INDONESIAN UNIVERSITY STUDENTS' VISUAL LEARNING STYLE: LEARNERS' AND TEACHERS' PERSPECTIVES

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ABSTRACT This study aimed to investigate Indonesian undergraduate non-English department students' visual learning style and their and teachers' perspectives on the uses of visual aids to promote learning. It was conducted to fill the gap in the literature on the scarcity of empirical studies in the field of learning style in the Indonesian context despite the potentials of instruction accommodating learners' learning styles. 127 students participated in the study through a survey and descriptive analysis, this study found that the participants, in general, had a high level of visual learning style, suggesting that class instruction should provide visual media and activities reported to be effective by the participants. Four participants with the highest visual learning style levels along with three teachers of General English classes were interviewed. Through Thematic Analysis of the interview results, the study found that both the students and teachers reported that teachers used certain visual media for certain purposes, for example, pictures for brainstorming activities, videos for providing input for further discussions, and writing on the boards to explain grammar. Based on the findings, possible implications and contributions are mentioned along with limitations and possible future studies.

Keywords: Individual differences (IDs) visual learning style, visual aids, Thematic Analysis

A. INTRODUCTION

earning style is one of Individual Differences (IDs) factors having an important role in the second language (L2) learning (Ortega, 2009). It also becomes a major concern in the field of English as L2 (Aliakbari & Qasemi, 2012). Raising learners' awareness of their learning styles becomes a current trend in language learning as learning styles influence how learners interact and respond to their learning environment (Dornyei, 2005). Teachers' awareness of their students' learning style is also important because it also affects the teachers' role in teaching (Castro & Peck, 2005).

Among several learning styles, visual learning style may be one of the most prominent. Learners using visual learning styles are known as visual learners and they learn better by seeing (Dornyei, 2005; Obralic & Akbarov, 2012). In general, visual learners prefer to learn in a classroom setting and they are good at reviewing materials (Oluremi, 2015). Moreover, visual learners tend to learn using a visual sensory channel to make them understand information (Al-Tamimi & Shuib, 2009). Some studies also found that learners' visual learning style affected their language achievement (e.g.: Afshar & Bayat, 2018; Padidar et al., 2015), suggesting the needs for education practitioners to pay attention to this field.

Rationales

Specific to the Indonesian context, even though English has been the primary foreign language taught in the Indonesian Higher Education institutions, the English proficiency of the graduates of Senior High School in Indonesia is unsatisfying (Zein, 2017), further affecting the Indonesian undergraduate students' English proficiency. The lack of success in English instruction may be caused by various factors and English instruction not accommodating learners' learning style could be one of them. For example, learners might not interested in the course materials when the teachers do not provide the aids suitable for their learning preference. Therefore, investigating the learning style of Indonesian university students, with a visual learning style presumably being one of the most prominent (Nematipour, 2012; Obralic & Akbarov, 2012), can be necessary. As important as researching learners' visual learning style, investigating teachers' perspectives on the issue could also be worthwhile. It is because teachers are the ones responsible to accommodate learners' needs through class instruction. Furthermore, as an empirical study on visual learning style in the Indonesian context has not been previously conducted, the present study aims to apply a mixed-method study to explore the non-English major college students' and teachers' perspectives about visual learning style to improve the learners' learning. Considering that there is no study of the visual learning style of Indonesian university students, the use of mixed methods could combine the advantages from the quantitative method, possible generalisation (Gray, 2014), and qualitative method, which is in-depth information and perspectives on the issue (Creswell, 2014).

Considering the rationales mentioned, through the use of mixed methods, this study seeks to answer two main questions. First, how is the non-English major college students' level of visual learning style? Second, how are students' and teachers' beliefs on the uses of visual aids to improve learners' learning?

B. REVIEW OF LITERATURE

Visual learners learn and understand better when the information is presented in the forms of visual (Dornyei, 2005; Gilakjani & Ahmadi, 2011; Oluremi, 2015). There are several characteristics of visual learners. They should sit in front of the class because they can access information by thinking in pictures and understanding from body language (Gilakjani, 2012; Gilakjani & Ahmadi, 2011; Hawk & Shah, 2007). Visual learners tend to remember things better and reviewing it, they are good at spelling, and they have good handwriting (Oluremi, 2015).

