

THE EFFECTIVENESS OF JIGSAW LEARNING
METHOD ON STUDENTS' READING
COMPREHENSION IN ONLINE
LEARNING

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SULTAN IDRIS EDUCATION UNIVERSITY

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THE EFFECTIVENESS OF JIGSAW LEARNING METHOD ON STUDENTS'
READING COMPREHENSION IN ONLINE LEARNING

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ABSTRACT

Jigsaw Learning Method as one of the cooperative learning strategies is known to be effective in promoting active learning and students' engagement in the classroom. While there are many studies conducted to investigate the effects of the Jigsaw method in the classroom, studies that focuses on online learning environment are found to be limited. This quasi-experimental study aimed to examine the effectiveness of the Jigsaw Learning Method on students' reading comprehension in online learning. A total of 50 students participated in the study where they were divided and assigned into experimental and control groups. The experimental group received treatment classes of Jigsaw Learning Method for about 4 weeks. Pre-test and post-test were administered to the students to investigate any significant difference after the intervention of the Jigsaw Learning Method. A survey was also conducted in order to attain knowledge on the students' perceptions of the Jigsaw Learning Method on reading comprehension when implemented in online learning. The quantitative data of pre-test, post-test and questionnaire were analysed statistically using SPSS software version 26 while thematic analysis were conducted on the qualitative data detained from the open-ended questions of the questionnaire. The findings shows that there was a significant difference in the reading achievement test between the pre-test and (M=12.60, SD=2.22) and the post-test (M=14.12, SD=1.92), $t(24) = -3.42, p = .002$ for experimental group. However, there was no significant difference in the mean scores between experimental and control group. The results also showed that there was significant improvement in reading comprehension for narrative text genre as compared to expository text genre. The experimental group participants also perceived the Jigsaw Learning Method positively in online classroom. In conclusion, the implementation of Jigsaw Learning Method in online environment is effective in improving student's reading comprehension. This method is feasible as a cooperative learning method to be implemented when learning English in an online learning environment at higher institutions.



KEBERKESANAN KAEDAH PEMBELAJARAN JIGSAW TERHADAP KOMPREHENSI MEMBACA PELAJAR DALAM PEMBELAJARAN ATAS TALIAN

ABSTRAK

Kaedah Pembelajaran Jigsaw sebagai salah satu strategi pembelajaran kooperatif diketahui berkesan dalam menggalakkan pembelajaran aktif dan penglibatan pelajar di dalam kelas. Walaupun terdapat banyak kajian yang dijalankan untuk menyiasat kesan kaedah Jigsaw dalam kelas, kajian yang memberi tumpuan kepada persekitaran pembelajaran atas talian adalah terhad. Kajian kuasi eksperimen ini bertujuan untuk mengkaji keberkesanan kaedah pembelajaran Jigsaw terhadap kefahaman bacaan pelajar dalam pembelajaran atas talian. Seramai 50 pelajar telah mengambil bahagian dalam kajian ini di mana mereka dibahagikan ke dalam kumpulan eksperimen dan kawalan. Kumpulan eksperimen menerima kelas rawatan kaedah pembelajaran Jigsaw selama kira-kira 4 minggu. Ujian pra dan ujian pasca telah diberikan kepada pelajar untuk menyiasat sebarang perbezaan yang signifikan selepas intervensi kaedah pembelajaran Jigsaw. Pengkaji juga menjalankan tinjauan untuk mengetahui persepsi pelajar terhadap kaedah pembelajaran Jigsaw terhadap pemahaman bacaan apabila dilaksanakan dalam pembelajaran atas talian. Data kuantitatif ujian pra dan ujian pasca serta soal selidik dianalisis secara statistik menggunakan perisian SPSS versi 26 manakala analisis tematik dijalankan ke atas data kualitatif yang diperolehi daripada soalan terbuka soal selidik. Dapatan kajian menunjukkan terdapat perbezaan yang signifikan dalam ujian pencapaian membaca antara markah ujian pra ($M=12.60$, $SD=2.22$) dan ujian pasca ($M=14.12$, $SD=1.92$), $t(24) = -3.42$, $p = .002$. bagi kumpulan eksperimen. Walau bagaimanapun, tidak terdapat perbezaan yang signifikan bagi skor min antara kumpulan eksperimen dan kawalan. Hasil kajian juga menunjukkan terdapat peningkatan yang ketara dalam pemahaman bacaan bagi genre teks naratif berbanding genre teks ekspositori. Peserta kumpulan eksperimen juga mempunyai persepsi yang positif terhadap kaedah pembelajaran Jigsaw atas talian. Kesimpulannya, pelaksanaan kaedah pembelajaran Jigsaw dalam persekitaran atas talian adalah berkesan dalam meningkatkan kefahaman bacaan pelajar. Kaedah ini boleh dilaksanakan sebagai salah satu kaedah pembelajaran kooperatif yang akan dilaksanakan dalam persekitaran atas talian untuk belajar bahasa Inggeris di institusi tinggi.

