

Zahro<sup>1</sup>, Imam Tabroni<sup>2</sup>, Cai Jixiong<sup>3</sup>, Li Jie<sup>4</sup>

<sup>1</sup>Universitas Islam Bunga Bangsa Cirebon, Indonesia

<sup>2</sup>Universitas Islam Bunga Bangsa Cirebon, Indonesia

<sup>3</sup>Universidad Central de Venezuela, Venezuela

<sup>4</sup>*The University of Tokyo, Japan* 

<b>Corresponding Auth</b>	or: Imam Tabroni, E-mail; <u>imamtabroni70@gmail.com</u>		
Article Information:	ABSTRACT		
Received June 10, 2023 Revised June 19, 2023 Accepted June 26, 2023	Learning the Qur'an, especially the ability to read the Qur'an, should be taught to children from an early age. In teaching reading the Qur'an teachers can use various methods. One of the methods of reading the Qur'an is the iqro' method. The purpose of the iqro' method is to prepare students to become a qur'ani generation, namely a generation that loves the Qur'an, is committed to the Qur'an and makes it a daily reading and outlook on life. Talaqqi method is a method used by the teacher in listening to the recitation of the Qur'an to his students directly, anywhere with the condition of meeting face to face without the intermediary of other tools. This study aims to describe the teacher's efforts to improve the pronunciation of hijaiyah letters in children at Pengajian Al-Muttaqien Purwakarta, totaling 25 children. Based on the results of research from cycle and cycle II, it can be concluded that the talaqqi method can improve the ability to pronounce hijaiyah letters in children at Pengajian Al-Muttaqien Purwakarta, it can be seen from the results of data analysis, in the first cycle of the first meeting, the percentage of talaqqi can be seen from the results of data analysis.		
	Keywords: Number Board, Symbolic Thinking, 5-6 Years Old		
Journal Homepage This is an open access artic	https://journal.ypidathu.or.id/index.php/jcsa le under the CC BY SA license https://creativecommons.org/licenses/by-sa/4.0/		
How to cite:	Cahro, Zahro., Tabroni, I., Jixiong, C., Jie, L. (2023). The Application of Talaqqi Aethod to Improve the Pronunciation of Hijaiyah Letters in Children in Pengajian. <i>ournal of Computer Science Advancements</i> , 1(3). 157-170. https://doi.org/10.70177/jsca.v1i3.483		
Published by:	Yayasan Pendidikan Islam Daarut Thufulah		

### **INTRODUCTION**

Learning the Qur'an, especially the ability to read the Qur'an, should be taught to children from an early age (Adelantado-Renau, 2019; Adhia, 2019; Afifi, 2019). In teaching reading the Qur'an teachers can use various methods. One of the methods of reading the Qur'an is the iqro' method. According to the Minister of Religious Affairs of the Republic of Indonesia (1991) the iqro' method is a fast way to read the Qur'an (Al-

Khowarizmi, 2021; Allsop, 2019; Bellis, 2019). During the period of children must begin to be introduced to Al-Qur'an education with the basic stage of introducing hijaiyah letters to children, because the Al-Qur'an is a guide and guide in their lives later, so that when they grow up they do not lose their grip and guidance (Amir, 2018; Benzing, 2018; Blankenship, 2019). Therefore, to read the Qur'an, we must recognize the hijaiyah letters in children as the basis for learning the Qur'an (Al-Khowarizmi, 2021; Bialystok, 2018; Blankenship, 2019).. With the iqro' method, it is hoped that it will make it easier for teachers to introduce hijaiyah letters to the stage of reading the Qur'an to children.

The author sees that the recitation still uses the iqro' method in introducing hijaiyah letters to children in the lesson, the teacher applies the iqro' method at Pengajian Al-Muttaqin is that children one by one bring their respective iqro' books, then the child is called by the teacher one by one and taught to read the hijaiyah letters correctly (Ainscow, 2020; Akbari dkk., 2022; Al Ayub Ahmed dkk., 2022). Of the 25 children there are still some children who cannot fully pronounce clearly the hijaiyah letters spoken by the teacher and cannot distinguish hijaiyah letters that are almost similar in shape.