When visual learners are describing or recalling subject or event, they prefer to use hand movements to help them recall the information (Pritchard, 2009). Besides, visual learners prefer to do annotating and highlighting the information because it helps them to get the important information which they find by writing it in the simple form and highlighting the information using colour to remind them about the main points of the information (Ajideh et al., 2018; Gilakjani, 2012; Gilakjani & Ahmadi, 2011). Moreover, visual learners will learn better when their teachers support their learning by writing on the board as they can learn from their teachers' written explanations (Aydinli & Elaziz, 2010; Sen & Agir, 2014).

As visual learners rely on visual information, they have their attributes in their learning process that support them in obtaining the information (Oluremi, 2015). Attributes such as pictures, graphs, charts, diagrams, and videos are used in learning because the visual presentation is interesting (Oluremi, 2015) and it can stimulate them into what they learn (Bajrami & Ismaili, 2016; Gilakjani & Ahmadi, 2011). Furthermore, other attributes such as brochures, symbols, flowcharts, mind map, flashcards, acronyms, and mnemonics are also used by visual learners because they can notice the detailed information on it and they can maximize the use of these attributes in their learning, for example, the use of mind map in vocabulary learning (Mei et al., 2010; Oluremi, 2015).

Visual learners benefit from the use of visual aids in class (Oluremi, 2015). In general, they understand materials better when they see it directly (Gilakjani, 2012). A mind map is an example of visual aid that can be used. The use of mind maps is to present words, tasks, by arranging the ideas with the visual presentation and it is important for the knowledge instruction of the students in which it facilitates the cognitive and visual information (Mei et al., 2010). Mind map is popular in the education field because it can be used to take notes, build creative thinking, and to report something (Mei et al., 2010). Furthermore, Jones et al. (2012) explained that mind maps can also be given any pictures and colours to organise ideas and it is used to engage learners in learning by giving them activities to connect their background knowledge with the new information. A previous study by Yunus and Chien (2016) in the Malaysian university context found that mind map could be used as a strategy in learning to improve learners' writing skill because through mind map learners were given opportunity to explain their ideas and they could write better in a more well-organized way. Buran and Filyukov (2015) stated that mind maps can also be used in reading in which learners use it to retell the contents of texts because it helps the students to memorize the important keywords in the texts. Another example of visual aids is videos. Using videos in teaching gives positive impacts to learners' learning because they become motivated to learn (Secer et al., 2015). Videos can be used to

promote learners' deep learning by encouraging them to be active in learning (Mitra et al., 2010). Moreover, to build learners' background knowledge about certain learning topics, teachers can use videos in instruction (Mitra et al., 2010).

Acknowledging the role of visual learning styles in L2 learning, several studies on visual learning styles have been conducted in various educational contexts, such as Iran (e.g.: Afshar & Bayat, 2018; Nematipour, 2012; Padidar et al., 2015), Turkey (e.g.: Obralic & Akbarov, 2012), and Malaysia (e.g.: Bhattacharyya & Sarip, 2014). Two studies in Iran found that learners' visual learning style affected their language achievement (see Afshar & Bayat, 2018; Padidar et al., 2015). Both Nematipour's (2012) study in Iran and Obralic's and Akbarov's (2012) study in Turkey found that visual learning style was the most preferred among other styles. Also, Bhattacharyya's and Sarip's (2014) study in Malaysia found that learners preferred to memorise pictures, learn from written information on the board, and take notes, further suggesting the relative dominance of this learning style over others.

C. METHODS

Research Design

This research explanatory sequential mixed methods in which a quantitative method was conducted first and it was then followed with a qualitative method (Ponce & Maldonado, 2015). Considering that studies of visual learning styles in the Indonesian university context had not been conducted yet, the quantitative method of the present study aimed for possible generalisations (Gray, 2014), whilst its qualitative method was to explore and gain an in-depth perspective of the issue (Creswell, 2014).