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LIST OF ABBREVIATIONS

CL	Cooperative Learning
EFL	English as Foreign Language
ESL	English as Second Language
MOHE	Ministry of Higher Education
SOP	Standard Operating Procedures
STAD	Student Teams-Achievement Divisions
TGT	Teams-Games-Tournaments



APPENDIX LIST

A READING ACHIEVEMENT TEST

B SURVEY ON THE EFFECTIVENESS OF JIGSAW LEARNING
METHOD ON READING COMPREHENSION IN ONLINE
LEARNING ENVIRONMENT

C JIGSAW LEARNING LESSON PLANS





CHAPTER 1

INTRODUCTION



1.0 Background Information

English is the second language of Malaysia and is taught at every level of education. Besides being a requirement to graduate, English is also acknowledged as important when applying for a job. In a study by Zainuddin, Pillai, Dumanig, and Phillip (2019), investigating employers and students' perceptions on the importance of English language, it was found that the language is very essential for employability. Hence, it is essential for learners to develop English communicative competence in order to expand their career opportunities.





While learning English, learners will eventually be exposed to reading materials as a source of learning. However, without the necessary reading skills, learners may have difficulties in understanding reading materials. According to Seraye (2016), reading skill is essential to expand an individual's knowledge. This is because understanding a text while reading needs comprehension skills. Koch and Spörer (2017) also stated the necessity of reading skills is to be able to learn from text. The skills are also important for lifelong learning.

For learners to comprehend reading materials, certain skills are needed to be utilised by the learners to assist better interpretation of meanings. According to Elleman and Oslund (2019), four of the most important components in the theories of reading comprehension are inference, knowledge, vocabulary and comprehension monitoring. As learners progress in their study, the level of reading materials that they need to comprehend becomes more complex such as in the case of unfamiliar vocabularies and limited background knowledge which calls for greater effort in interpreting the meaning. Other than teaching reading strategies to learners, instructors should also implement teaching strategies to assist learners. According to Wibowo, Syafrizal and Syafryadin (2020), reading comprehension teaching strategies are essential in the learning process and can influence learners' reading comprehension.

One of the reading teaching strategies commonly used by English as Second Language (ESL) practitioners in classroom settings is cooperative learning (CL). According to Sumtsova, Aikina, Bolsunovskaya, Phillips, Zubkova, and Mitchell (2018), collaborative and cooperative learning are regarded by modern pedagogical





community as important elements in the process of successful knowledge and acquiring practical experience. The Jigsaw learning method is a CL strategy that has been applied in classroom to encourage students to participate in active learning. It is frequently utilised by educational practitioners. According to Madzlan (2019), learners are able to understand the course better through Jigsaw Learning Method. The implementation of Jigsaw as intervention in educational research is common as it promotes learners' engagement in a face-to-face classroom.

