



Accepted: January 2023

Published: April 2024

Research Article

The Comparative Impact of Information Gap Tasks on the Reading Comprehension of Iranian Impulsive and Reflective EFL Learners**Mehrdad Rezaee**

Department of English Language, Central Tehran Branch, Islamic Azad University, Tehran, Iran

Email: mehr351@yahoo.com

Phone: +98 912 1963802

ORCID: 0000-0002-5604-3064

Mohammad Iman Askari*

Department of English Language, Central Tehran Branch, Islamic Azad University, Tehran, Iran

Email: mi.askari@iauctb.ac.ir

Phone: +98 912 6054144

ABSTRACT

The present study was an attempt to investigate the comparative effect of Information Gap Tasks on Impulsive and Reflective EFL Learners' Reading Comprehension. Accordingly, 60 male and female EFL learners were selected out of an initial 100 intermediate learners based on their performance on a piloted of PET test took part in the study. The participants were divided into two homogenous groups in terms of language proficiency with 25 reflective and 35 impulsive learners in each. These two groups were randomly assigned as the impulsive and reflective learners based on the result of Eysenck Personality Questionnaire Revised (EPQR). All the participants in the two groups received a teacher-made multiple-choice test of reading comprehension which was administered at the outset. The learners in the two instructional groups received the same test as the posttest. Both groups were taught by the same teacher and they used the same course book. Moreover, they received the same hours of instruction and teaching aids in the same physical environment; therefore, the most significant point of departure in the two experimental groups in the present study was their personality style. The findings of this study revealed that the participants' reading comprehension improved significantly among the reflective group compared to the impulsive group. Meanwhile, the more reflective EFL learners were, the more meta-cognitively aware they were of reading strategy use. Moreover, the reflective learners reported a significantly higher reading scores compared to the impulsive learners following the instruction. The findings could be used by EFL teachers and syllabus designers to develop efficient vocabulary teaching procedures.

Keywords: Information Gap, Reflective, Impulsive, EFL Learners

*** Corresponding Author**

1. INTRODUCTION

Reading comprehension development is and indeed has always been one of the major concerns in foreign language teaching and learning (Henning & Ewerth, 2018). The reason underlying this importance is of course very straightforward: “reading is the most significant source of gaining information concerning L2 vocabulary, grammar, and cultural knowledge” (Mandak, Light, & Boyle, 2018, p. 206). Even, the building blocks of language learning and communication which are lexis, that is, word and word combination are properly found through reading comprehension (Richards & Rodgers, 2001). It is thus no wonder then that the ELT literature is simply overwhelmed by an ever-growing array of studies on reading comprehension (e.g., Abi & Kömür, 2018; Beiranvand & Mall-Amiri, 2018; Mandak, Light, & Boyle, 2018; Marashi & Mehdizadeh, 2018; Satriawan, Budiarto, & Siswono, 2018; Slater, 2018).

learners might know how to read a book, newspaper, the internet, and many kinds of texts. However, reading skill is considered as the ability of an individual to read, comprehend, and interpret written words on a page of an article or any other reading material (Askari, Khoshshima, Khatin-zadeh & Banaruee, 2017). Boulware, Carreker, Thornhill, and Joshi (2007) stated that “proficiency in reading is a key target of schooling and major prerequisite for learning, both within and beyond the context of education” (p. 70).

Recently, many studies have focused on how to enhance the reading texts through increasing intake of information (Abi & Kömür, 2018; Ashraf & Arabi, 2017; Ehri, 2005; Magnusson, Roe & Blikstad-Balas, 2019). The role of academic reading comprehension is undeniable in this regard, as low achieving language learners suffer from poor reading comprehension (Han, Park, & Combs, 2008). The issue is at the stake even among postgraduate English students who face complex difficulties in reading comprehension and content retention. In this view, many cross dimensional aspects of learning framing from vocabulary acquisition to contextual reading comprehension and paratextual retention for communicative enhancement were proposed as an attempt to develop a metacognitive and paratextual strategies to cope with the case (Seifoori, 2023, 2024a & 2024b). However, comprehension also requires effective use of strategic processes, such as metacognition and comprehension monitoring. Likewise, personality traits might affect ones’ reading comprehension ability and it appears that such traits play a larger influence in improving reading comprehension skills for young readers (Abi & Kömür, 2018).