The use of a quantitative method of distributing questionnaires was to find the answer to the first research question on the level of the visual learning style of the non-English major student participants. The questionnaire on the visual learning style was adapted from Barsch (1991). The original version consisted of 23 statements of visual, auditory, and kinaesthetic learning styles and had three responses: "never", "seldom", and "often". For the present study, only statements on visual learning style were used and the items were slightly modified to better suit the context. The possible responses were also modified into 5 indicating "strongly agree", 4 indicating "agree", 2 indicating "disagree", and 1 indicating "strongly disagree". The questionnaire was translated from English into the Indonesian language as it was the participants' first language (L1) and could facilitate the participants' better understanding of the questionnaire items. Before the questionnaire was administered to the participants, a pilot study was conducted to maintain the validity and reliability of the questionnaire and to avoid any possible ambiguity in the questionnaire (Cohen et al., 2007). The pilot study involved two students to gain their feedback on the questionnaire (Cohen et al., 2007). The questionnaire was then improved per the given feedback. Data gathering was conducted from 26 February 2020 to 3 March 2020 in the even semester of the 2019-2020 academic year.

The qualitative method of conducting interviews was used to answer the second research question on in-depth perspectives of students and teachers on the uses of visual aids to improve learners' learning through (Ponce & Maldonado, 2015). The interviews with the students were conducted from 29 March 2020 to 9 April 2020 whilst the interviews with the teachers were conducted from 12 to 14 May 2020.

Research Participants

The target participants of the present study were 205 students of General English Level 3 of a private university in Indonesia. However, only 127 of them filled the questionnaires and signed the informed consent forms indicating their participation in the study, whilst other students were absent during the distribution of the questionnaires. General English Level 3 was a mandatory English class for non-English major students and it was held once a week for sixteen meetings per semester. This class was the continuation of General English Levels 1 and 2. In general, General English classes were to facilitate learners to learn English to support their future careers after graduating from university. After passing General English Level 3, learners could take English for Specific Purposes classes in their respective major or department.

Based on the results of the questionnaires, four participants, two males, and two females, with the highest visual learning style levels, were invited to individual semi-structured interviews. They came from different majors. Three General English classes' teachers, two females and one male were also invited for interviews to compare their perspectives with those of the students.

Data Collection and Analysis

The data collection and data analysis were divided into two steps. The first step was the quantitative data analysis. The results of the questionnaires were recorded in SPSS. Descriptive analysis was performed to answer the first research question in the forms of means and percentages. The second step was the qualitative data analysis. After we obtained the levels of the participants' visual learning style, we invited four participants with the highest levels of visual learning style for individual semi-structured interviews. Three General English teachers were also invited for interviews. All interviews were conducted in the Indonesian language. Due to the Covid-19 pandemic, the interviews were conducted online instead of face-to-face. Each interview was recorded and transcribed verbatim. The transcripts were translated into English

and coded per the second research question. Thematic analysis was then conducted to find the reoccurring themes (Maguire & Delahunt, 2017).

Ethical Considerations

The present study adhered to the principles of research ethics. They were asking permission to the Head of Language Training Centre as the gatekeeper (Homan, 2001) and providing written informed consent form for the students detailing the purposes of the study and their rights as participants shall they be willing to participate (Akaranga & Makau, 2016). By doing so, this study facilitated the participants to be confident in using their right on whether to participate in the research (Marczyk et al., 2005).

D. FINDINGS AND DISCUSSION

The total participants who filled the questionnaires and signed the informed consent forms were 127 students of General English class level 3. They consisted of 61 males (48%) and 66 females (52%) from eight different majors: Biotechnology, Management, Accounting, Architecture, Product Design, Medical, Informatics System, and Informatics Engineering. The mean of the participants' ages was 19 (SD=1.41). 68 of the participants (53.5%) stated their willingness to participate in follow-up interviews if invited, suggesting that their interest in the present study was quite high. The seven items of Barsch's (1991) learning style questionnaire had a .62 Cronbach's alpha coefficient, indicating that the questionnaire, though could not be considered very reliable, was quite reliable.

Research question 1: How is the non-English major college students' level of visual learning style?

Descriptive analysis was employed to know the participants' levels of visual learning style. The participants' responses to the seven questionnaire items in percentages could be seen in the Appendix. The mean score from all the seven items in the questionnaire was 26.60 (SD = 3.75), with the minimum being 12 whilst the maximum being 34. The complete results of the participants' responses in mean scores could be seen in Table 1.

