

Analysing the Relationship between Reading Fluency and Reading Comprehension of Learners at Early Childhood Education

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Abstract

Reading fluency and reading comprehension are the determining factors at early grades. Children who are unable to read fluently and spend time to decode words get failed to understand the meaning of the written text. Taking into account this crucial problem, this study intends to determine the relationship between reading fluency and reading comprehension of learners at early grades. A qualitative survey was conducted to collect data from the learners studying in the six public schools by using convenient sampling technique. Informal Reading Inventory (IRI) was adopted to collect the data from learners studying at class two in public schools of district Multan. After applying the inferential statistics, simple linear regression was applied to infer the results of this study. Findings show a significant relationship between reading fluency and reading comprehension of learners. As to determine the current level of their reading fluency and reading comprehension, it is identified that learners are at frustrational level in reading and comprehending the written text.

Keywords: *Reading fluency, Comprehension, Early Childhood Education, Linear regression, Informal Reading Inventory*

1. Introduction

Research has always been focusing on early childhood education from basic learning to language development. It is important to emphasize on language learning at this stage as this is a transition stage from oral language to reading language. This helps a child to move on to further stages of their academic journey. Paying attention to all the four language skills at early childhood education help children to learn better in the future (Shakil, 2020). Reading is one of the major skills required to learn a language. A sequential and combined activity that processes information from the written text is referred as reading (Sohlberg, Griffiths, & Fickas, 2014). Reading is a task of acquiring knowledge from the written text. It is the recognition of alphabets, words and sound of

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words. Reading is a process of putting vocal sounds to the written alphabets (Smith, 2012). Reading is the ability to recognize words, individual sounds of alphabets in a word and utter words with correct sound and pronunciation. It is the ability to speak written text with expression and correctness to stress important content. Fluency and correct pronunciation are not sufficient but understanding the written text is the key in learning a language.

Understanding of the written text is known as comprehension. It is the process of finding meaning of text through prior knowledge and understanding of the concept as a whole (Kırmızı, 2011; Therrien, & Watt, 2012). Comprehension is the process of recognizing the meaning of words and sentences together and processing the knowledge into the mind. It is an activity of creating links to prior knowledge, interpretation of written ideas and narrating those ideas in one's own words.

The major aim of reading is comprehension (Kırmızı, 2011). Reading and comprehension has a close relationship. Reading is not only uttering words of written text it involves understanding of it furthermore, understanding of text is comprehension. Extensive reading enables a learner to be better in comprehension. An efficient reader is one who comprehends well, has knowledge of phonics, vocabulary and read fluently. For effective learning at early childhood education, reading and comprehension are significant skills, an effective reader does not only read with correct pronunciation but also get the correct meaning of the content (Zaccoletti, Altoè & Mason, 2020). Being expert in reading indicates success in learning environment. Inefficient reading leads to poor comprehension.

In Pakistani context, English is the official language of the country. However, the medium of instruction in public schools is Urdu – the national language of the country. There is only one subject of English in the public schools' curriculum. Due to this, learners have inefficient reading and comprehension skills. Studies reflected the fact that learners of public schools are poor readers and struggling to learn English language (United States Agency for International Development [USAID], 2017). As mentioned elsewhere, reading has a key role in early childhood education; this is a crucial stage of child's life to develop the literacy skills and failing which could affect his whole educational life (Siddiqui & Gorard, 2017). Inefficient reading and comprehension skills were observed in public schools and this could be due to inadequate quality of teaching and learning in the public schools in Pakistan (Manan, 2019). This might be due to government educational policies and preferences for public schools. Our education system does not put required emphasis on language and literacy skills in the public schools. Our learners do not get required exposure in

learning English language (Muhammad, 2013). This could be another main reason of poor reading and comprehension skills of public schools' children. Considering the need of this important problem, this research tried to analyze the relationship between reading fluency and reading comprehension at public schools of Pakistan.

1.1 Objectives of the Study

Objectives of this study were as follows:

1. To identify the current level of reading fluency and reading comprehension of learners at early childhood education.
2. To examine the relationship between reading fluency and reading comprehension of learners at early childhood education.