In comprehension skills, mature readers are able to progress efficiently from the stage of learning to read to the ultimate goal of reading to learn (Shi, Zhang, & Wang, 2019). Through information gap tasks “students share their information in the classroom and need to complete it when learners are missing a piece of the necessary” (Larsen-Freeman, 2000, p. 148).

An individual can share certain information with others in order to solve a problem in an information gap activity. Jigsaw activity, problem solving, decision making, opinion-gap and information-gap are some of the effective tasks which lead the learners to improve their linguistics and negotiation skills. One example of information-gap activity is pair work in which each member has a part of information and tries to convey it verbally to the other (Prahbu, 1987).

Pica, Kanagy, and Falodun (1993) argued that information-gap tasks enhance the level of learning significantly. Such tasks set up conditions for learners to modify their interaction through the negotiation of meaning. Cele-Murcia (2001) described the ability to read and comprehend as a task which requires the reader to “draw information from a text and combine it with information and expectations that the reader already has. This interaction of information is a common way to explain reading comprehension” (P. 188).

Wang (2018) pointed that information gap as “a basic concept in contemporary methodology” (p. 33). He argues that “when one student talks to another, we feel that it is important that new information should be transmitted across the ‘gap’ between them” (p. 36).

Information gap tasks have many advantages and one of them is that learners engage in real world contexts, they can use four skills: reading, listening, speaking, and writing. The focus of the information gap task is on the comparison studies on learners’ negotiation, collaboration, and encoding of form, function,



and meaning for different tasks and classroom groupings (e.g., Doughty & Pica, 1986; Swain & Lapkin, 2001). In reading comprehension information gap tasks are supported by metacognition which refers to the control of cognitive strategies which help the reader process new information from a text (Brick, MacIntyre, & Schücker, 2019). In addition, children have various cognitive learning strategies to correct their intellect and skills and information gap tasks are the place for them to challenge their previous knowledge against the new information they receive.

As mentioned above personality traits and cognitive styles are interwoven and information-gap tasks have proved effective in improving reading comprehension of EFL learners (Marashi & Mehdizadeh, 2018). A cognitive style is characterized by either reflection or reflectivity, a tendency to consider and deliberate over alternative solutions to problems, or impulsivity, a tendency to respond spontaneously without deliberation, especially in situations of uncertainty (Altun & Cakan, 2006). Teachers can measure their learners' cognitive style by analyzing patterns of response and errors they make in simple tasks (Boulware et al., 2007).

Here are some examples of different cognitive learning strategies: Some children would like to answer very rapidly rather than a right answer. In this case, your child is learning in an impulsive way. Most of them find concentrating and focusing on their lessons very difficult. Confusions are very common to the children and through missing concentration, children cannot focus on their lessons for a long time. Likewise, impulsive individuals have more errors but shorter response times (Beiranvand & Mall-Amiri, 2018).

Quick paced and crisp assignments may fit the mental makeup of such children (Brockbank, McGill & Beech, 2017). In general, reflective learners often have too much concern with their learning process. They seem to be clearly focused, and almost it is impossible to make quick decisions their deep concentration levels. Generally, a reflective person produces relatively few errors but long response times (Boulware et al., 2007). In fact, they are known for their delayed responses and decisions that eventually make them difficult for quick learning. Reflective learners are very methodic and slow type of learners, while impulsive ones are very quick and disorganized learners. Impulsive learners are globalized in their thinking process and they can create a quick mental picture of patterns and objects or even outlines of lessons (Brockbank et al., 2017).