According to the Minister of Religious Affairs of the Republic of Indonesia (1991) "The iqro' method is a fast way to learn to read the Qur'an". The iqro' method is a method of reading the Qur'an that emphasizes directly on reading practice. The iqro' guidebook consists of 6 volumes starting from a simple level, step by step to the perfect level (- Lie dkk., 2020; Adeleke, 2019; Adhia, 2019). This Iqro' method in practice does not require various tools, because it emphasizes on reading (reading the letters of the Qur'an correctly). Direct reading without spelling (Akbari dkk., 2022; Akbay & Delibalta, 2020). This means introducing the names of letters in an active student learning way (CBSA) and more individualized.

The purpose of the iqro' method is to prepare students to become a qur'ani generation, namely a generation that loves the Qur'an, is committed to the Qur'an and makes it a daily reading and outlook on life.

According to Rusdi Saska (2005: 2) "Letter is a sign or sound symbol that has a shape with certain characteristics, whether it has an accompanying point or not". Arabic letters (Al-Qur'an letters) alphabetically or in alphabetical order are called hijaiyah letters abbreviated as Rufyah starting from Alif to Ya, as basic or original letters totaling 29 letters. Meanwhile, according to Abdullah As-syafi'i (1992: 9) the hijaiyah letters consist of 28 letters.

# LITERATURE REVIEW Early Childhood

Early childhood is a group of children who have a unique growth and development process (Abidi dkk., 2020; Afandi, 2021; Akyeampong dkk., 2021). This is because it has a specific development pattern according to the level of growth and development. Meanwhile, according to (Novi Mulyani, 2004: 294) said that:

In Indonesia, early childhood is addressed to children aged 0 to 6 years. In the education process, they are usually grouped into several stages based on age groups. For example, 2-3 years of age enter the daycare group, 3-4 years of age for playgroups, and 4-6 years for kindergarten or raudhatul athfal ".

From the opinion, it can be concluded about the definition of early childhood. Early childhood is a child aged 0-6 years who has unique growth and development. Where at this time it is often called the Golden Age period (Abdelaliem dkk., 2022; Ahmadipour, 2022; Ainscow, 2020). That is a golden period that is only experienced once in life. Children experience rapid development in their language and social skills. This period will not be repeated in the next period because it only comes once.

## Early Childhood Development

- 1) Physical Development
- 2) Physical/motor development will affect children's lives either directly or indirectly, physical development will determine the ability to move. Indirectly, physical growth and development will affect how children will perceive themselves or others.
- 3) Cognitive Ability
- 4) The ability to adapt to the environment, cognitive ability is the ability to process information obtained through the senses.
- 5) Language Development
- 6) Language development in children includes four components, namely: speech, writing skills, reading skills and listening skills.
- 7) Moral development
- 8) Development related to a person's ability to know the good and bad of an act, awareness to do good deeds, habits of doing good, and love for good deeds. Morals develop according to the child.
- 9) Social emotional development
- 10) Positive social and emotional development makes it easier for children to get along with others and learn well, as well as in other activities in the social environment.
- 11) Art development
- 12) The development of artistic abilities aims to enable children to create something based on the results of their imagination, develop sensitivity and appreciate the results of art. (Henry Guntur Tarigan, 2015: 76-78)

### **Hijaiyah Letters**

Learning Hijaiyah letters certainly has different methods or methods according to the characteristics of each method developed. One important basis for introducing hijaiyah letters is how one can distinguish letters clearly. This is what is called the term letter makhraj. Accuracy in makhroj can be measured by whether or not the hijaiyah letters are pronounced correctly in their makhroj. Each hijaiyah letter has a different place, so when you want to pronounce it requires foresight and understanding.

The hijaiyah letters are 28 single letters or 30 if you include the double letters lam alif and hamzah as independent letters. The person who first arranged the hijaiyah letters in sequence from alif to ya' was Nasher bin Ashim Al-laitsi. In writing Arabic letters different from Latin letters from left to right, Arabic letters are written from right to left.