Although many studies have been conducted to investigate the effectiveness of the Jigsaw Learning Method on learners' performance in reading comprehension, studies that focuses on its effects in the online environment are however found to be very limited. Therefore, this study intended to investigate the effects of the Jigsaw Learning Method on learners' reading comprehension in the online environment.

1.1 Problem Statement

Due to the recent pandemic outbreak, the Malaysian Ministry of Higher Education (MOHE) has taken preventive measures to avoid the spread of the virus in higher education institutions by shifting the physical class mode to online learning (Landau, 2020). This shifting has resulted in the emergence of challenges faced by the stakeholders of educational institutions. However, according to Sumtsova *et. al.* (2018), online learning incorporates methodological practices and modern educational technology, such as teamwork, collaborative learning, a dynamic cognitive process, and





the ability to work with information from multitude of sources. The technologies are seen to be extremely beneficial and suited for online learning.

Chahkandi (2021) who conducted a study to understand the perceptions of English as Foreign Language (EFL) faculty on the design and execution of online learning during COVID-19, found that one of the challenges faced was keeping students engaged in classroom practices. A study by Ulum (2021) on the challenges of distant education faced during COVID-19 found that participants mainly express concerns in their lack of authentic communication skills which include negotiating meaning and taking part in collaborative work with other participants.

The challenges of learning in online environment faced by students also ensue the scope of reading comprehension. González, Alberto, and Medina (2012) conducted a study to investigate the interaction of students in an English as Foreign Language (EFL) reading comprehension of a distance web-based course. Their findings show that interaction between the students was the weakest throughout the course. The feeling of isolation was only lessened when the sense of community among the students rose after the teacher encouraged them to participate together.

The participants in study by Chahkandi (2021) suggested a few online classroom practices to promote students' engagement such as the use of attractive multimedia content, cooperative learning, collaborative projects and Jigsaw tasks. There are few studies that have been conducted to explore the effects of Jigsaw Learning Method in online learning. In a study by Chang and Benson (2020), it was found that the Jigsaw Learning method on cloud platforms has an impact on group





learning during a collaboration. Meanwhile, Kasyadi, Lapasau and Virgana (2020) found that the implementation of the Jigsaw type cooperative learning model along with additional homework provided has improve the students' learning of mathematics in online learning.

In regards to reading comprehension, although there are many studies conducted to explore the effects of the Jigsaw Learning Method (Ahmada, 2019; Baneng, 2020; Barbosa *et al.*, 2020; Butros Abed, 2019; Chang & Benson, 2020; Halimah, *et. al.*, 2019; Hidayati & Rohayati, 2017; Namaziandost, *et.al.*, 2020; Zubaidah, *et.al.*, 2018), there is however only a limited number of studies conducted on similar scopes of study but within the online learning environment. Hence, this research intends to fill this gap by implementing the Jigsaw Learning Method within an online classroom environment to investigate its effects on learners' reading comprehension. The findings of this study could provide insights to stakeholders of higher education institutions on the feasibility of Jigsaw Learning Method for teaching and learning of reading comprehension in online setting.

1.2 Purpose of the Study

The purpose of this study is to explore the effects of implementing the Jigsaw Learning Method on learners' reading comprehension in online environment. CL strategy is one of the approaches employed to foster active learning in classroom as part of the 21st century learner-centred education. Therefore, this research aimed to find how the Jigsaw Learning Method as the CL strategy affects the performance of the students in





reading comprehension skills when learning in an online classroom. In addition, this research also aimed to understand the learners' perspectives on the employment of the Jigsaw learning Method in their English online class.

1.3 Research Objectives

This research aims to fulfil the following objectives:

1. To investigate the effectiveness of the Jigsaw Learning Method on students' reading comprehension in online learning.
2. To investigate the effectiveness of the Jigsaw Learning Method on students' reading comprehension skills of different text genres in online learning.
3. To investigate students' perceptions of the Jigsaw Learning Method for reading comprehension in online learning.