If the results demonstrate a significant difference between the reading comprehension ability of the two learning styles of impulsivity and reflectivity under the effect of information gap tasks, such tasks could be encouraged in the EFL classroom thus offering insightful suggestions to EFL test developers as well as those involved in educational administrations. It is hoped that the results of this study be beneficial for teachers and instructors. They may consider using the information-gap tasks and its different materials in the classroom. It may help teachers to design a guideline for different tasks in the classroom such as information gap tasks which can be useful in teaching reading comprehension.

This may encourage teachers to design suitable contexts and use different material and techniques of information-gap tasks such as the internet in order to improve the students' performance in reading comprehension skill. It can be used to increase the students' achievement in the English language and improve their reading comprehension.

On the other hand, if the results show no such difference, it could be deciphered that the tasks focused on have no specific effect on the personality traits thus a specific point could be clarified in ELT circles. In either case, EFL teachers, syllabus designers, curriculum planners, as well as materials developers might use the results of the study in their own activities and contribute to the development of ELT in the context of Iran.

Research Question

With regard to the main intention of the present research, the following research question was posed:

Q. Is there any significant difference between the impact of information-gap tasks on impulsive and reflective EFL learners' reading comprehension?



2. METHODOLOGY

2.1. Design

This study was a quasi-experimental one, due to the fact that the researcher selected the participants based on convenient non-random sampling but randomly assigned them into two experimental groups. Furthermore, it enjoyed a pretest posttest comparison design. Accordingly, the study involved one independent variable (information-gap tasks) and one dependent variable (EFL learners' reading comprehension). The participants' language proficiency was considered as the control variable of the study, while the moderator variables were the impulsive and reflective styles. Furthermore, age and gender were not considered as controlled variables.

2.2. Participants

The main participants of the present study were 60 male and female English language learners, selected out of an initial 100 intermediate EFL learners based on their performance on a piloted version of Preliminary English Test (PET) language (whose scores fell one standard deviation below and above the mean) as well as their scores on a questionnaire identifying impulsive and reflective individuals. They were English language learners who attended Safir language institute were within the age range of 18 to 25. They were divided into two homogenous classes with 28 to 32 individuals in each class for the purpose of facilitating teaching and learning process. Group A. included 28 learners (15 reflective and 13 impulsive learners) and group B. included 32 learners (10 reflective and 22 impulsive learners). It is worth mentioning that based on the results of Eysenck Personality Questionnaire Revised (EPQR) in both of the classes altogether 25 learners were reflective, while 35 learners were impulsive. Table 1 below best shows the distribution of participants in the study after the process of subject selection. As the table shows 39 participants were female and 21 were male.

Table 1

Description of the Study Participants

	Group	Male	Female
Reflective	25	13	12
Impulsive	35	8	27
Total	N=60	N=21	N=39

Another 30 learners sharing almost the same English language background with the main participants of the study participated in the piloting of the tests utilized in this study. Furthermore, one of the researcher's colleagues who had been teaching the intermediate level at that institute for five years and held an MA degree in TEFL cooperated with the researcher in rating the writing tests. Their inter-rater reliability had been established a priori.

2.3. Instruments and Materials

To fulfill the purpose of the current study, the following instrumentations and materials were used:

Tests

Preliminary English Test (PET)

To begin with, the researcher utilized a piloted sample of PET to select a homogenous sample of participants based on their level of proficiency prior to the study.

Test of Reading Comprehension

To make sure that the participants were not familiar with the texts to be taught and considered them as unseen texts, a teacher-made test of reading comprehension was administered at the outset. This multiple-choice test comprising 50 items was developed by the researcher based on the texts appearing in the learners' textbook (described below) which were taught during the treatment procedure.



Eysenck Personality Questionnaire Revised (EPQR)

Eysenck Personality Questionnaire Revised (EPQR) was used as the fourth instrument in the present study in order to identify reflective and impulsive personality traits among the EFL learners taking part in the study. Eysenck Personality Questionnaire Revised-Short Form (EPQR-S) (Eysenck, Eysenck & Barrett, 1985) is a self-reported personality questionnaire and has 48 items; 12 for each of the traits of Neuroticism (N) which includes both impulsivity and reflectivity, Extraversion (E) which includes both extraversion and introversion, Psychoticism (P), and L2 for the lie (L) scale. Each question has a binary response, 'yes' or 'no'.