2. Literature Review

Language literacy is involved in child's life from the day of his birth (Edwards, 2014; Schickedanz & Collins, 2013). A child starts learning a language from sounds and gradually it becomes the base of language learning, later the formal language learning starts from school. Learning a language mainly consists of four skills: listening, speaking, reading and writing. These skills are substantial components of language and literacy (Ahmadi, & Reza, 2018). Reading is a sequential and combined activity that processes information from the written text (Sohlberg, Griffiths, & Fickas, 2014). Reading is a process of putting vocal sounds to the written alphabets (Smith, 2012). It is the ability to recognize words, individual sounds of alphabets in a word and utter words with correct sound and pronunciation, the ability to speak written text with fluency and pauses in between words to lay stress on important content. Fluency and correct pronunciation are not sufficient but understanding the written text is the key in learning a language. Efficient reading leads to successful learning in an educational setting (Treiman, 2018; Zarić & Nagler, 2021).

A learner needs to develop reading skills in order to be a successful reader. A past study on reading skills suggested that development of reading skills goes through three levels: acclimation, competence and proficiency (Alexander, 2005). In acclimation level the early years of schooling means a beginner in reading and can only read easy words and small sentences. In the next level of competence, the reader can read difficult words and long sentences with correct pronunciation but cannot understand the meaning. In the last level of proficiency, the reader is able to read difficult words and long sentences with understanding. The reader can also relate new concepts to prior knowledge. The reader can also make useful strategies for attaining knowledge. Reading mainly based on five components which are interlinked to develop a fluent reader who cannot read fluently but comprehend efficiently.

Phonemes is the smallest unit of sounds. It makes one word different from another word. Phonemic awareness is the quality of an individual to listen and differentiate among sounds in words (Hampton & Resnick, 2009). Readers can differentiate between different alphabets in a word, produce sounds, furthermore, reader can recognize those words and alphabets in listening. Phonemic awareness is related to pronunciation of words. The next important component of reading is phonics. Phonics is the ability to separate sounds of an alphabet. It is the identification of relationship between spoken sounds of language and recognition of text (Tankersley, 2003). Readers are aware of different sounds in a word and can relate that to each other. When reader sees written text he/she can recognize the words and immediately utter its sound.

Vocabulary is the third component of reading which plays an important role in reading at early stage. Vocabulary enables a person to pronounce and understand the meaning of variety of words and using those words in his own conversation or writing or speaking publicly. Kaufer, Ishizaki, Butler and Collins (2004) have identified four types of vocabulary: Listening (when a person listens to someone and understands the words) other is speaking; Speaking (when a person is talking to someone, he/she uses specific words); Reading (when an individual sees the text, recognize it, utter sound of the word and understand its meaning); Writing (the words a writer uses in his writing).

Phonics, phonemes and vocabulary help learners to develop fluency. Fluency is the way an individual speaks continuously with paces and able to convey his message accurately. Fluency has two types: oral fluency (oral reading of material and applying reading techniques to read) and silent fluency (it is comprehension of information in one's own mind) (Tankersley, 2003). Oral fluency can help to judge the pronunciation of words while silent fluency helps to gain insight into the text and understand the concept that is being delivered through the content. Manning (2013) suggested three components of fluency: speed, accuracy and prosody. A reader is fluent and speaks words smoothly and non-stop. Reader is also able to identify words on the first sight and pronounce them correctly. Prosody means that the fluent reader adds emotions to their reading. Raise the voice to put emphasis on certain words and pause during reading.

Next to highlighting the significance of these reading components it is also pertinent to mention, the poor fluency in reading could have severe effects on child's learning and achievements in school. Stevens (2010) suggested that poor reading fluency affects a person in three ways: academically, emotionally and socially. Academically: the reader is not able to perform well, have poor reading fluency and cannot recognize words during reading. Emotionally: poor

reading fluency affects the self-esteem of an individual. Socially: poor readers due to their low self-esteem are incapable to make friends and socialize with anyone. They gradually lose all their confidence and like to remain silent in social gathering and avoiding social events. Moreover, such readers left behind in schools and always struggle to read. More seriously, they often try to get escape from school and ultimately leave school (Torppa, Vasalampi, Eklund, Sulkunen, & Niemi, 2020).