Items	Means
Q1	3.72
Q2	3.76
Q3	3.32
Q4	3.85
Q5	3.86

Table 1. The mean scores of students' responses to the visual learning style questionnaire

Q6	4.24
Q7	3.84
Means	3.80

As seen in Table 1, with the means of the participants' response on 3.80 level with option 2 indicating "disagree" and option 4 indicating "agree", it could be stated that the participants were in general visual learners. Item 3 produced the lowest mean score indicating learners' least dominant visual learning preference whilst items 6 and 5 produced the highest mean scores indicating learners' most dominant visual learning preference as measured with the questionnaire items.

First, item number 3, "I am good at and enjoy making mind map in learning English", produced the lowest mean score of 3.32 in which 38.6% of the participants showed their disagreement. It could indicate that even though in general the participants had a high level of visual learning style, they might not enjoy making mind maps in their English learning. Being unfamiliar to mind maps could be a reason behind it. Although some researchers have explained the benefits of mind mapping as a strategy to organize ideas and support the students' activities in learning (e.g.: Buran & Filyukov, 2015; Jones et al., 2012; Yunus & Chien, 2016), this finding showed that regardless of reiterated potentials of certain strategies, learners' choice and preference mattered more in determining whether or not the said potentials could be achieved. As learners might not be familiar with a mind map, they may not understand the use of mind maps in learning English. Also, mind maps may not be the only approach that the learners used when learning. Besides, the participants were probably not good at drawing and thought that making mind maps was time-consuming (see also Yunus & Chien, 2016). Besides, learners possibly disliked that they needed to read certain materials before they could present these materials in the form of mind maps (Jones et al., 2012).

Second, the mean score of item number 5, "I can remember English learning better by writing for several times" was 3.86, the second-highest among all items. 82.7% of the participants either "strongly agreed" or "agreed" to the statement. This may indicate that learners tended to write several times to learn English better. This finding was in line with the finding of Gilakjani's and Ahmadi's (2011) study that visual learners preferred to take notes to help them understand learning materials. The note-taking can take various forms, for example, annotating and highlighting information and review it later (Ajideh et al., 2018; Dornyei, 2005). Furthermore, this item may resemble item number 7, "I understand English easily when lecturer writes in the whiteboard rather than listening to the lecturer's speech" which produced a mean

score of 3.84. Both of the items discussed writing as the activity that visual learners prefer to do in learning English. This may indicate that as students learned based on their learning style, they did things they considered effective to help them learn.

Third is item number 6, "I obtain new vocabulary by reading the materials that are related to English through online (reading journal, article, and news) or offline (reading book)". The mean score of this item was 4.24, the highest mean score among all the responses. 94.5 % of the participants showed their agreement with this item. This item was also similar to item number 4, "I understand an English material by reading rather than listening through audio" which produced the mean score of 3.85, indicating that the participants tended to learn English better by reading than by listening. This study's finding was in line with the finding of Bhattacharyya's and Sarip's (2014) study in Malaysia in which their visual learner participants reported their agreements that through reading they could understand information better.

Research question 2: How are students' and teachers' beliefs on the uses of visual aids to improve learners' learning?

Concerning the second research question, four students were interviewed as they had a high level of visual learning style. The participants were given pseudonyms as follows: Miller [Male], Jenni [Female], Nora [Female], and Bastian [Male]. Furthermore, three teachers from General English classes of Level 3 were invited for individual interviews. They were given pseudonyms: Rian [Male, Teacher 1], Luna [Female, Teacher 2], and Narita [Female, Teacher 3]. The Thematic Analysis produced four reoccurring themes related to the second research question as seen in Table 2.

Table 2	2. Eme	erg	ing t	theme	es oi	n the	e stu	ıden	ts' a	and	tead	cher	s' [ber	spec	tives	on the	e uses	s of	visu	al aid	ls
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Theme 2. Teachers used videos to provide input for further discussions and tasks.

Theme 3. Teachers wrote on the board about English grammar.

Theme 1. Teachers used pictures to engage students in brainstorming activities.

