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The Correlation Between Intrinsic Motivation and Students' Reading Comprehension at Information Systems Study Program of Universitas Muhammadiyah Riau

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Abstract- This research aims to examine the relationship between intrinsic motivation and reading comprehension skills of Information Systems Study Program students at Muhammadiyah Riau University. The research used a quantitative approach with a sample of 62 randomly selected students. The instruments used included an intrinsic motivation questionnaire based on the Motivation Reading Questionnaire (MRQ) and a reading ability test based on TOEFL standards. Data were analyzed using Kolmogorov-Smirnov normality test and Pearson Product Moment correlation. The results showed a weak but statistically significant positive relationship ($r = 0.367$, $p < 0.05$) between intrinsic motivation and reading comprehension ability. The findings confirmed the importance of intrinsic motivation in supporting the engagement and development of reading ability, but also showed that other factors such as language skills and reading strategies play a role in comprehending technical texts. The implication of this research is the importance of developing learning strategies that integrate motivation with technical elements to improve students' reading ability holistically.

Keywords: Intrinsic Motivation; Reading Comprehension; Information System; Student; Skill.

I. INTRODUCTION

Reading comprehension is a crucial academic skill in higher education, especially in disciplines such as information systems, where students frequently engage with complex technical texts that require a high level of understanding. Mastering reading comprehension involves not only recognizing vocabulary but also connecting concepts to derive meaningful interpretations from texts. According to McGeown et al. (2007), reading comprehension is significantly influenced by motivation, a factor that has been shown to play a pivotal role in driving students toward academic success. As higher education increasingly demands that students engage with scholarly and technical content in English, their ability to comprehend complex material becomes essential to remain competitive in the global and digital landscape (Laličić & Dubravac, 2021). Despite the importance of reading comprehension, students often struggle

with this skill, particularly when intrinsic motivation is lacking, which is a key issue that merits deeper exploration.

Intrinsic motivation refers to the internal drive to engage in an activity for its inherent satisfaction (Legault, 2020), plays a foundational role in encouraging students to invest effort and time in activities such as reading. Students who are intrinsically motivated are driven by personal curiosity and the desire for self-improvement, rather than external pressures or rewards. According to Marinak and Gambrell (2008), intrinsically motivated students are more likely to engage with reading materials, which naturally leads to improvements in their comprehension skills. Within the Information Systems Study Program at Universitas Muhammadiyah Riau, a concerning trend has emerged: students display low levels of intrinsic motivation to read English texts, a challenge that may impede their academic performance and comprehension abilities. As highlighted by Becker et al. (2010), a lack of intrinsic motivation can hinder students' development of effective reading strategies, making it difficult for them to fully comprehend academic texts, particularly those in a foreign language.

Numerous studies have explored the relationship between motivation and reading comprehension. For instance, Khasanah (2018) explored the impact of intrinsic motivation on general academic achievement, while Bakkaloğlu and Pilten (2023) examined the relationship between reading motivation and reading self-efficacy. Similarly, Kanonire et al. (2020) studied both intrinsic and extrinsic motivation's effects on reading performance, albeit in elementary school students. While these studies have contributed valuable insights, they differ from the present study in both scope and context. Khasanah's (2018) study, for example, focused on broader academic achievement rather than specifically addressing reading comprehension. Bakkaloğlu and Pilten (2023) emphasized self-efficacy in reading, and Kanonire et al. (2020) investigated younger populations, which contrasts with this study's focus on intrinsic motivation and reading comprehension among university-level students. Furthermore, the current research is uniquely positioned to address the challenges faced by university students, particularly those enrolled in specialized programs like Information Systems, where the ability to comprehend complex, technical English texts is critical to their academic success.

Given the increasing demands for technical literacy and the challenges posed by English academic texts, understanding the relationship between intrinsic motivation and reading comprehension is of paramount importance. The present study seeks to investigate this relationship specifically among students in the Information Systems degree program at Universitas Muhammadiyah Riau. By exploring how intrinsic motivation influences reading comprehension, this research aims to provide valuable insights that can inform the development of instructional strategies designed to foster intrinsic motivation and improve reading abilities. This is especially pertinent for students who are preparing to engage in a digital economy that requires both advanced technical knowledge and the ability to navigate vast amounts of English-language information. Ultimately, the findings of this study could assist educators in creating a more engaging and supportive learning environment, thereby helping students develop the necessary skills to succeed in their academic and professional pursuits.