Research has proved that fluent readers can understand the written text and are able to interpret it, this is called reading comprehension. It is a set of steps to take out meaning and building meaning of words (RAND Reading Study Group [RRSG], 2002). It is the translation of text being read and understanding of the sentences and paragraph. It is also the ability to summarize a content in one's own words. In reading comprehension an individual takes out information data and makes something meaningful (Lyster, Lervåg, & Hulme, 2016). It also enables a reader to make connection between knowledge and construct productive ideas or strategies. Reading comprehension process generally involves following:

Decoding is the capability of a reader to change printed letters to phonetic codes (Groen, Veenendaal, & Verhoeven, 2019). Decoding enables a reader to know the separate and grouped sounds of words. Decoding is the ability to see words and recognize their separate and grouped sounds, understand the sentence structure and understanding the cues in sentences to make a meaning of whole sentence or paragraph (Tankersley, 2003). Decoding is a complex process of understanding and knowing the sounds of words, link between sentences and words in text (Goodwin, 2020). In reading comprehension, readers understand the parts of speech and have knowledge about the verbs and helping verbs used in construction of the sentence. The reader recognizes the connection of words. The reader has ability to make sentences and can decode the text.

Fluency of a reader represents efficient skills of reading comprehension. Reading fluently is the key for comprehension (Goodwin, 2020). Fluency is only possible when a reader understands the meaning of text. A reader with efficient comprehension skills can understand the meaning of text and can take pauses at appropriate places and consequently demonstrate fluency in reading. It is hypothesized that fluency ease reading comprehension as it reduces the pressure of reader to concentrate on meaning of the word (Gurning & Siregar, 2017). The relationship between reading fluency and reading comprehension has been proved through various researches which reported the moderate to strong relationship between reading fluency and reading comprehension (Klauda & Guthrie, 2008; Wolf & Katzir-Cohen, 2001). In fact, it is a reciprocal

relationship, which means increase in fluency can increase in the level of comprehension (Berendes, Wagner, Meurers, & Trautwein, 2019; Klauda & Guthrie, 2008).

3. Research Methodology

3.1 Research Design

This study primarily used correlational research design. Creswell (2008) asserted that correlational research design is applied to examine the relationship between two or more variables. In alignment with design of the study, a survey was conducted to collect data from the learners studying in public schools. The data were collected from children studying at ECE level in the public school of district Multan. Informal Reading Inventory (Morris, 2014) was applied to gather data from ECE learners.

3.2 Population and Sample

The population of this study was comprised of Multan district, within this district; researchers focused only on public schools since their counterparts mainly teach in English and pay much attention to reading and related activities. There were in total 1316 schools in Multan district. Out of 738 female and 578 male schools (School Education Department, Government of the Punjab, 2020), six public schools, two female schools, two male schools and two co-education schools were involved in this study. In total, 238 students studying in class two were involved in this research by using the convenient sampling technique. Convenient sampling technique is considering to be best fitted in view of time, efforts and resources available for this research. The nature of this study is qualitative so convenient sampling is best suited strategy for selecting small sample size (Robinson, 2014).

3.3 Instrument to measure Reading Comprehension

Measuring language skills in students was never easy for researchers; it requires quality research instruments, skill and a systematic way to reach to certain conclusions. Both type of assessment tests criterion-referenced and norm-referenced can be used to identify such skills of learners (Lok, McNaught, & Young, 2016). Moreover, a variety of standardized inventories are also available to test reading and comprehension abilities of young learners. However, selecting a suitable inventory is quite crucial due to the dominating role of contextual factors e.g., the available instruments were developed in certain contexts where national and oral language of students will be different than Pakistani context. There is no doubt to claim that the results infer through such instruments could vary in various contexts. Another important issue with such instruments is the copyright of the instruments. Thus, mostly available standardized research instruments in this domain are not free to access and not affordable to purchase.