It was found that the teachers used pictures to engage their students in the activities in which the students should brainstorm what they were going to learn. For instance, the students, Miller and Nora, reported that their teachers provided pictures to lead them into the materials in which they were given pictures and they should think and explain what happened in the pictures and its relation to the materials. They commented:

Pictures and graphics are really helpful when learning ... related to the material, so I can understand quickly. The picture shows what is in the words, so it helps me to understand. [Miller]

... The lecturer gives pictures of fast-food chicken restaurants, then we are asked to tell the differences in English. [Nora]

In a similar tone, the teachers admitted that they used pictures to engage their students in the topic of learning. Luna, for instance, acknowledged that pictures 'explained' better than lengthy spoken explanation. She stated:

I use pictures of human sticks, pictures that make the students curious about a particular topic ... for example ... food and mood. Well, I use emoticons, so I give emoticons and then I relate to how you feel about this kind of food. Then, I put the picture and they (the students) have to read whether they like it or not ... pictures speak louder than words so it's more helpful by using pictures instead of giving a long explanation. [Luna, Teacher 2]

Additionally, Narita also admitted that using pictures to explain a topic could give comprehensive information to the students. She commented:

The topic is about water pollution, the animals that eat rubbish, as it is trending on social media, for example, I give a picture of a fried fish and then I ask "what do you think about this?" and then they answer, after that I give them a picture of a fish that eats rubbish and ask "now, what do you think about this?" it will give them comprehensive information just by using visual, just by using some pictures it can open a wide discussion for the students. [Narita, Teacher 3]

This finding suggested that the use of pictures facilitated better learning. Seen from learners' and teachers' excerpts, this finding was in line with some previous studies' findings on visual learning style (e.g.: Gilakjani, 2012; Gilakjani & Ahmadi, 2011; Hawk & Shah, 2007; Oluremi, 2015) that as the role of the teachers is to provide appropriate material with their students' visual learning style when the teachers use visual aid that can accommodate students' visual learning style, it will be beneficial for their learning (Pritchard, 2009). The mentioned excerpts reflected Gilakjani's (2012) idea that as visual learners learn better from what they see, they prefer to learn by using pictures as it helps them to obtain the information better. Though this study's finding suggested that pictures were mostly used in brainstorming activities, pictures could be used in all stages of instruction such as reporting stage in which learners produce language or tell stories through the help of pictures, and could be embedded with other media such as online games emphasising on the uses of visuals to practice and review what they have learned.

Theme 2. Teachers used videos to provide input for further discussions and tasks.

Besides using pictures in learning, teachers also used videos as input for the students before they discussed certain topics and to show examples for learners before they worked on tasks. For instance, Jenni and Nora stated that their teachers used videos to give them input on what

they were going to learn. They commented:

Well, [we] see the title first, then the video is played several times so that after that, we try to get what the video is about. []enni] The individual task is about to answer true or false based on the video that we watch. Later we'll see whether our responses on the true or false [exercise] are correct ... Sometimes it's like a question, but we answer it based on the video. [Nora]

In a similar vein, the teachers also admitted that they used videos in their teaching as the input for the students in which those videos were used in lead-in activities. For example, Luna commented that the use of video in her teaching was as an example for the students to learn before they made their videos as the output of their learning. She reported:

This is more like an example for later, so their output is like that. ...so after they learn, they have to make a product as the output. So they know "oh, if we make a vlog, we have to give back sound ..." so it will be easier for them. So by giving the [sample] video, students can learn from ... the video. So it can be input [to produce] output of their learning. [Luna, Teacher 2]

Narita, in comparison, commented that she believed that not all of her students had the same background knowledge; therefore, using videos could give new information to the students about the topics of that day. She stated:

Students do not have the same background knowledge; they have a different starting point ... using video ... it gives the students similar information, later in the production stage, they have to produce something ... [from the video] they get the same understanding. So, the effort to explain the topic is not as complicated as to explain without using video. [Narita, Teacher 3]