In the regulation of the Minister of Education and Culture of the Republic of Indonesia No. 137 of 2013 concerning National Standards for Early Childhood Education states the achievement level of language development in literacy aged 5-6 years, namely:

Mentioning known letter symbols, recognizing the initial letter sounds of the names of objects around him, mentioning groups of images that have the same initial sound / letter, understanding between sounds and letter shapes, reading his own name, and writing his own name.

Based on the opinion of Suharsimi (2015: 54) which states that the aspects of reading hijaiyah letters in early childhood are that children are able to imitate the teacher to read hijaiyah letters, are able to pronounce hijaiyah letters, children are able to read hijaiyah letters without punctuation and use punctuation marks. How to read the hijaiyah letters alif- ya'. Punctuation marks for fathah, kasrah, and dhammah. Reading a series of hijaiyah letters with fathah, kasrah and dhammah, then from this theory the researcher makes or compiles indicators of reading hijaiyah letters in early childhood, namely:

- 1) Imitate the reading that has been practiced by the teacher reading hijaiyah letters
- 2) Listen to what the teacher says
- 3) Able to pronounce hijaiyah letters
- 4) The child confidently recites the sound of the hijaiyah letters
- 5) The child can make the sound
- 6) Children are able to distinguish hijaiyah letters with Fathah, kasroh, and dhommah harokat

## Talaqqi Method

The Talaqqi method is a method used by the teacher in listening to the recitation of the Qur'an to his students directly, anywhere with the condition of meeting face to face without the intermediary of other tools. The teacher will reprimand the student if there are mistakes in his reading and correct his mistakes continuously. Because memorizing gradually from short and easy letters to long and difficult letters is much easier to do. (Imam Masud, 2018:88)

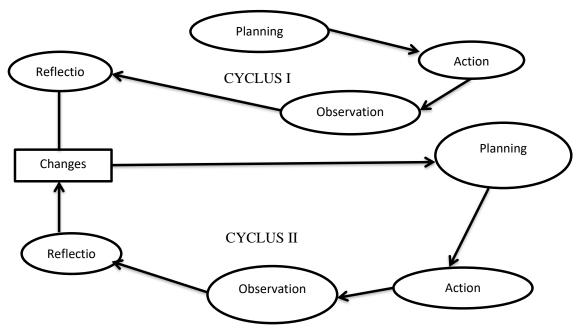
#### **RESEARCH METHODOLOGY**

This type of research uses the Classroom Action Research method (action research). Classroom Action Research is not just teaching as usual, but must contain one understanding, that the actions taken are based on efforts to improve results, which are better than before. In his book Suharsimi Arikunto et al Classroom Action Research, he

said that the nature of this class action research is not about things that are static but dynamic, namely changes. So that in Classroom Action Research it does not concern the subject matter, but concerns its presentation, namely strategies, approaches, methods or ways to obtain results through a trial or experimental activity.

The purpose of Classroom Action Research is to determine the success of the talaqqi method in improving the pronunciation of hijaiyah letters to students at Pengajian Al-Muttaqin Purwakarta. In addition, it is also to find out how the application of the talaqqi method in improving the pronunciation of hijaiyah letters in children.

This research uses the Kurt Lewin model (2006: 87) which consists of four stages, namely planning, implementation, observation and reflection. This research is divided into two cycles, each cycle consists of four aspects that must be implemented, namely: (1) planning (2) implementation (3) observation (4) reflection. The design of the action plan used in this study can be seen as follows:



The stages in the action plan in this study are as follows:

#### **Pre-Research Activities**

- a. Contacting the owner of the foundation regarding permission to conduct research at Pengajian Al-Muttaqien
- b. Conducting interviews with teachers

### **Cycle I Research**

In the first cycle implementation indicators were carried out with the following indicators:

- 1. Pronounce the hijaiyah letters according to the teacher's instructions correctly
- 2. Differentiate hijaiyah letters that are almost similar in shape.
  - a) Planning

The activities of the planning stage of this research are as follows:

- 1) Prepare tools and media that will be used in the teaching and learning process.
- 2) Planning strategies in the learning process
- b) Implementation (Acting)

At the stage of implementing the action, the researcher carried out the actions that had been formulated for cycle I, namely:

## **Initial Activities**

- 1. The teacher gives greetings and prays to start learning
- 2. The teacher asks how the students are doing and makes apperception

# **Core Activity**

- a. The teacher introduces the names of the hijaiyah letters
- b. The teacher asks the children to read the hijaiyah letters using the talaqqi method
- c. The teacher asks children to distinguish hijaiayah letters that are almost similar in shape.

