for language learning and language use: Revising

- the theoretical framework. *The Modern Language Journal*, 90(3), 320-337.
- Maharani, S., Fauziet al, E., & Supriyadi, S. (2018). An investigation of writing strategies used by the students from the perspective of language proficiency and gender *International Journal of Multicultural and Multireligious Understanding* 5(5), 185. <https://doi.org/10.18415/ijmmu.v5i5.364>
- Mahendra, M. W., & Dewi, N. P. R. P. (2017). The Use of Transition Signals in Efl Academic Writing Context: a Corpus Study. *Jurnal Bahasa Lingua Scientia*, 9(1), 87–100. <https://doi.org/10.21274/lis.2017.9.1.87-100>
- Mastan, M.E.B., N. Maarof and M.A. Embi, 2017. The effect of writing strategy instruction on ESL intermediate proficiency learners' writing performance. *Journal of Educational Research and Review*, 5(5), 71-78.
- McNamara, D. S., & Allen, L. K. (2018). Toward an integrated perspective of writing as a discourse process. In M. Scherber, A. Britt, & D. N. Rapp (Eds.), *Handbook of discourse processes* (2nd ed). Routledge.
- O'Malley M & A U Chamot. (1994). *The CALLA handbook: Implementing the cognitive academic language learning approach*. N.J: Addison-Wesley, Reading MA. Longman.
- Oshima, A. & Hogue, A. (2006) *Writing Academic English*, Level 4, 4th ed. *The Longman Academic Writing Series*. White Plains, NY: Pearson Education, Inc.
- Oxford, R. (2003). *Language Learning Strategies: What Every Teacher Should Know*. Rowley, Mass: Newbury House, 284-297.
- Penningroth, S. L., & Rosenberg, S. (2008). Effects of a high information-processing load on the writing process and the story written. *Applied Psycholinguistics*, 16(5), 189-210.
- Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A comprehensive grammar of the English language*. Longman
- Sadighi, F., & Heydari, P. (2012). Cohesion analysis of L2 writing: The case of Iranian undergraduate EFL learners. *Mediterranean Journal of Social Sciences*, 557-573.
- Sadighi, F., & Heydari, P. (2012). Cohesion analysis of L2 writing: The case of Iranian undergraduate EFL learners. *Mediterranean Journal of Social Sciences*, 557-573.
- Rabbitt, P. M. (1968). Channel capacity, intelligibility, and immediate memory. *The Quarterly Journal of experimental psychology*, 20(3), 241-248.
- Ramadhanti, D., & Mana, L. A. (2018). Comparison of Brainstorming and Mind Mapping Techniques in Argumentation Writing Learning. *Journal of Teaching and Learning*, 3(3), 159–171. <https://doi.org/10.22216/jcc.2018.v3i3.2024> *Learning*, 3(3), 159–171. <https://doi.org/10.22216/jcc.2018.v3i3.2024>
- Raoofi, S., Binandeh, M., & Rahmani, S. (2017) An Investigation into Writing Strategies and Writing Proficiency of University Students. *Journal of Language Teaching and Research*, 8(1), 19-31. <https://doi.org/10.17507/jltr.0801.24>
- Richards, J.C., Schmidt, R. (2002). *Longman Dictionary of Language Teaching and Applied Linguistics*, third ed. Pearson Education.
- Robinson, P. (2001). Task complexity, cognitive resources, and syllabus design: A triadic framework for examining task influences on SLA. *Cognition and second language instruction*, 27(1), 287-318.
- Sadighi, F., & Heydari, P. (2012). Cohesion analysis of L2 writing: The case of Iranian undergraduate EFL learners. *Mediterranean Journal of Social Sciences*, 5 (7) 557-573.
- Sanchez, S. (2019). Needs analysis on developing EFL paragraph writing materials for Kalimantan L2 learners. *Canadian Center of Science and Education*, 12(1), 5-19 <https://doi.org/10.5539/elt.v12n1p186Sl>

- oan, G. (1983). *Transitions: Relationships among T-Units. College Composition and Communication*. Free Press.
- Smith, R. E., Leffingwell, T. R., & Ptacek, J. T. (1999). Can people remember how they coped? Factors associated with discordance between same-day and retrospective reports. *Journal of Personality and Social Psychology*, 76(6), 10-50.
- Stone, A., Schwartz, J., Neale, J., Shiffman, S., Marco, C., Hickcox, M., Paty, J., Porter, L., & Cruise, L. (1998). A comparison of coping assessed by ecological momentary analysis and retrospective recall. *Journal of Personality and Social Psychology*, 74(6), 1670-1680.
- Suwandi, S. (2016). Coherence and cohesion: An analysis of the final project abstracts of the undergraduate students of PGRI Semarang. *Indonesian Journal of Applied Linguistics*, 9(2), 23-35. <https://doi.org/10.17509/ijal.v5i2.1349>
- Tabari, M.A. (2019). Differential effects of strategic planning and task structure on L2 writing outcomes. *Reading & Writing Quarterly*, 10(7), 320-338. <https://doi.org/10.1080/10573569.2019.1637310>
- Thongchalerms, S., & Jarunthawatchai, W. (2020). The Impact of Genre-Based Instruction on EFL Learners' Writing Development. *International Journal of Instruction*, 13(1), 1-16. <https://doi.org/10.29333/iji.2020.1311a>
- Toba, R., Noor, W. N., & Sanu, L. O. (2019). The current issues of Indonesian EFL students' writing skills: Ability, problem, and reason in writing comparison and contrast essays. *Dinamika Ilmu*, 19(1), 57-73. <https://doi.org/10.21093/di.v19i1.1506>
- Varier, D., Zumbunn, S., Conklin, S., Marrs, S., Stringer, J. K., & Furman, J. (2020). Getting stuck in writing: exploring elementary students' writing self-regulation strategies. *Educational Studies*, 1(4), 11-20.
- Winarto, A. E. (2015). Training of learning strategies in writing essays. *JEELS (Journal of English Education and Linguistics Studies)*, 2(2), 17-27. <https://doi.org/10.30762/jeels.v2i2.96>
- Zanov, M. V., & Davison, G. C. (2010). A conceptual and empirical review of 25 years of cognitive assessment using the articulated thoughts in simulated situations (ATSS) think-aloud paradigm. *Cognitive Therapy and Research*, 34(3), 282-291.

Biodata

Reza Rezvani is an associate professor of Yasouj University/Shiraz University. He did his undergraduate, master and Ph.D. degrees at Shiraz University. His research areas of interest include Language Assessment, ELT Research Methodology, and Materials Development & Evaluation.

Email: rezvanireza@gmail.com

Hajar Shahhoseini is a teaching English of Farhangian University of Bushehr. She did her master and Ph.D. degrees at Bushehr Islamic Azad University. Her research areas of interest include Testing, Methodology, and Linguistic.

Email: shahhoseinihajar@gmail.com

Saeed Yazdani is an Assistant Professor of English Literature at Islamic Azad University of Bushehr University. He has taught various courses and published several books and articles in the area of English Language Teaching and language assessment.

Email: saya134074@yahoo.com

Mohammad Behroozi is an Assistant Professor of Management at Islamic Azad University of Bushehr University. He has taught various courses and published several books and articles in the area of management and teaching.

Email: m.behrozi@iaubushehr.ac.ir

Akbar Molaei is an Assistant Professor of at Farhangian University of Bushehr. His research areas of interest include research, and teaching.

Email: akmolaei2002@gmail.com