Course Book

The course book used in the present study was the intermediate level book of the *Top Notch* (Saslow & Ascher, 2013). Units 6-9 of Book 2 of the series were used in the present study. *Top Notch* is an innovative four-level series for adults and young adults, taking students from beginning to intermediate levels and based on the Common European Framework of Reference for languages, the series covers A1 to B1.

2.4. Data Collection and Analysis Procedures

After collecting the data, some descriptive and inferential data analysis procedures were carried out in order to analyze the data. All tests underwent descriptive statistics including their mean and standard deviation including the reliability through KR-21. Also, the inter-rater consistency of the two raters scoring the writing section of the PET was carried out by using of the Pearson Product correlation.

An independent-samples t-test was run to compare the reflective and impulsive groups' mean on PET test in order to prove that the two groups were homogenous in terms of their general language proficiency prior to the administration of the treatment. A one-way ANCOVA was run to compare the reflective and impulsive groups' means on the posttest of reading comprehension after controlling for the effect of their entry reading ability as measured through the pretest.

3. RESULTS AND DISCUSSIONS

Testing Null-Hypothesis

The null-hypothesis raised in this study stated that there was not any significant difference between impulsive and reflective EFL learners' performance on the reading comprehension test. A one-way ANCOVA was run to compare the reflective and impulsive groups' means on the posttest of reading comprehension after controlling for the effect of their entry reading ability as measured through the pretest. The results of one-way ANCOVA ($F(1, 57) = 15.68, p = .000, \text{partial } \eta^2 = .216$ representing a large effect size) (Table 2) indicated that the reflective group significantly outperformed the impulsive group on the posttest of reading comprehension after controlling for the effect of pretest. Thus, **the null-hypothesis** as "there was no significant difference between the impact of information-gap tasks on impulsive and reflective EFL learners' reading comprehension" **was rejected**. It should also be noted that the significant F-value associated with the covariate (pretest) ($F = 21.04, p = .000$) indicated that the pretest was corrected chosen as a covariate, i.e. it had a significant role in this model.

Table 2

Tests of Between-Subjects Effects; Posttest of Reading by Groups with Pretest

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
RC	457.813	1	457.813	21.045	.000	.270
Group	341.223	1	341.223	15.686	.000	.216
Error	1239.970	57	21.754			



The findings of this study revealed a significant difference between the impact of information-gap tasks on impulsive and reflective EFL learners' reading comprehension. Based on the obtained result it can be claimed that the reflective group had a higher mean than the impulsive group on the posttest of reading comprehension after controlling for the effect of pretest. The present finding is in line with those of a good number of previous studies focusing on the effects of information-gap tasks on impulsive and reflective EFL learners' reading comprehension. Information gap tasks, as shown in the present study, are among the most productive tasks for SLA as they enhance interaction which in its own turn leads to a specific goal or outcome. This is in line with some of the prominent studies in the ELT domain (Ellis, 2003; Pica, Kanagy, & Falodum, 1993). Likewise, information-gap tasks rely on a verbal exchange of information to reach their goal (Long, 1980). As Varonis and Gass (1985) argued, information-gap tasks set up conditions for participants to adapt their interaction through the negotiation of meaning. This notion signifies why being reflexive or impulsive is important. It seems that impulsive individuals are not patient enough to have an effective meaning negotiation. In addition, low self-control is presumed to be associated with the stronger influence of impulsive processes on behavior (Cheval et al., 2016). This might show why in the present study, reflective learners could be more benefited from the instruction presented through information gap tasks.