II. METHODS

Participants

The participants of this study were students of the Information Systems study program at Universitas Muhammadiyah Riau. The population consisted of all students enrolled in the program during the academic year 2024. Using a random sampling technique, a subset of students was selected to represent the population. This approach ensured that each student had an equal chance of being included in the study, minimizing bias and improving generalizability.

The participants of this study were students of the Information Systems study

program at Muhammadiyah Riau University. The study population consisted of 160 first semester students from the 2024 batch in the 2023/2024 academic year. Due to the large population size, random sampling technique was used to select the research sample. Data collection was conducted on December 9 and 10, 2024, to ensure reliable representation of the population.

According to Arikunto's (2018) guidelines, as cited in (Rahmah, 2024), when the population size is less than 100, it is advisable to include all members in the sample. However, for populations exceeding 100, a sample size of 10-15% or 20-25% is recommended. Based on this recommendation, 62 students, approximately 10% of the total population, were selected as the research sample to ensure the feasibility of the study while maintaining its generalizability.

Instruments

Two instruments were used in this study. The first was a questionnaire adapted from the Motivation Reading Questionnaire (MRQ) by Wigfield et al. (1996), designed to measure students' intrinsic motivation to read. The questionnaire consisted of 20 items, each rated on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The second instrument was a reading comprehension test based on TOEFL standards, which assessed students' skills in key areas such as identifying the main idea, recognizing specific details, drawing inferences, and understanding the author's purpose. Both instruments were tested for validity and reliability to ensure their suitability for this study.

Data Collection Procedure

The data collection process began with the administration of the MRQ questionnaire to participants to assess their level of intrinsic motivation to read. This was followed by the reading comprehension test, which measured their ability to understand texts in English. Both instruments were distributed and completed under standardized conditions to ensure consistency. The data collected from these instruments were then analyzed using statistical methods, specifically Pearson's product-moment correlation, to determine the relationship between intrinsic motivation and reading comprehension.

BESARNYA NILAI HUBUNGAN	INTERPRETASI HUBUNGAN
0,80 – 1,00	Tinggi
0,06 – 0,80	Cukup
0,40 – 0,60	Agak rendah
0,20 – 0,40	Rendah
0,00 – 0,20	Sangat rendah

(Sumber Cahyono, 2017)

III. RESULT AND DISCUSSION

Results

In this research the researcher finds out the result after conducting the research. Based on (Nuryadi et al., 2017) in his book entitled "Dasar Dasar Statistik Penelitian" Normality test is a procedure used to determine whether the data comes from a normally distributed population or is in a normal distribution. in this normality test, researchers used the Kolmogorov Smirnov normality test with the following decision-making provisions:

1. Sig. or significance value or probability value <0.05 then the distribution is not normal.
2. Sig. or significance value or probability value > 0.05 then the distribution is normal.

From the reason, the data in this research were categorized as the normal data after using statistical test of normality in SPSS 23.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TOTAL_MRQ	.130	62	.011	.963	62	.058
TOTAL_TESTREADING	.117	62	.034	.970	62	.126

a. Lilliefors Significance Correction

The process of statistic test is using correlation pearson product moment using spss 23 with the conditions The significance of the correlation can be based on the p value (probability) compared to the value of α. The p value < the value of α, then Ho is rejected, Ha accepted, meaning there is a significant correlation, otherwise p value > α value, then Ho is accepted, Ha is rejected, meaning there is an insignificant correlation (Cahyono, 2017).

Correlations

		TOTAL_MRQ	TOTAL_TEST READING
TOTAL_MRQ	Pearson Correlation	1	.367**
	Sig. (2-tailed)		.003
	N	62	62
TOTAL_TESTREADING	Pearson Correlation	.367**	1
	Sig. (2-tailed)	.003	
	N	62	62

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the analysis conducted by the researchers, the Pearson Correlation value of 0.367 indicates a positive and quite weak relationship between intrinsic motivation and reading comprehension. This indicates that an increase in intrinsic motivation tends to be followed by an increase in reading comprehension, although the relationship is not very strong. In addition, the significance value p = 0.003 which is smaller than 0.05 indicates that this relationship is statistically significant, so it can be concluded that there is a real relationship between the two variables.

Discussion

The results of this research revealed a weak but statistically significant positive correlation ($r = 0.367$, $p < 0.05$) between intrinsic motivation and reading comprehension among Information Systems students at Universitas Muhammadiyah Riau. While this correlation suggests that higher intrinsic motivation tends to be associated with improved reading comprehension, the relationship is relatively modest. This finding aligns with the conclusions of Marinak and Gambrell (2008), who emphasized the role of intrinsic motivation in fostering engagement with reading, which is essential for developing reading skills. The low correlation observed in this study indicates that intrinsic motivation, while beneficial, does not serve as a strong or sole predictor of reading comprehension, particularly in the context of technical and specialized texts.