Administration of such instruments in its true spirit is also challenging for researchers. Many available research instruments were reviewed and considered to use for this study however, due to the above mentioned factors researchers ended up by adopting the Informal Reading Inventory developed by (Morris, 2014).

3.3.1 Informal Reading Inventory (IRI)

Informal Reading Inventory is a diagnostic assessment tool to assess the reading level of learners and to identify the particular reading problems. This inventory basically helped to identify the following three basic levels of learners' reading: independent, instructional, and frustrational. The collected data through this particular inventory were both quantitative and qualitative in nature. Quantitative data based on percentage of reading accuracy and recognition of words and grade level scores to identify the certain level of learner's reading e.g., independent, instructional and frustrational whereas qualitative data included the strengths and difficulties of learners' during reading and word recognition. The quantitative findings of the study were also presented in qualitative form because the main purpose is to identify the level of reading and comprehension of the students at the three following levels. This inventory is flexible in selecting the number and types of paragraphs and assessment options for reading. Availing this privilege and considering the status of public schools selected, 1-3 grade level passages.

Table 3.1

Levels of Reading Comprehension

Levels of Reading Comprehension	Description	Max level of reading	Max level of comprehension
Independent level	This is the highest level where learners are fluent in their reading. In order to achieve this level, a learner have to read at least 95% of the words correctly and comprehend 90% of the words.	95%	90%
Instructional level	In order to attain instructional level a learner needs to decode at least 90% words and the level of comprehension should not be below 60%. Learners can take guidance at this stage to read and understand correctly and fluently.	90%	60%

Frustrational level	Word decoding at frustrational level should not be less than 89% and the level of comprehension should not below 50%. or less. At this level, learners feel difficulty in reading and understanding the written text.	89%	50%
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3.3.2 Format of Informal Reading Inventory

Informal reading inventory package includes a graded word list and reading passages from grade 1 to grade 6. Each grade has two paragraphs, fiction and non-fiction. These paragraphs can be used alternatively during silent and oral reading. In order to measure the level of comprehension each paragraph is followed by three literal questions, one vocabulary question and one interpretive question. Inside the IRI package, there are reading passages, recording sheets for researcher/teacher, word lists for Grades 1-6. On average the word count for fiction and non-fiction paragraphs were from 70 to 130.

3.3.3 Administration of Informal Reading Inventory

There are certain steps which need to be followed to get desired outcomes. At first step, word list will assist researchers to map the reading level of learners. Both correct and incorrect words will be marked to keep records for further steps and analysis. Learners will continue reading until he failed to read or make an error. Of course no error will lead him to achieve the highest level of reading fluency. Researcher will stop the learner when he will make at least two errors. Next, after determining the level of reading of a learner with the word list, he will be asked to read the passage. During the passage reading, researcher will note down the error and miscues on the available recording sheet. As to the scoring of IRI, there is certain criteria for scoring, all the mispronounced, substituted, reluctances, omissions of words will be counted as errors. Self-correction and repetitions will not be counted as errors. The inventory facilitated with complete operational instructions of marking correct and incorrect words. The reading comprehension of the learners was assessed through the questions asked at the end of the reading passage and this was based on retelling, reflecting and think aloud.

3.3.4 Instrument to measure Reading Fluency

Reading fluency can be measured through calculating the time of reading. For example, calculating the seconds to read a short paragraph in the form of word per minute (WPM) and word correct per minute (WCPM). Following formula was used to map the reading fluency of learners: Word Correct Per Minute (WCPM): $(\text{total words read} - \text{errors} \times 60 = \text{_____} / \text{number of seconds to read passage} = \text{_____} \text{ WCPM}).$

3.3.5 Reliability of the Instrument

This was an adopted inventory, thus, to ensure the internal reliability of the inventory researchers calculated the Cronbach's alpha. The Cronbach's alpha value of the instrument was (.91). which shows excellent internal consistency and reliability of the instrument.