In terms of metacognitive awareness concerning reading comprehension, the finding of the present study is in line with Soltani, Hadidi, and Seifoori's (2015) study on Iranian EFL learners' reflectivity/impulsivity styles and their metacognitive awareness which found that "reflective participants were more metacognitively aware of their reading strategy use as compared to the impulsive ones" (p. 103). In general, it can be argued that the more reflective learners are, the more they become metacognitively aware of their reading strategy use (Abi & Kömür, 2018; Mokhtari & Perry, 2008; Mokhtari, Sheorey, & Reichard, 2008; Oxford, 1990; Soltani et al., 2015).

With regard to the aforementioned studies, it can be argued that greater metacognitive awareness of learners leads to better reading comprehension and in turn, reflective learners have shown to be more metacognitively aware of reading strategy use (Abi & Kömür, 2018; Slater, 2018; Soltani et al., 2015). Therefore, it is logical to assume that reflective learners are better readers and are the ones who could gain more from information-gap tasks in reading compared to the impulsive readers who, in the present study showed to be less successful achievers. This conclusion is in line with Quezada and Westmacott (2019) who suggested that reflective students were slower but more accurate than impulsive students in reading and with Beiranvand and Mall-Amiri (2018) who found that reflective learners could significantly outperform the impulsive students on the posttest of listening comprehension suggesting that reflective learners make fewer errors in listening than impulsive ones.

Also, the finding of the present study is in line with Brown's (2012) finding that revealed learners' preferences and tendencies play a great role in language learning for example learners who are reflective can perform some kinds of learning activities better than learners who are impulsive. In addition, the present results are in line with Nietfeld and Bosma's (2003) study on examining the self-regulation of impulsive and reflective response styles on academic tasks. As they have reported no relationship was found between subjects' self-report impulsivity as measured by the EPI and response style on the cognitive tasks. Reflectivity, both on the cognitive tasks and self-report, was found to be significantly related to agreeableness.

However, the results of this study is in contrast with the findings obtained by some previous researchers who believed impulsivity/reflectivity tendencies may not play a role in different aspects of language learning such as Talebi's (2012) results of the study which indicated that reflectivity/impulsivity may not play a great role in the use of formulaic sequences in news summary writing. Also, the result of this study was not in line with the findings of Ghapanchi and Dashti's (2011) study which revealed no significant difference between low, medium and high impulsive learners and their performance in display,



referential, and inferential reading comprehension questions. Another contrasting finding comes from Razmjoo and Mirzaei's (2009) study which indicated no relationship between reflectivity/impulsivity and language proficiency of the learners.

In the present study, information-gap tasks were employed as a medium to facilitate teaching reading comprehension to the EFL learners with different personality traits. This process is in line with Doughty and Pica's (1986) study which proved that information-gap tasks could facilitate second language acquisition as they provide a ground for exchanging of information. When this comes to the reading skill in which the information should be sought in and driven from the texts, the role of personality styles gets more significant.

In sum, although some of above mentioned studies were not in favor of the impact of personality styles (impulsivity/reflectivity) in developing L2 reading comprehension and benefiting from specific tasks and techniques such as information-gap tasks, present investigation made it clear that impulsivity/reflectivity tendencies may play a basic role in metacognitive awareness of reading strategy use between EFL learners.

4. CONCLUSION

The finding of this study revealed that the participants' reading comprehension improved significantly among the reflective group compared to the impulsive group. Based on the findings of this study, it might be concluded that reflectivity/impulsivity styles can affect EFL learners' metacognitive awareness of reading strategy use, meaning that, the more reflective EFL learners were, the more meta-cognitively aware they were of reading strategy use whereas the more impulsive these participants were the less meta-cognitively aware they were of reading strategy use. Moreover, the reflective learners reported a significantly higher reading scores compared to the impulsive learners following the instruction.