Seen from the excerpts of Jenni and Nora, the use of videos reflected the statement of Mitra et al. (2010) that using the video helps the students to link their background knowledge and the new information with the topic in their learning. The excerpts of the teachers also highlighted the advantages of using videos to teach English. The video was used also as the input in learning which provided students with important information that they were going to use in discussions (Bajrami & Ismaili, 2016; Mitra et al., 2010). This present study's finding was also in line with several studies that have been reported in various contexts (e.g.: Bajrami & Ismaili, 2016; Mitra et al., 2010; Oluremi, 2015) that when the teachers use videos, it is interesting and motivating as it provides the students with some topics to be further discussed. The same findings across learning contexts could also suggest that the benefits of using videos in learning have been relatively established. However, this relatively uniformed finding on the reported benefits of using videos should not be taken for granted. Language teachers should also pay attention to other aspects related to videos such as appropriate language levels used in the videos and duration of the video to optimise the potentials.

Theme 3. Teachers wrote on the boards to explain English grammar.

Miller and Bastian commented that their teachers wrote the English grammar formula on the boards and it helped them to understand it better because they could also take notes and use them as examples to make new sentences. They reported:

If the lecturer only talks, I will not understand ... but if she writes on the whiteboard such as the formula, I can understand it, I also write it down. [Miller] So, later, when we are asked to do the task [writing sentences]... so the sentence can be correct ... the one on the whiteboard is an example, then we just need to make the new ones that are already adjusted to what we have made. [Bastian]

These comments corresponded to the teachers' comments that they wrote on the board to explain grammar ... patterns and examples to make learners understand better. Luna, for example, stated:

The whiteboard ... kind of assistant for me to make it easy to explain ... So I always start with pictures so after the students can guess what will be learned on that day then I usually say "okay if we want to talk about this topic, what kind of tenses you need to use", maybe, if some students were still confused, yes, I wrote it on the board because in today's world not everything can be done digitally. [Luna, Teacher 2]

Narita also stated that writing on the board facilitated learners' note-taking. She reported:

Hm... It becomes more effective because when I write on the board, the students also write it. ... If it is written on the board, the students will write it also or they will work on the exercises directly using the examples on the board. [Narita, Teacher 3]

Seen from both students' and teachers' excerpts, explaining grammar by writing on the board could help the students in learning English formula because they could learn from the teachers' explanation on the board (see also Aydinli & Elaziz, 2010). Besides, this finding was in line with Oluremi's (2015) idea that as visual learners prefer to take notes on important information when the teachers write important points on the boards, it gives learners benefits as they can also take notes on what they obtain from their teachers' explanation. This study's finding also corresponded to Sen's and Agir's (2014) reiteration on the paramount role of boards to emphasise on certain important points and to engage the students' attention. Learners' positive perception of teachers' uses of boards to explain grammar is particularly interesting. It may suggest that, albeit perhaps considered traditional explicit grammar teaching, teachers teaching grammatical points on the board is still perceived to offer merits by some L2 learners. This may be attributed to the fact that their uses of English were restricted to classroom uses and thus they were more facilitated when learning grammar explicitly and, as for these visual learners, through written explanation on the boards.

E. CONCLUSION

The present study could have several possible contributions and implications. The quantitative analysis could offer a general picture of Indonesian undergraduate university students' visual learning style and it could be used as a reference for future studies in the field with the same participants' characteristics. Additionally, the finding that despite learners' high level of visual learning style they relatively disliked mind map may indicate that despite mind map being highly visual, visual learners who were not familiar with it may not automatically like it and thus may not be able to use it to help them learn. As the degree of familiarisation could also play a role in determining learners' preference in learning, teachers should not take learners' learning styles for granted and should make efforts to familiarise learners with certain learning media that are considered potential to facilitate learning. Furthermore, the qualitative analysis found that the uses of pictures, videos, and boards helped visual learners understand materials better in different ways. Hence, what matters more is not whether teachers use such media in instruction but rather how and when teachers use such media in the way that best facilitate learners to learn. A combination of the uses of such media is also desirable. Thus, instead of relying on one visual medium all the time, teachers could combine various visual media for various purposes during class instruction. The uses of technology to enhance the presentation of these learning media may also enhance their effectiveness in facilitating learners' learning, for example, the uses of interactive whiteboards and digital pictures imbedded in online games.