1.4 Research Questions

The research questions posed in this research are:

1. How effective is the Jigsaw Learning Method in improving students' reading comprehension in online learning?
2. How effective is the Jigsaw Learning Method on the reading comprehension of different text genres in online learning?





3. What are students' perceptions of the Jigsaw Learning Method for reading comprehension in online learning?

1.5 Significance of the Study

This study posit several benefits to various stakeholders. Firstly, this study may be of a great benefit to ESL practitioners. The findings of the study may be able to recommend the best practice in incorporating the Jigsaw learning as a CL strategy for ESL online classroom. The Jigsaw activities require careful planning and execution, hence understanding the challenges of its implementation in online learning through this study will allow practitioners to consider ways of incorporating it in the classroom setting.

Secondly, it may benefit learners who are involved in online learning. While the study emphasizes the effects of the Jigsaw Learning Method as a form of teaching strategy for reading comprehension, the findings may also increase the awareness of learners on the benefits of CL.

Last but not least, the study may also benefit institutions that are currently implementing online learning. Understanding the challenges and benefits of the implementation of the Jigsaw Learning Method may provide insights for institutions on teaching and learning supports needed by both instructors and learners. Providing the necessary supports will ensure effective online learning in educational institutions.





1.6 Limitations of the Study

There are few limitations that can be identified in this study. Firstly, there is a limitation in regards to the context of the research. Since the research was conducted only at a private local university, it may affect the generalization of the findings to represent the target population. Extensive research should be done by taking samples from different institutions in order to allow for the generalization of the findings.

Other than that, there is also a limitation in terms of the size of the sample for this research. According to Creswell and Creswell (2018), it is recommended that a larger sample is selected to ensure the accuracy of the inferences. However, due to the pandemic, institutions are facing low rates of intake, thus affecting the number of learners in class. Hence, for a quantitative research analysis, the number of participants is considered as insufficient which may affect the representation of the target population.

1.7 Operational Definitions

The terms used in this study are as follows, and they are frequently referred to in the following chapters.





1.7.1 Online Learning

According to Singh and Thurman (2019), online learning refers to an experience where students learn remotely and communicate with instructors as well as other students either in synchronous or asynchronous settings using a variety of devices. In the current study, online learning refers to both the synchronous and asynchronous learning environment that utilise various applications, technologies and also the Internet.

1.7.2 Cooperative Learning

According to Ehsan, Vida and Mehdi (2019), cooperative learning is a teaching style in which students collaborate on a specific activity to improve each other's learning and attain certain goals. In the current study, cooperative learning refers to the instructional practice of setting the learners into small groups which allows the learners to work together for both the benefits of individuals and the team.

1.7.3 Jigsaw Learning Method

Tran and Lewis (2012) refers Jigsaw learning as one of the many CL methods that assist students in breaking down materials into manageable learning pieces, master them and teach the materials to other students. Similarly, the definition of Jigsaw Learning Method in this study is in line with the definition presented by Trans and Lewis (2012).



1.7.4 Reading Comprehension

According to Mohseni Takaloo and Ahmadi (2017), reading comprehension is a process of organising the meaning of a written or spoken communication in a communicative environment by a shared and holistic flow of ideas between the readers and the message. In this research, reading comprehension refers to learners' ability to understand reading materials and utilise the skills needed in interpreting its meaning.

1.7.5 Text Genre

Nordin and Eng (2017) defined the genre of a text as text types. In this research, text genre refers to the types of text, for example narrative and expository, that will be used to assess students' reading comprehension in online classroom.

1.8 Summary

In this chapter, the background as well as the problem of the study is presented. Subsequently, the research questions and objectives were also discussed. Additionally, the significance and limitations of the study were also conferred in the last subsections of this chapter. Chapter 2 unveil the concepts and framework of Jigsaw Learning Method in online learning and review related literature.