REFERENCES

- Abi, M., & Kömür, Ş. (2018). Tracing the changes in reading scores and learning style preferences through reading strategy training. *Eurasian Journal of Applied Linguistics*, 4(2), 213-237.
- Altun, A., & Cakan, M. (2006). Undergraduate students' academic achievement, field dependent/independent cognitive styles and attitude toward computers. *Educational Technology and Society Journal*, 3(15), 56-64.
- Ashraf, H., & Arabi, M. (2017). Assessing speed reading strategies of impulsive vs. reflective EFL learners. *Teaching English as a Foreign Language*, 2(3), 1-24.
- Askari, A., Khoshsima, H., Khatin-Zadeh, O., & Banaruee, H. (2017). Learners' factors in l2 reading comprehension. *Global Journal of Educational Studies*, 3(2), 70-82.
- Beiranvand, F., & Mall-Amiri, B. (2018). The comparative effect of using listening strategies on reflective and impulsive visually impaired learners' listening comprehension. *Journal of English Language Pedagogy and Practice*, 11(22), 73-54.
- Boulware, G.R., Carreker, S., Thornhill, A., & Joshi, R. (2007). Instruction of Metacognitive strategies enhances reading comprehension and Vocabulary achievement of third-grade students. *Reading Teacher*, 61(1), (pp. 70-77). <http://dx.doi.org/10.1598/RT.61.1.7>.
- Brick, N., MacIntyre, T., & Schücker, L. (2019). Attentional focus and cognitive strategies during endurance



- activity. *Endurance performance in sport: Psychological theory and interventions*, 23, 113-124.
- Brockbank, A., McGill, I., & Beech, N. (2017). Reflective learning in practice. In A. Brockbank & I. McGill (Eds.), *Reflective learning in practice* (pp. 18-28). London: Routledge.
- Brown, H. D. (2012). *Principles of language learning and teaching* (3rd ed.). New York: Longman.
- Celce-Murcia, M. (2001). *Teaching English as a second or foreign language*. Boston: Heinle & Heinle.
- Cheval, B., Sarrazin, P., Isoard-Gautheur, S., Radel, R., & Friese, M. (2016). How impulsivity shapes the interplay of impulsive and reflective processes involved in objective physical activity. *Personality and Individual Differences*, 96, 132-137.
- Doughty, C., & Pica, T. (1986). Information gap tasks: Do they facilitate second language acquisition? *TESOL Quarterly*, 20, 305-325.
- Ehri, L. C. (2005). Learning to read words: Theory, findings, and issues. *Scientific Studies of reading*, 9(2), 167-188
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.
- Ghapanchi, Z., & Dashti, Z. (2011). The relationship between cognitive style of impulsivity and display, referential, and inferential reading comprehension questions among Iranian EFL university students. *Canadian Social Science*, 7(6), 227-233.
- Han, Z., Park, E.S., & Combs, C. (2008). Textual enhancement of input: Issues and possibilities. *Applied Linguistics*, 29(4), 597-618.
- Henning, C., & Ewerth, R. (2018). Estimating the information gap between textual and visual representations. *International Journal of Multimedia Information Retrieval*, 7(1), 43-56.
- Larsen-Freeman, D. (2000). Second language acquisition and applied linguistics. *Annual Review of Applied Linguistics*, 20, 165-181.
- Long, M. H. (1980). Inside the "black box": Methodological issues in classroom research on language learning. *Language Learning*, 30(1), 1-42.
- Magnusson, C. G., Roe, A., & Blikstad-Balas, M. (2019). To what extent and how are reading comprehension strategies part of language arts instruction? A study of lower secondary classrooms. *Reading Research Quarterly*, 54(2), 187-212.
- Mandak, K., Light, J., & Boyle, S. (2018). The effects of literacy interventions on single-word reading for individuals who use aided AAC: a systematic review. *Augmentative and Alternative Communication*, 34(3), 206-218.
- Marashi, H., & Mehdizadeh, P. (2018). Using information-gap tasks to improve reading: An analysis of cognitive styles. *Language Horizons*, 2(1), 87-102.
- Mokhtari, K., & Perry, B. (2008). Using Rasch analysis to calibrate students' metacognitive awareness and use of reading strategies. In K. Mokhtari & R. Sheorey (Eds.), *Reading strategies of first- and second-language learners: See how they read* (pp. 678-4). Norwood, MA: Christopher-Gordon Publishers
- Mokhtari, K., Sheorey, R., & Reichard, C. (2008). Measuring the reading strategies of first and second language readers. In K. Mokhtari & R. Sheorey (Eds.), *Reading strategies of first and second-language learners: See how they read* (pp. 43-65). Norwood, MA: Christopher-Gordon.
- Nietfeld, J., & Bosma, A. (2003). Examining the self-regulation of impulsive and reflective response styles on academic tasks. *Journal of Research in Personality*, 32, 118-140
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know?* New York: Newbury House.
- Pica, T., Kanagy, R., & Falodun, J. (1993). Choosing and using communication tasks for second language instruction. In G. Crookes & S. M. Gass (Eds.), *Tasks and language learning* (pp. 9-34). London: Longman.
- Prahu, N. S. (1987). *Second language pedagogy*. Oxford: Oxford University Press.
- Quezada, C., & Westmacott, A. (2019). Reflections of L1 reading comprehension skills in university academic grades for an undergraduate translation program. *The Interpreter and Translator Trainer*,