## **End Activity**

- a. The teacher asks about the child's activities and feelings today
- b. The teacher motivates the children
- c. Pray before going home

## Observing

At the observation stage, the researcher observes the learning process taking place. The following are the activities carried out by researchers in the observation process:

- 1) Observing the learning process takes place to determine the success of educators using the talaqqi method in children's ability to read hijaiyah letters.
- 2) Observing children's activities in the learning process which aims to determine the activeness of children in learning using the Tallaqqi method.
- 3) Observing events that occur in the learning process, both those that support and those that hinder the learning process.

## Reflecting

At the reflection stage the researcher analyzes the results of the actions that have been taken from improving the ability to read hijaiyah letters. In addition, researchers also discuss with teachers about the shortcomings and advantages of the learning process using the talaqqi method. If the learning has not been successful, the next cycle will be carried out.

# Cycle II Research

In cycle II there are two indicators that are implemented as follows:

- a) Reading hijaiyah letters
- b) Distinguishing hijaiyah letters that are almost similar in shape.

In cycle II the stages carried out are the same as cycle I, namely, planning, implementation, observation and reflection.

## Planning

- 1. Develop a learning improvement plan that has been carried out in cycle II by looking at the shortcomings that exist in cycle I.
- 2. Prepare data collection instruments including: observation sheets of student and teacher activities in the implementation of learning.

## **Implementation (Acting)**

Implementation of children's ability to read hijaiyah letters using the talaqqi method with the results of the reflection of cycle I, namely implementing learning about hijaiyah letters, lesson plans from reflection I. The learning implementation plan in cycle II is:

- 1. Initial Activity
- 2. Core activities
- 3. End Activity

## Observing

The observation stage carried out in this activity is as follows:

- 1. Observing the ongoing learning process in cycle II using the talaqqi method.
- 2. Observing activities carried out by children in cycle II
- 3. Observing the activities carried out in cycle II both those that support and those that hinder the learning process in cycle II.

### Reflecting

At the reflection stage, the implementation of cycle II is the same as cycle I. Researchers also analyze the implementation of learning carried out by applying the talaqqi method to improve children's ability to read hijaiyah letters.

## **RESULT AND DISCUSSION**

This study aims to describe the teacher's efforts to improve the pronunciation of hijaiyah letters in children at Pengajian Al-Muttaqien Purwakarta, totaling 25 children. Based on the results of observations about the teacher's efforts to improve the pronunciation of hijaiyah letters in children as stated in the following data: Table 1

Observation Results of Meeting 1 Cycle 1

No	Child Development	Saying the Hijaiyah letters		Differentiating the same s hijaiyah letters	
	Criteria	Number of children	%	Number of children	%
1.	BSB	0	0%	0	0%
2.	BSH	3	12%	4	16%
3.	MB	9	36%	6	24%
4.	BB	12	48%	15	60%
ТОТ	<b>TAL</b>	25	100%	25	100%

Based on the table above, it can be seen the percentage in improving the pronunciation of hijaiyah letters in children through the talaqqi method meeting 1 cycle 1. In the first aspect, namely children can pronounce hijaiyah letters according to teacher commands that have not developed as many as 12 children with a percentage of 48%, which began to develop as many as 9 children with a percentage of 36%, which developed as expected as many as 3 children with a percentage of 12% and no children who reached the criteria developed very well.

