



Triarchic Intelligence and Reading Comprehension of Junior High School Learners

Merlyn M. Bayatan

Teacher III, Salngan National High School, Passi City, Philippines
Email – merlyn.bayatan003@deped.gov.ph

Abstract: *Reading comprehension is a necessary skill that helps improve reading enjoyment and effectiveness and benefits students' academic, professional, and personal lives. But years of observations clearly indicated that learners' reading comprehension skills are diminishing significantly, threatening the foundation of their learning process in school and other necessary processes to succeed. Thus it is empirical to explore factors that could help improve students' reading comprehension, especially in the school context. In this study, the role of triarchic intelligence, as proposed by Robert Sternberg, was explored in relation to students' reading comprehension. Results of this study indicated that students were shown to have a predominance of practical intelligence, with students having a dominant of creative and analytical intelligence. It further revealed that students with a predominance of creative intelligence have high reading comprehension skills when compared to students with other predominant components of triarchic intelligence. Lastly, no significant difference is found among students' reading comprehension when grouped according to their dominant triarchic intelligence. These results show that classifying students according to their dominant triarchic intelligence has no effect on their reading comprehension skills.*

Key Words: *triarchic intelligence, reading comprehension*

1. INTRODUCTION:

Skillful reading is not a unitary skill. It is a vast, intricate system of abilities and information. The skills and actions required to visually discern distinct printed words inside this system are meaningless in and of themselves. They are beneficial and only in a real sense possible if they are supported and received by additional language comprehension knowledge and activities. On the other hand, unless the processes involved in individual word recognition operate properly, nothing else in the system can either (Adams, 1994).

Reading comprehension is the application of a talent that is developed for other purposes (hearing or speaking comprehension) to a new type of input (text). Contrary to listening comprehension, reading comprehension is not a function for which our brains have evolved. Reading comprehension is more difficult and necessitates intentional training, in contrast to spoken comprehension, which appears to develop "naturally" with less intentional guidance. Oral comprehension is a skill that humans have mastered for at least 100,000 years (Donald, 1991), and almost all of us are capable of it.

Although it is a complicated process in and of itself, reading comprehension also relies on other significant lower-level processes. It is a critical foundation for later academic learning, many employment skills, and life satisfaction. While focusing on it is crucial, we must keep in mind the skills that it depends on. To improve the reading comprehension skills of poor performers, we need to understand that there is no "magic wand" for it, and no secret weapon that will quickly improve reading competencies for all poor readers. Careful assessment is required to determine individual children's strengths and weaknesses, and programs need to be tailored accordingly; most poor readers will need continued support in many areas. The roots of most reading comprehension problems lie in the early elementary years. Waiting until later in elementary school or even secondary school to deal with them is a high-risk course of action.



On the other hand, according to the Triarchic Theory of human intelligence and its development (Sternberg, 1985), a common set of processes underlies all aspects of intelligence. These processes are hypothesized to be universal. As an illustration, even though the solutions to problems that are deemed intelligent in one culture may differ from those that are deemed intelligent in another, the need to describe problems and translate solutions to these problems remains in all cultures. The same processes are employed for all three facets of intelligence, but they are applied to various tasks and circumstances depending on whether a particular issue calls for analytical thinking, practical thinking, creative thinking, or a combination of these types of thinking.

Sternberg (1985), in his book *Beyond IQ: A Triarchic Theory of Human Intelligence*, detailed the three components of human intelligence which are Analytical (Componential) Intelligence, Creative (Experiential) Intelligence, and Practical (Contextual) Intelligence. The ability to analyze, assess, judge, or compare and contrast things is a component of analytical intelligence. It is typically used when processing components are applied to relatively familiar problems requiring abstract judgments. The ability to put concepts into practice, apply, or carry out in real-world situations is a component of practical intelligence. It entails people using their skills to solve the kinds of everyday issues they run with at work or home. Practical intelligence is the application of the components of intelligence to experience to (a) adapt to, (b) shape, and (c) select environments. Skills for creating, inventing, discovering, imagining, supposing, or positing hypotheses are a part of creative intelligence. When it comes to gauging performance on tasks that call on people to handle relatively fresh situations, tests of creative intelligence go beyond measures of analytical intelligence. Sternberg has demonstrated that one can access the origins of individual variations that these tests capture only weakly or not at all by examining a variety of talents beyond those examined by conventional tests of IQ (Sternberg, 1985). Therefore, it is crucial to incorporate issues of a relatively unique nature. Convergent or divergent thinking may be required to solve these difficulties.