3.4 Data Collection

Six public schools were involved to collect data from district Multan. An informed consent was obtained from the school principals. An orientation was given to all the principals in relation to implementation of IRI, its procedure and data collection. At the time of data collection, researchers called each individual learner outside the classroom at a quiet place to maintain the concentration and quality of data. Learners/respondents were motivated by the fiction passages. They were asked to read the word list and passages carefully. After that assessment began by reading the graded word lists, passages and then comprehension questions. It took approximately 20-25 minutes to complete the inventory with one respondent. It took almost three months to collect data. All the data were recorded and stored in SPSS for analysis. All the ethical concerns were assured during the research process.

4. Data Analysis and Interpretation

Reading comprehension of the learners was assessed at independent, instructional and frustrational levels. Fiction and non-fiction passages helped to check their level of comprehension. Later, percentages of scores were calculated to assessed students' independent, instructional, and frustrational levels of reading comprehension. After identifying the level of their reading comprehension, the percentage of scores was used for further data analysis to find the relationship between reading fluency and reading comprehension. Descriptive statistics were calculated to set the base for the main analysis. Simple linear regression was calculated to measure the relationship between reading fluency and reading comprehension. To measure reading fluency, afore mentioned formula of WCPM was calculated.

Descriptive Statistics

Table 4.1

Descriptive Statistics and Correlation

Items	Reading Comprehension	Reading Fluency
Mean	29.76	46.25
Standard Deviation	9.22	8.02
Correlation	.85*	

* $p > 0.05$, ($N=238$)

Table 4.1, presents the descriptive statistics and correlations between the variables. It also summarized the descriptive with the following: students can read on average (46) words per minute and their level of comprehension was (29.76%). This shows that learners are struggling with reading and this impact on their level of comprehension. As to finding the correlation between these two variables, the value of $r = .85$ shows a strong and significant correlation between reading fluency and reading comprehension.

Regression Analysis

Table 4.2

Regression Analysis

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	14528.100	1	14528.100	610.129	.000 ^b
Residual	5619.519	236	23.812		
Total	20147.619	237			

* $p < 0.05$

Table 4.2, presents the results of regression analysis. A significant regression equation was found $F(1,5619.52) = 610.13$, $aR^2 = 72\%$, $p < .00$.

These values provide an evidence that the amount of variance explained by reading fluency and reading comprehension is substantively good. Both variables ‘reading fluency’ and ‘reading comprehension’ account for 72% variance. This relationship can also be seen through the following scatter plot:

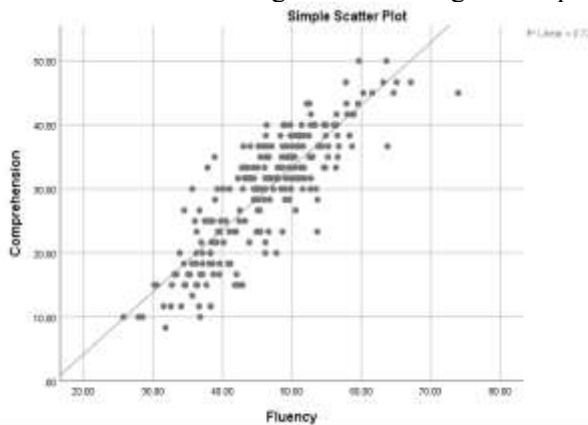


Figure 1 Relationship between Reading Fluency and Reading Comprehension

Table 4.3
Regression Coefficients

Model	B	Std. Error	Beta	t	sig.
(Constant)	-15.34	1.85		-8.28	.00
Fluency	.98	.04	.85	24.7	.00

* $p < 0.05$

Table 4.3, reporting the regression coefficients for the predictor variable. A significant correlation was already identified which also strengthen the regression coefficients. This means an increase of one unit in reading fluency will result in an increase of .98 in reading comprehension.