The relatively weak relationship between intrinsic motivation and reading comprehension underscores the complexity of reading comprehension, especially within the domain of technical subjects such as information systems. Unlike general reading or literature, technical texts require not only basic comprehension skills but also the ability to navigate domain-specific vocabulary, complex structures, and specialized concepts. This suggests that intrinsic motivation alone may not sufficiently account for the variance in students' ability to understand and process these texts. As such, it is crucial to recognize that reading comprehension, particularly in technical fields, is influenced by a constellation of factors, including prior knowledge, language proficiency, cognitive strategies, and the specific demands of the discipline.

These findings have significant implications for educational practices in the Information Systems program. While Becker et al. (2010) highlighted the importance of intrinsic motivation for improving reading comprehension, this study indicates that motivation, in isolation, may not be sufficient for students to excel in reading comprehension tasks, particularly when confronted with complex or unfamiliar technical material. The nature of technical reading often involves understanding dense content that requires not only comprehension but also problem-solving skills and the application of technical knowledge. Therefore, the role of motivation must be considered alongside other instructional strategies that address the unique challenges of reading in technical fields.

One implication of this research is the necessity for a more integrated approach to teaching reading comprehension in technical disciplines. Specifically, educators should aim to combine intrinsic motivation with discipline-specific strategies that address the challenges of technical reading. For example, promoting intrinsic motivation through student-centered teaching methods such as incorporating real-world applications or interactive learning activities can increase engagement. At the same time, teaching students how to effectively approach technical texts, including the use of specialized reading strategies (e.g., skimming for key concepts, using contextual clues to decipher technical terms, and improving note-taking skills for complex materials), can support the development of reading comprehension. Furthermore, explicit instruction in discipline-specific vocabulary and concepts is essential, as technical texts often assume familiarity with a specialized lexicon that can be a barrier to understanding for students with limited exposure

or background knowledge.

Another critical insight from this study is the importance of creating learning environments that not only foster intrinsic motivation but also address the specific cognitive and academic challenges posed by reading technical content. Educators could enhance reading motivation by selecting reading materials that are not only relevant but also engaging and aligned with students' interests and future career goals. This approach could help students see the direct application of their reading tasks to real-world scenarios, thereby enhancing their intrinsic motivation to engage with the material. Additionally, incorporating diverse instructional strategies such as collaborative reading exercises, peer discussions, or problem-based learning projects could support motivation while simultaneously reinforcing the practical skills required for reading comprehension in technical fields.

Future research should delve deeper into how intrinsic motivation interacts with other contextual and individual factors, such as language proficiency, cognitive load, academic stress, and the development of specific reading strategies. For instance, studies could examine how students' language skills both in terms of general language proficiency and specialized technical vocabulary affect their ability to comprehend technical texts. Similarly, the role of academic stress, which may reduce motivation and cognitive resources, could be explored to understand how stress levels influence both intrinsic motivation and reading comprehension performance. Additionally, longitudinal studies could provide insights into how intrinsic motivation evolves over time and how it interacts with other factors to predict reading comprehension and academic success in technical disciplines.

Ultimately, the results of this study suggest that enhancing reading comprehension among Information Systems students requires a multifaceted approach. While intrinsic motivation is an important driver, it must be paired with targeted instructional strategies that address the specific challenges of technical reading. By fostering both motivation and the necessary reading skills, educators can better equip students to navigate the complex texts they encounter in their academic and professional careers, leading to improved academic performance and greater success in the rapidly evolving field of information systems.

IV. CONCLUSION

This research has revealed a weak yet statistically significant positive link between inner motivation and reading comprehension among Information Systems students at Universitas Muhammadiyah Riau. The outcomes show that an increase in intrinsic motivation is associated with a minor enhancement in reading comprehension, emphasizing how crucial motivation is for engaging students with academic texts. Nevertheless, the weak link indicates that intrinsic motivation by itself may not fully explain the differences in reading comprehension, especially when it comes to understanding technical documents.

Furthermore, the findings highlight the intricate nature of reading comprehension, which can be shaped by various elements beyond motivation, including language skills, specialized vocabulary, and cognitive strategies. These insights lay the groundwork for additional studies and suggest that a comprehensive approach is necessary to improve students' comprehension abilities, especially in academic fields that require a high degree of proficiency in technical reading.

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