In the second aspect, namely, children can distinguish hijaiyah letters of the same shape, which have not developed as many as 15 children with a percentage of 60%, which began to develop as many as 6 children with a percentage of 24%, which developed as expected as many as 4 children with a percentage of 16%, and no children reached the criteria of developing very well.

Table 2

Observation Results of the Second Meeting of Cycle I

No	Child Development	Saying the letters	ne Hijaiyah	Differentiating hijaiyah letters	the same
	Criteria	Number of children	%	Number of children	%
1.	BSB	3	12%	2	8%
2.	BSH	5	20%	7	28%
3.	МВ	13	52%	12	48%
4.	BB	4	16%	4	16%
TOTA	AL	25	100%	25	100%

Based on the table above, it can be seen the percentage in improving the pronunciation of hijaiyah letters through the talaqqi method in children. In the first aspect, namely children can pronounce hijaiyah letters according to teacher commands that have not developed as many as 4 children with a percentage of 16%, which began to develop as many as 13 children with a percentage of 52%, which developed as expected as many as 5 people with a percentage of 20% and which developed very well as many as 3 children with a percentage of 12%.

In the second aspect, namely, children can distinguish hijaiyah letters that are the same shape, which have not developed as many as 4 children with a percentage of 16%, which began to develop as many as 12 children with a percentage of 48%, which developed as expected as many as 7 children with a percentage of 28%, and whose criteria developed very well as many as 2 children with a percentage of 8%.

#### Table 3

Observation Results of the Third Meeting of Cycle 2

No	Child Development Criteria	Saying the Hijaiyah letters		Differentiating hijaiyah letters	the same
		Number of children	%	Number of children	%
1.	BSB	11	44%	4	16%
2.	BSH	6	24%	12	48%
3.	МВ	6	24%	7	28%
4.	BB	2	8%	2	8%
TOTA	AL	25	100%	25	100%

Based on the table above, it can be seen the percentage in improving the pronunciation of hijaiyah letters through the talaqqi method in children at the third meeting of the second cycle. In the first aspect, there were no more children who obtained the criteria for not developing as many as 2 children with a percentage of 8% and there were children who began to develop as many as 6 children with a percentage of 24%, while children who developed as expected were 6 with a percentage of 24% and those who developed very well were 11 children with a percentage of 44%.

In the second aspect, namely, children can distinguish hijaiyah letters that are the same shape. Those who have not developed are 2 children with a percentage of 8%, there are also children who are starting to develop as many as 7 children with a percentage of 28%, there are children who are developing as expected as many as 12 children with a percentage of 48%, and those who are developing as expected are 4 children with a percentage of 16%.

Table 4

Observation Results of the Fourth Meeting of Cycle 2

No	Child Development Criteria	Saying the Hijaiyah letters		Differentiating t hijaiyah letters	the same
		Number of children	%	Number of children	%
1.	BSB	22	88%	21	84%
2.	BSH	3	12%	4	16%
3.	МВ	0	0%	0	0%
4.	BB	0	0%	0	0%
TOTA	AL	25	100%	25	100%

Based on the table above, it can be seen the percentage in improving the pronunciation of hijaiyah letters through the talaqqi method in children at the 4th meeting of the second cycle. In the first aspect, there were no more children who obtained the criteria for not developing, and starting to develop, while children who developed as expected were 3 children with a percentage of 12% and those who developed very well were 22 children with a percentage of 88%.

In the second aspect, namely, children can distinguish hijaiyah letters that are the same shape. There are no longer children who are in the criteria for not yet developing, and starting to develop, there are children who are developing as expected as many as 4 children with a percentage of 16%, and who are developing as expected as many as 21 children with a percentage of 84%.

TABLE 5

Table Percentage of child success

	Criteia	Percentage
0		
	BSB (developing very well)	76%-100%
	BSH (developing as expected)	51%-75%
	MB (starting to develop)	26%-50%
	BB (not yet developed)	0%-25%

This class action assessment can be said to be successful if it is marked by an increase in children's ability to pronounce hijaiyah letters from cycle to cycle with the success indicators to be achieved has reached the predetermined presentation target marked by the achievement of the BSH (developing as expected) or developing very well (BSB) category, namely with percentage criteria between 51%-75% or 76%-100%. According to Suharsimi Arikunto (2010:192), success in this study is if 76% or more

get scores with good criteria. The determination of 76 is based on the results of discussions with teachers at Pengajian Al-Muttaqien Purwakarta.