5. Discussion & Conclusion

This study intends to map the relationship between learners' reading fluency and reading comprehension at early childhood education level. The study findings were completely aligned with the available research conducted in local and international context. Reading is one of the core problems of early childhood education. As mentioned elsewhere in this manuscript poor reading in early grades could lead to poor grades and could affect the whole academic life of a learner. Considering this important concern, findings also contributed in the available pool of literature that poor reading fluency could end up with poor reading comprehension. Findings of study are in line with the study results of following local researcher conducted their studies in the domain of early childhood education (Shakil, 2020; Hussain & Hussain, 2018; Iqbal, Noor, Muhabat, & Kazemian, 2015). Similar results were corroborated when explored the international literature in view of studying the impact of reading fluency and reading comprehension of learners at ECE level (Spencer & Wagner, 2018; Cain & Oakhill, 2011; Khazaal, 2019 Nation, Cocksey, Taylor, & Bishop, 2010).

Studies also explored the causes of poor reading fluency and its effects on reading comprehension of early grades learners. This aspect of finding is also aligned with research findings (Sari, Wardhana, & Kusumaningsih, 2020). Findings are also in accordance with the study findings of Nurjanah (2018) who conducted a study to identify the difficulties of reading and comprehension at early grades in public schools.

As mentioned elsewhere, early reading instructions can enhance the level of students' reading and their level of comprehension. Many researchers conducted reading interventions with early grades teachers and learners to improve their reading abilities and level of comprehension. For example, the

following studies provides a base and can be taken as model studies to develop and conduct an intervention to improve learning skills of students in early grades (Diaz & Laguado, 2013; Kim, Park, & Wagner, 2014; Kim, Wagner, & Foster, 2011; Förster, Kawohl, & Souvignier, 2018; Wise et al., 2010).

To conclude, reading fluency has strong impact on reading comprehension. Moreover, the speed, prosody and accuracy ultimately lead to comprehend the written text which is the success criteria for learners at early grades. Findings showed that learners who struggle with reading also lack in comprehension.

6. Recommendations

The findings of this research and related researches called for sound intervention programs for developing reading skills in young learners. This also raised the questions on teachers training program and skills. Teachers may be equipped with the certain skills to develop the reading and comprehension skills of learners. Specifically, in Pakistani context, where English is not the first language of the country and the so-called medium of instruction is English. A strong emphasis should be placed on teacher training programs to prepare skilled and motivated teachers who can invest true efforts in developing students' reading and comprehension skills.

Next, children may be engaged in a variety of learning activities which give them exposure to interact with written text, they may be provided with reading literature based on essays, stories, and general knowledge. Research has proved that reading exposure enhanced the students reading skills which ultimately add in vocabulary and reading comprehension.

Teaches could also arrange reading theatre activities, reading comprehension competitions and reading aloud etc. to develop reading abilities of learners.

But all these depends on school policies and administration that how they set their school priorities. School administration can train their teachers on these lines to produce/prepare creative and innovative teachers so that they could create interest of learners in reading to perform better in their classes. It is important to mention, readers who struggle in early grade often becomes frustrated and ultimately leave the schools. This calls for serious actions against this crucial problem to develop reading abilities of learners to make them efficient readers which help them to perform better in further grades.

References

- Ahmadi, D., & Reza, M. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, 3(2), 115-125.
- Alexander, P. A. (2005). The path to competence: A lifespan developmental perspective on reading. *Journal of Literacy Research*, 37(4), 413-436.
- Berendes, K., Wagner, W., Meurers, D., & Trautwein, U. (2019). When a silent reading fluency test measures more than reading fluency: Academic language features predict the test performance of students with a non-German home language. *Reading and Writing*, 32(3), 561-583.
- Cain, K., & Oakhill, J. (2011). Matthew effects in young readers: Reading comprehension and reading experience aid vocabulary development. *Journal of learning disabilities*, 44(5), 431-443.
- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, 19(1), 5-51.
- Creswell, J. W. (2008). *Planning, conducting and evaluating quantitative ad quantitative research*, Educational Research. Upper Saddle River, NJ: Pearson Education Inc.
- Diaz, S., & Laguado, J. C. (2013). Improving reading skills through skimming and scanning techniques at a public school: Action research. *Opening Writing Doors Journal*, 10(1), 133-150.
- Edwards, C. M. (2014). Maternal literacy practices and toddlers' emergent literacy skills. *Journal of Early Childhood Literacy*, 14(1), 53-79.
- Förster, N., Kawohl, E., & Souvignier, E. (2018). Short-and long-term effects of assessment-based differentiated reading instruction in general education on reading fluency and reading comprehension. *Learning and Instruction*, 56, 98-109.
- Goodwin, A. P., Petscher, Y., Jones, S., McFadden, S., Reynolds, D., & Lantos, T. (2020). The monster in the classroom: Assessing language to inform instruction. *The Reading Teacher*, 73(5), 603-616.