1-16.

- Razmjoo, S. A., & Mirzaei, R. (2009). On the relationship between dimensions of reflectivity/impulsivity as cognitive styles, language proficiency and, GPAs among the Iranian EFL university learners. *Iranian Journal of Language Studies*, 3(1), 105-124.
- Saslow, J., & Ascher, A. (2013). *Top notch series: English for today's world* (3rd ed.). New York, White Plains: Pearson Education.
- Satriawan, M. A., Budiarto, M. T., & Siswono, T. Y. E. (2018). Students' relational thinking of impulsive and reflective in solving mathematical problem. *Journal of Physics: Conference series*, 947(1), 120-130.
- Shi, Y., Zhang, Q., & Wang, S. (2019, May). The application of information gap in English teaching in middle school. In W. Strielkowski & J. Cheng (Eds.), *Proceedings of the 5th International Conference on Humanities and Social Science Research (ICHSSR 2019)* (pp. 2019-222). New York: Atlantis Press.
- Slater, T. (2018). *Effects of a scripted and intense reading intervention program on the reading comprehension of fifth grade students with learning disabilities*. Unpublished master's thesis, Rowan University, Glassboro, New Jersey, The U.S.A
- Seifoori, Z. (2024a), Postgraduate English students' reading comprehension and content retention across major: links to metacognitive strategy use. *International Journal of Language and Translation Research*, 4(1), pp. 57-75.
- Seifoori, Z. (2023). Undergraduate ESP students' reading comprehension and metacognitive awareness across discipline and gender, *Journal of Teaching English Language Studies*, 8(3), pp. 55-66.
- Seifoori, Z. (2024b). Iranian bilingual EFL learners' willingness to communicate across gender, *Journal of New Trends in English Language Learning (JNTELL)*, 3 (3), pp. 1-7.
- Soltani, K., Hadidi, N., & Seifoori, Z. (2015). Iranian EFL learners' reflectivity/impulsivity styles and their metacognitive awareness of reading strategy use across gender. *Instruction and Evaluation Journal*, 31, 103-124.
- Swain, M. and S. Lapkin. 2001. Focus on form through collaborative dialogue: Exploring task effects. In M. Bygate, P. Skehan and M. Swain (eds.), *Researching pedagogic tasks: Second-language learning, teaching and testing*. London: Longmans, pp. 99–118.
- Talebi, M. (2012). *The relationship between upper-intermediate Iranian EFL learners' reflectivity style and use of formulaic expressions in news summary writing*. Unpublished master's thesis, Azad University of Tabriz, Tabriz, Iran.
- Varonis, E. M., & Gass, S. (1985). Non-native/non-native conversations: A model for negotiation of meaning. *Applied linguistics*, 6(1), 71-90.
- Wang, S. (2018). On the principle and design of information gap task in foreign language teaching *Shandong Foreign Language Teaching*, 2(3), 33-38.