Many researchers have done this about the correlation of intelligence to the specific skills students acquired in schools like their mathematical ability, problem-solving skills, scientific ability, comprehension and vocabulary level, and many others. And these later decades, some thinkers have formulated new theories about the nature of human intelligence that need to confirm whether the specific approach to intelligence does affect or do relate to the academic and non-academic skills of students. And with these, the researcher wanted to determine whether the Triarchic intelligence as proposed by Sternberg and the components of this type of intelligence relates to the reading comprehension level of Salngan National High School students. Specifically, it sought to answer the following questions:

1. What is the level of Triarchic intelligence among Salngan National High School students?
2. What is the level of reading comprehension of Salngan National High School students when grouped according to their dominant component of Triarchic intelligence?
3. Is there a significant difference in the reading comprehension of Salngan National High School students when grouped according to their dominant component of Triarchic intelligence?

2. METHODS :

Research Design. The study utilized the causal-comparative research design. In causal-comparative research, investigators attempt to determine the cause or consequences of differences that already exist between or among groups of individuals (Fraenkel, Wallen, & Hyun, 2012). In this study, the researcher looked into the consequence of Triarchic intelligence on the reading comprehension level of Salngan National High School Students.

Subject of the Study. The researcher randomly identified 50 grade 9 students of Salngan National High School as respondents to this study. These respondents were chosen through the fishbowl method.

Research Instrument. The researcher utilized two standardized questionnaires – for Triarchic intelligence and for reading comprehension. Students' dominant component of triarchic intelligence was determined using Stenberg's Triarchic Intelligence Inventory (STII) adapted from the work of Naval (2019). The STII was revised based on the Triarchic Theory of Human Intelligence Survey of Schultz Center for Teaching and Leadership website. The instrument is a Likert-scaled inventory consisting of 30 items with 10 items each on analytical, creative, and practical intelligence. Students' dominant intelligence was described based on the scoring guide of Shearer's (2006) Multiple Intelligences Developmental Assessment Scales (MIDAS) which was as follows:



Range	Description
40.00 – 50.99	Very High
30.00 – 39.99	High
20.00 – 29.99	Moderate
10.00 – 19.99	Low
0.00 – 9.99	Very Low

On the other hand, a validated 50-item questionnaire was used in determining the level of reading comprehension of the students of Salngan National High School. This questionnaire has undergone phase and content validation. Experts in the field of English linguistics were chosen to validate the research instrument. Each expert was given a copy of the instrument for comments and corrections which were considered by the researcher in the revisions. To interpret and describe the test scores of respondents in their reading comprehension skills, this scale was used.

Range	Description
40.00 – 50.99	Very High
30.00 – 39.99	High
20.00 – 29.99	Moderate
10.00 – 19.99	Low
0.00 – 9.99	Very Low

Data Collection Procedure. The data were collected by administering the tests prepared for the respondents. Approval of the conduct of the study was secured from the Office of the School Principal. The researcher personally administered the tests to the respondents and eventually retrieved the questionnaires, encoded, processed, and analyzed the data.

Statistical Tools. Different statistical tools were used under the SPSS to process and analyze the data gathered in this study. These tools were as follows: (1) Mean. The Mean or average was used to determine the level of dominant triarchic intelligence and reading comprehension skills of Salngan National High School students. (2) Frequency. The frequency was used to determine the number of respondents with the highest score in Stenberg’s Triarchic Intelligence Inventory (STII) of the respondents. (3) One-Way Analysis of Variance (ANOVA). This statistical tool was used to find out whether there were significant differences in reading comprehension of the respondents when grouped according to their dominant triarchic intelligence.

3. RESULTS AND DISCUSSIONS :

Descriptive Data Analysis. Table 1 shows the level of triarchic intelligence of Salngan National High School students in their dominant intelligence. It presents that most of the respondents dominantly had practical intelligence (N=30) while the least in number were respondents dominantly having analytical intelligence (N=9) and the rest of the respondents were dominant in terms of creative intelligence (N=11). This result resembles the study conducted by Naval, Lomibao, & Luna (2018) where the majority of the research subjects were found to have practical intelligence as their dominant triarchic intelligence.

Furthermore, the result shows that when the respondents are grouped according to their dominant triarchic intelligence, those having analytical intelligence had the highest mean triarchic intelligence inventory score (\bar{x} =38.00), it was followed by students with dominantly creative intelligence (\bar{x} =37.36) and students with practical intelligence had the least mean inventory score (\bar{x} =35.47). But despite having differences in the mean triarchic intelligence inventory score, all three groups of students were found to have a high mean triarchic intelligence inventory score.