- Groen, M. A., Veenendaal, N. J., & Verhoeven, L. (2019). The role of prosody in reading comprehension: Evidence from poor comprehenders. *Journal of Research in Reading, 42*(1), 37-57.
- Gurning, B., & Siregar, A. (2017). The effect of teaching strategies and curiosity on students' achievement in reading comprehension. *English Language Teaching, 10*(11), 191-198.
- Hampton, S., & Resnick, L. B. (2009). *Reading and Writing with Understanding*. Washington DC: International Reading Association.
- Hussain, T., & Hussain, G. (2018). Relationship between reading fluency and reading comprehension of secondary level Pashto speaking learners of English in Parachinar, KP Pakistan. *International Journal of English and Education, 7*(3), 227-233.
- Iqbal, M., Noor, M., Muhabat, F., & Kazemian, B. (2015). Factors responsible for poor English reading comprehension at secondary level. *Communication and Linguistics Studies, 1*(1), 1-6.
- Kaufer, D. S., Ishizaki, S., Butler, B. S., & Collins, J. (2004). *The power of words: Unveiling the speaker and writer's hidden craft*. Routledge.
- Khazaal, E. N. (2019). Impact of Intensive Reading Strategy on English for Specific Purposes College Students' in Developing Vocabulary. *Arab World of English Journal, 10*(2), 181-195.
- Klauda, S. L., & Guthrie, J. T. (2008). Relationships of three components of reading fluency to reading comprehension. *Journal of Educational psychology, 100*(2), 310.
- Kim, Y. S., Park, C. H., & Wagner, R. K. (2014). Is oral/text reading fluency a “bridge” to reading comprehension? *Reading and writing, 27*(1), 79-99.
- Kim, Y. S., Wagner, R. K., & Foster, E. (2011). Relations among oral reading fluency, silent reading fluency, and reading comprehension: A latent variable study of first-grade readers. *Scientific Studies of Reading, 15*(4), 338-362.
- KIRMIZI, F. S. (2011). The relationship between reading comprehension strategies and reading attitudes. *Education 3–13 International Journal of Primary, Elementary and Early Years Education, 39*(3), 289-303.

- Lok, B., McNaught, C., & Young, K. (2016). Criterion-referenced and norm-referenced assessments: compatibility and complementarity. *Assessment & Evaluation in Higher Education*, 41(3), 450-465.
- Lyster, S. A. H., Lervåg, A. O., & Hulme, C. (2016). Preschool morphological training produces long-term improvements in reading comprehension. *Reading and Writing*, 29(6), 1269-1288.
- Manan, S. A. (2019). Myth of English teaching and learning: A study of practices in the low-cost schools in Pakistan. *Asian Englishes*, 21(2), 172-189.
- Manning, A. (2013). *Ways to Improve Reading Fluency: the Addition of Podcasting and Tape-Assisted Reading to Readers Theatre* (Doctoral dissertation, University of Dublin).
- Morris, D. (2014). *Morris informal reading inventory: Preprimer through grade 8*. Guilford Publications.
- Muhammad, S. (2013). Second language reading instruction in Pakistan. *Procedia-Social and Behavioural Sciences*, 70, 1403-1412.
- Nation, K., Cocksey, J., Taylor, J. S., & Bishop, D. V. (2010). A longitudinal investigation of early reading and language skills in children with poor reading comprehension. *Journal of Child Psychology and Psychiatry*, 51(9), 1031-1039.
- Nurjanah, R. L. (2018). The analysis on students' difficulties in doing reading comprehension final test. *Metathesis: Journal of English Language, Literature, and Teaching*, 2(2), 253-264.
- RAND Reading Study Group. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: Rand.
- Robinson, O. C. (2014). Sampling in interview-based qualitative research: A theoretical and practical guide. *Qualitative research in psychology*, 11(1), 25-41.
- Sari, M. H., Wardhana, D. E. C., & Kusumaningsih, D. (2020). Understanding the level of students' reading comprehension ability. *Universal Journal of Educational Research*, 8(5), 1848-1855.