The present study has a limitation and suggestions for future studies. As the number of previous studies on visual learning style in the Indonesian university context is still very limited, the sources with which to compare the present study's findings were limited to sources from foreign education contexts. Based on this limitation, it is suggested that future studies in Indonesia can be conducted in different education levels using either quantitative or qualitative methods. Several findings could also merit further studies. They could further investigate learners' note-taking strategies in English class and to what extent it could facilitate learning. Learners' preference for teachers' uses of whiteboards to explain grammar could also be investigated further concerning the debates of implicit and explicit grammar teaching in L2 instruction.

REFERENCES

Afshar, H. S., & Bayat, M. (2018). Strategy use, learning styles and L2 achievement of Iranian students of English for Academic Purposes. *Issues in Educational Research*, 28(4), 1039– 1059.

- Ajideh, P., Zohrabi, M., & Pouralvar, K. (2018). Investigating the relationship between learning styles and ESP reading strategies in academic setting. *International Journal of Applied Linguistics and English Literature*, 7(3), 156–164. https://doi.org/10.7575/aiac.ijalel.v.7n.3p.156
- Akaranga, S. I., & Makau, B. K. (2016). Ethical considerations and their applications to research: A case of the University of Nairobi. *Journal of Educational Policy and Entrepreneurial Research*, 3(12), 1–9. https://doi.org/2016
- Al-Tamimi, A., & Shuib, M. (2009). Investigating the learning styles preferences of ESL learners: The case of English majors in Universiti Sains Malaysia. *Malaysian Journal of ELT Research*, 5(2004), 56–107.
- Aliakbari, M., & Qasemi, N. (2012). On the relationship between Iranian EFL learners' learning style preference and their gender, proficiency level and achievement score. *International Journal of Pedagogies and Learning*, 7(3), 275–283. https://doi.org/10.5172/ijpl.2012.7.3.275
- Aydinli, J. M., & Elaziz, F. (2010). Turkish students' and teachers' attitudes toward the use of interactive whiteboards in EFL classrooms. *Computer Assisted Language Learning*, 23(3), 235–252. https://doi.org/10.1080/09588221003776781
- Bajrami, L., & Ismaili, M. (2016). The role of video materials in EFL classrooms. Procedia Social and Behavioral Sciences, 232, 502–506. https://doi.org/10.1016/j.sbspro.2016.10.068
- Barsch, J. (1991). Barsch learning style inventory. Open Library.
- Bhattacharyya, E., & Sarip, A. B. M. (2014). Learning style and its impact in higher education and human capital needs. *Procedia - Social and Behavioral Sciences*, 123, 485–494. https://doi.org/10.1016/j.sbspro.2014.01.1448
- Buran, A., & Filyukov, A. (2015). Mind mapping technique in language learning. Procedia Social and Behavioral Sciences, 206, 215–218. https://doi.org/10.1016/j.sbspro.2015.10.010
- Castro, O., & Peck, V. (2005). Learning styles and foreign language learning difficulties. *Foreign Language Annals*, *38*(3), 401–409. https://doi.org/10.1111/j.1944-9720.2005.tb02226.x

- Cohen, L., Manion, L., & Morrison, K. (2007). Research methods in education (6th ed.). Routledge.
- Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approach. Sage Publications, Inc.
- Dornyei, Z. (2005). The psychology of the language learner: Individual differences in second language acquisition. Lawrence Erlbaum.
- Gilakjani, A. P. (2012). Visual, auditory, kinaesthetic learning styles and their impacts on English Language Teaching. *Journal of Studies in Education*, 2(1), 104–113. https://doi.org/10.5296/jse.v2i1.1007
- Gilakjani, A. P., & Ahmadi, S. M. (2011). The effect of visual, auditory, and kinaesthetic learning styles on language teaching. *International Conference on Social Science and Humanity*, 5, 469– 472. https://doi.org/https://doi.org/10.1111/j.1461-0248.2011.01660.x
- Gray, D. E. (2014). Doing research in the real world (3rd Editio). Sage Publications, Ltd.
- Hawk, T. F., & Shah, A. J. (2007). Using learning style instrument to enhance student learning. Decision Sciences Journal of Innovative Education, 5(1), 1–19.
- Homan, R. (2001). The principle of assumed consent: The ethics of gatekeeping. *Journal of Philosophy of Education*, 35(3), 330–343.
- Jones, B. D., Ruff, C., Snyder, J. D., Petrich, B., & Koonce, C. (2012). The effects of mind mapping activities on students' motivation. *International Journal for the Scholarship of Teaching and Learning*, 6(1), 1–23.
- Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: a practical, step-by-step guide for learning and teaching scholars. *Journal of Teaching and Learning in Higher Education* (AISHE, J), 8(3), 3351–33513.
- Marczyk, G., DeMatteo, D., & Festinger, D. (2005). *Essentials of research design and methodology*. John Wiley & Sons, Inc.
- Mei, L., Kun, Y., & Hai, C. (2010). Using mind maps as a strategy for vocabulary acquisition in Chinese Universities. 3.
- Mitra, B., Lewin-Jones, J., Barrett, H., & Williamson, S. (2010). The use of video to enable deep 272