Table 1. Level of Dominant Triarchic intelligence of Salngan National High School Students

Components of Human Intelligence	\bar{x}	N	SD	Description
Analytical Intelligence	38.00	9	3.16	High
Creative Intelligence	37.36	11	8.00	High



Practical Intelligence	35.47	30	5.70	High
Total	36.34	50	5.92	High

With regard to students' reading comprehension skills, the respondents were grouped according to their dominant triarchic intelligence. The result shows that students with dominantly creative intelligence had a high level of reading comprehension ($\bar{x}=31.09$). On the hand, students with dominantly practical and analytical intelligence had a moderate level of reading comprehension with mean scores $\bar{x}=29.70$ and $\bar{x}=26.78$, respectively.

Table 2. Level of Reading Comprehension of Salngan National High School Students

Components of Human Intelligence	\bar{x}	N	SD	Description
Analytical Intelligence	26.78	9	8.39	Moderate
Creative Intelligence	31.09	11	5.63	High
Practical Intelligence	29.70	30	7.23	Moderate
Total	29.48	50	7.13	Moderate

This result presenting that those students with dominantly creative intelligence have a high level of reading comprehension skill is in consonance with the work of Mourges, Preiss, and Grigorenko (2014) which concluded that reading comprehension was the best predictor of performance of students on creativity tasks. Danesh and Nourdad (2017) further added that there is a strong positive correlation between creative skills and reading comprehension among students.

Inferential Statistical Analysis. The One-way Analysis of Variance was the statistical tool used to determine the existence of significant differences in the reading comprehension of Salngan National High School students grouped according to their dominant triarchic intelligence.

The result shows that the sig. value is $p=.398$ which is way higher than the set alpha value of $\alpha=0.05$. This means that the null hypothesis which states that there is no significant difference in the reading comprehension of Salngan National High School students when grouped according to their dominant component of Triarchic intelligence is not rejected. It shows that the reading comprehension of students does not significantly differ when grouped according to their dominant triarchic intelligence. Knowing once dominant triarchic intelligence does not immediately dictate what its resulting reading comprehension skill is. In short, triarchic intelligence cannot solely predict students' performance in reading comprehension.

Table 3. One-way Analysis of Variance (ANOVA) on Students' Triarchic Intelligence and Reading Comprehension

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	95.715	2	47.858	.938	.398
Within Groups	2396.765	47	50.995		
Total	2492.480	49			

CONCLUSIONS :

Conclusions. Based on the foregoing findings, the following was concluded:

1. Most students of Salngan National High School were found to dominantly have practical intelligence and few are having creative and analytical intelligence as their dominant triarchic intelligence. This is good to show that most students of this school are well adept at behaving in successful ways in their external environment.
2. Students with dominantly creative intelligence have high reading comprehension ability. Thus, students who are more creative have a high chance of doing well in reading comprehension tasks compared to other students having other dominant triarchic intelligence.



3. No significant difference is found among the reading comprehension of Salngan National High School students when grouped according to their dominant triarchic intelligence. Thus, reading comprehension does not solely depend on the triarchic intelligence of students. Reading comprehension requires a lot of skills and is a complex process that does not rely only in one's intelligence.

Recommendations. Based on the results and conclusions of this study, the following are the recommendations:

1. There is a need for schools to identify the dominant triarchic intelligence of students and tilt the teaching-learning process on these forms of intelligence since students learn best when their strength is tapped.

2. There is a need to further improve the reading comprehension of moderately-leveled students since reading comprehension is an important skill needed for the academic success of a student.

3. Future research may be conducted focusing on experimental research that will explore the variation in triarchic intelligence as a factor in improving the reading comprehension of students.

REFERENCES :

1. Adams, M. J. (1994). *Beginning to read: Thinking and learning about print*. The MIT Press.
2. Donald, M. (1991). *The origins of the modern mind: Three stages in the evolution of culture and cognition*. Cambridge MA: Harvard University Press.
3. Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence*. Cambridge University Press.
4. Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). New York: Mc Graw Hill.
5. Naval, A. B, Lomibao, L. S, & Luna, C. A. (2019). The influence of triarchic intelligence model in mathematics intervention on the students' mathematics performance. *International Journal of Science and Research*, 8(1), 1026–1030. <https://www.ijsr.net/archive/v8i1/ART20194320.pdf>
6. Shearer, C. B. (2006). *Math skill and the multiple intelligences: an investigation into the mi profiles of high school students with varying levels of math skill*. Multiple Intelligences Research and Consulting, Inc. Kent, Ohio 44240, USA: Kent State University
7. Mourgues, C. V., Preiss, D. D., & Grigorenko, E. L. (2014). Reading skills, creativity, and insight: exploring the connections. *The Spanish Journal of Psychology*, 17. <https://doi.org/10.1017/sjp.2014.59>
8. Nourdad, N., & Asghari, R. (2017). The effect of reflective reading on reading comprehension of Iranian EFL learners. *International Journal of Applied Linguistics and English Literature*, 6(6), 267. <https://doi.org/10.7575/aiac.ijalel.v.6n.6p.267>