#### Discussion

From the results of research in cycle II, the ability of children to pronounce hijaiyah letters using the talaqqi method has increased. Teachers have also done learning well in accordance with the lesson plans that have been made. The obstacles experienced in cycle I can be improved in cycle II. The observation results showed an increase from cycle II. That the number of children who are in the criteria develops very well, it can be concluded that cycle II is successful because it has exceeded the specified value. By looking at the results of children's development in pronouncing hijaiyah letters well in cycle II, the researcher decided to stop the research in cycle II.

### CONCLUSION

Based on the results of research from cycle and cycle II, it can be concluded that the talaqqi method can improve the ability to pronounce hijaiyah letters in children at Pengajian Al-Muttaqien Purwakarta, it can be seen from the results of data analysis, in the first cycle the first meeting the percentage obtained was 25% which was in the criteria not yet developed, the second meeting the percentage obtained was 67% and was in the criteria as expected, cycle II the first meeting was obtained with a percentage of 76% developing very well, cycle II the second meeting with a percentage of 88% and was in the criteria developing very well. And has reached the predetermined developmental achievement level of 76%, meaning that children who are complete in cycle II action are higher than in cycle I.

#### REFERENCES

- Lie, A., Mina Tamah, S., Gozali, I., Retno Triwidayati, K., Sari Diah Utami, T., & -Jemadi, F. (2020). Secondary School Language Teachers' Online Learning Engagement during the Covid-19 Pandemic in Indonesia. *Journal of Information Technology Education: Research*, 19, 803–832. <u>https://doi.org/10.28945/4626</u>
- Abdelaliem, S. M. F., Dator, W. L. T., & Sankarapandian, C. (2022). The Relationship between Nursing Students' Smart Devices Addiction and Their Perception of Artificial Intelligence. *Healthcare*, 11(1), 110. https://doi.org/10.3390/healthcare11010110
- Abidi, S. M. R., Zhang, W., Haidery, S. A., Rizvi, S. S., Riaz, R., Ding, H., & Kwon, S. J. (2020). Educational sustainability through big data assimilation to quantify academic procrastination using ensemble classifiers. *Sustainability* (*Switzerland*), 12(15). Scopus. <u>https://doi.org/10.3390/su12156074</u>
- Adelantado-Renau, M. (2019). Association between Screen Media Use and Academic Performance among Children and Adolescents: A Systematic Review and Meta-analysis. JAMA Pediatrics, 173(11), 1058–1067. https://doi.org/10.1001/jamapediatrics.2019.3176
- Adeleke, A. (2019). Automating quranic verses labeling using machine learning approach. *Indonesian Journal of Electrical Engineering and Computer Science*, 16(2), 925–931. <u>https://doi.org/10.11591/ijeecs.v16.i2.pp925-931</u>