learning. Research in Post-Compulsory Education, 15(4), 405–414. https://doi.org/10.1080/13596748.2010.526802

- Nematipour, M. (2012). A study of Iranian EFL learners' autonomy level and its relationship with learning style. *English Linguistics Research*, 1(1), 126–136. https://doi.org/10.5430/elr.v1n1p126
- Obralic, N., & Akbarov, A. (2012). Students preference on perceptual learning style. *Acta Didactica Napocensia*, 5(3), 31–42.
- Oluremi, F. D. (2015). Learning styles among college students. International Journal for Cross-Disciplinary Subjects in Education, 5(4), 2631–2640.
- Ortega, L. (2009). Understanding second language acquisition. Routledge.
- Padidar, H. A., Tayebi, G., & Shakarami, A. (2015). The relationship between learning styles and vocabulary learning and retention. *Spectrum: A Journal of Multidisciplinary Research*, 4(1), 249–263. https://doi.org/10.1016/j.sbspro.2013.12.655
- Ponce, O. A., & Maldonado, N. P. (2015). Mixed methods research in education: Capturing the complexity of the profession. *International Journal of Educational Excellent*, 1(1), 111–135.
- Pritchard, A. (2009). Ways of learning: Learning theories and learning styles in the classroom. In *The Lancet* (Second). Routledge. https://doi.org/10.1016/S0140-6736(45)91319-5
- Seçer, Ş. Y. E., Şahin, M., & Alcı, B. (2015). Investigating the effect of audio visual materials as warm-up activity in Aviation English courses on students' motivation and participation at High School Level. *Procedia - Social and Behavioral Sciences*, 199, 120–128. https://doi.org/10.1016/j.sbspro.2015.07.495
- Sen, M., & Agir, A. (2014). The effects of using an interactive white board in teaching English on the achievement of Primary School Students. *Hasan Ali Yucel Egitim Fakultesi Dergisi*, 11(22), 39–54.
- Yunus, M., & Chien, C. H. (2016). The use of mind mapping strategy in Malaysian University English Test (MUET) writing. *Creative Education*, 7, 619–626.
- Zein, M. S. (2017). Elementary English education in Indonesia: Policy developments, current practices, and future prospects. In *English Today*. Cambridge University Press. https://doi.org/10.1017/S0266078416000407

APPENDIX

The participants' responses on the questionnaire items in percentages

	Statements	Strongly Agree	Agree	Disagree	Strongly Disagr
1.	I follow written instruction better than oral direction when learning English in the class.	11. 8%	68.5%	19. 7%	0%
2.	I prefer to take note of the important things when learning English in the class, so I can remember it again.	17. 3%	62. 2%	20.5%	0%
3.	I am good at and enjoy making mind maps in English learning.	10.2%	51.2%	37.8%	0.8%
4.	I understand an English material by reading rather than listening to the audio.	24.4%	56, 7%	17,3%	1,6%
5.	I can remember the English learning better when I write it several times.	21.3%	61. 4%	16.5%	0.8%
6.	I obtain new English vocabulary by reading the materials that are related to English learning online (read the journal, article, and news) or offline (read the book).	35.4%	59.1%	5.5%	0%
7.	I understand English learning better when the lecturer writes on the board instead of listening to the lecturers' explanation.	24.4%	55.9%	18.9%	0.8%