- Schickedanz, J. A., & Collins, M. F. (2013). *So much more than the ABCs: The early phases of reading and writing*. National Association for the Education of Young Children.
- School Education Department. (2020). *School Education Department, The Punjab Portal Government of Punjab*. Retrieved from <https://schools.punjab.gov.pk>
- Shakil, M. (2020). Factors affecting students' low competence in reading English at primary level in Pakistan. *International Journal of Education (IJE)*, 8(3), 19-26.
- Siddiqui, N., & Gorard, S. (2017). Comparing government and private schools in Pakistan: The way forward for universal education. *International Journal of Educational Research*, 82, 159-169.
- Smith, F. (2012). *Understanding reading: A psycholinguistic analysis of reading and learning to read*. Routledge.
- Sohlberg, M. M., Griffiths, G. G., & Fickas, S. (2014). An evaluation of reading comprehension of expository text in adults with traumatic brain injury. *American journal of speech-language pathology*, 23(2), 160-175.
- Spencer, M., & Wagner, R. K. (2018). The comprehension problems of children with poor reading comprehension despite adequate decoding: A meta-analysis. *Review of educational research*, 88(3), 366-400.
- Stevens, A. (2010). *3 ways poor reading skills impact 68% of 4th graders*. Retrieved from <https://www.readinghorizons.com/blog/post/2010/06/22/3-ways-poor-reading-skills-impact-6825-of-4th-graders>
- Tankersley, K. (2003). *The threads of reading: Strategies of literacy development*. Alexandria, VA: Association for Curriculum and Supervision Development.
- Therrien, W.J., & Watt, S. (2012). Repeated reading. In Hattie, J., Anderman, E. (Eds.), *International handbook of student achievement* (pp. 320–321). London: Routledge.
- Torppa, M., Vasalampi, K., Eklund, K., Sulkunen, S., & Niemi, P. (2020). Reading comprehension difficulty is often distinct from difficulty in

reading fluency and accompanied with problems in motivation and school well-being. *Educational Psychology*, 40(1), 62-81.

Treiman, R. (2018). What research tells us about reading instruction. *Psychological Science in the Public Interest*, 19(1), 1-4.

United States Agency for International Development [USAID]. (2017). *USAID-Funded Pakistan Reading Project – Quarterly progress report: January 01- March 31, 2017*, USAID/Pakistan.

Wise, J. C., Sevcik, R. A., Morris, R. D., Lovett, M. W., Wolf, M., Kuhn, M. ... & Schwanenflugel, P. (2010). The relationship between different measures of oral reading fluency and reading comprehension in second-grade students who evidence different oral reading fluency difficulties. *Language, speech, and hearing services in schools*, 41(1), 340–348.

Wolf, M., & Katzir-Cohen, T. (2001). Reading fluency and its intervention. *Scientific studies of reading*, 5(3), 211-239.

Zaccoletti, S., Altoè, G., & Mason, L. (2020). Enjoyment, anxiety and boredom, and their control-value antecedents as predictors of reading comprehension. *Learning and Individual Differences*, 79, 101869.

Zarić, J., & Nagler, T. (2021). Reading comprehension on word-and sentence-level can be predicted by orthographic knowledge for German children with poor reading proficiency. *Reading and Writing*, 34, 2031-2057.

Citation of this Article:

Zulfqar, A., Hussain, B., & Hira, N. (2021). Analysing the Relationship between Reading Fluency and Reading Comprehension of Learners at Early Childhood Education. *International Journal of Innovation in Teaching and Learning (IJITL)*, 7(2), 101-117.