- Adhia, A. (2019). The Role of Intimate Partner Violence in Homicides of Children Aged 2–14 Years. *American Journal of Preventive Medicine*, 56(1), 38–46. https://doi.org/10.1016/j.amepre.2018.08.028
- Afandi, M. (2021). ... Based on Multiple Intelligences: Theoretical and Practical Overview in SD/MI/Pengembangan Buku Teks Strategi Pembelajaran Berbasis Multiple Intelligences .... Al-Mudarris: Journal Of Education, Query date: 2023-05-10 17:10:09. <u>https://e-journal.staima-alhikam.ac.id/al-</u> mudarris/article/view/639
- Afifi, T. O. (2019). Considerations for expanding the definition of ACEs. Adverse Childhood Experiences: Using Evidence to Advance Research, Practice, Policy, and Prevention, Query date: 2023-05-24 13:17:13, 35–44. https://doi.org/10.1016/B978-0-12-816065-7.00003-3
- Ahmadipour, H. (2022). Online learning self-efficacy: A necessity for virtual education. *Journal of Education and Health Promotion*, 11, 113. <u>https://doi.org/10.4103/jehp.jehp\_848\_21</u>
- Ainscow, M. (2020). Promoting inclusion and equity in education: Lessons from international experiences. *Nordic Journal of Studies in Educational Policy*, 6(1), 7–16. <u>https://doi.org/10.1080/20020317.2020.1729587</u>
- Akbari, M., Danesh, M., Rezvani, A., Javadi, N., Banihashem, S. K., & Noroozi, O. (2022). The role of students' relational identity and autotelic experience for their innovative and continuous use of e-learning. *Education and Information Technologies*, 1–24. <u>https://doi.org/10.1007/s10639-022-11272-5</u>
- Akbay, S. E., & Delibalta, A. (2020). Academic risk taking behavior in university students: Academic procrastination, academic locus of control, and academic perfectionism. *Eurasian Journal of Educational Research*, 2020(89), 159–178. Scopus. <u>https://doi.org/10.14689/ejer.2020.89.8</u>
- Akyeampong, K., Carter, E., Rose, P., Ryan, J., Sabates, R., & Stern, J. M. B. (2021). The effects of language preference and home resources on foundational literacy retention during school holiday closures in Ghana: Lessons from the Complementary Basic Education Programme. *PROSPECTS*, 52(1–2), 115–136. <u>https://doi.org/10.1007/s11125-021-09590-6</u>
- Al Ayub Ahmed, A., Hassan, I., Pallathadka, H., Keezhatta, M. S., Haryadi, R. N., Al Mashhadani, Z. I., Attwan, L. Y., & Rohi, A. (2022). MALL and EFL Learners' Speaking: Impacts of Duolingo and WhatsApp Applications on Speaking Accuracy and Fluency. *Education Research International*, 2022. Scopus. <u>https://doi.org/10.1155/2022/6716474</u>
- Al-Khowarizmi. (2021). The Model of Marker Based Tracking on the Augmented Reality of Hijaiyah Alphabet and Tajweed Al-Qur'an for Children Education. Proceedings - 2nd International Conference on Computer Science and Engineering: The Effects of the Digital World After Pandemic (EDWAP), IC2SE 2021, Query date: 2023-06-19 07:41:47. https://doi.org/10.1109/IC2SE52832.2021.9792135
- Allsop, Y. (2019). Assessing computational thinking process using a multiple evaluation approach. *International Journal of Child-Computer Interaction*, 19(Query date: 2023-07-26 04:11:15), 30–55. <u>https://doi.org/10.1016/j.ijcci.2018.10.004</u>
- Amir, D. (2018). An uncertainty management perspective on long-run impacts of adversity: The influence of childhood socioeconomic status on risk, time, and

social preferences. *Journal of Experimental Social Psychology*, 79(Query date: 2023-07-26 04:11:15), 217–226. <u>https://doi.org/10.1016/j.jesp.2018.07.014</u>

- Bellis, M. A. (2019). Life course health consequences and associated annual costs of adverse childhood experiences across Europe and North America: A systematic review and meta-analysis. *The Lancet Public Health*, 4(10). <u>https://doi.org/10.1016/S2468-2667(19)30145-8</u>
- Benzing, V. (2018). Exergaming for children and adolescents: Strengths, weaknesses, opportunities and threats. *Journal of Clinical Medicine*, 7(11). https://doi.org/10.3390/jcm7110422
- Bialystok, E. (2018). Bilingual education for young children: Review of the effects and consequences. *International Journal of Bilingual Education and Bilingualism*, 21(6), 666–679. <u>https://doi.org/10.1080/13670050.2016.1203859</u>
- Blankenship, T. L. (2019). Attention and executive functioning in infancy: Links to childhood executive function and reading achievement. *Developmental Science*, 22(6). <u>https://doi.org/10.1111/desc.12824</u>

**Copyright Holder :** © Zahro et al. (2023)

**First Publication Right :** © Journal of Computer Science Advancements

This article is under:

