LIBRARY SERVICES FOR SCIENCE AND EDUCATION SUPPORT

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Student Academic Achievement with the Ability to Read a Collection of Textbooks from the Library Collection

Objective. The students' academic achievement is related to their intelligence (IQ). Studies on factors that affect student academic achievement are still relatively limited and few. Purpose of this research is to consider student academic achievement with the ability to read a collection of textbooks from the library collection. **Methods.** The research method used is quantitative research. While the method of observation is experiment. **Results.** First hypothesis is academic achievement has a significant relationship with the good reading method. The hypothesis is accepted because academic achievement has a significant relationship with reading habits. Both the experimental group and the control group showed that academic achievement has a significant relationship with students reading methods, or it can be said that the good reading method is equivalent to students' reading habits. Second hypothesis, academic achievement has a significant relationship with students' reading ability is accepted. The calculated Chi-square count is greater than the Chi-square table. Third hypothesis, academic achievement has a non-significant relationship with access to information sources, meaning that the hypothesis is rejected. **Conclusions.** Student's academic achievement had a significant relationship with the good reading method and a non-significant relationship with reading ability. Student's academic achievement had a non-significant relationship with access to information sources.

Keywords: student academic achievement; collection; textbooks; library collection

Introduction

The view of students' academic achievement is related to their intelligence (IQ). This point of view is so strongly attached to the general public, that efforts to boost student academic achievement seem to be a dead end. On the one hand, studies on factors that affect student academic achievement are still relatively limited and few. Here, several studies offer the factors that influence student academic achievement, related to the reading dimension, a perspective that is quite interesting and needs to be developed. For example, Moyle (1973) in Prijana and Yanto (2020) created a formula regarding the reading dimension, Good Reading. So that it is increasingly clear that reading requires skill, a kind of skill. Moyle's idea led to the idea of conducting an experimental study on the reading dimension. That reading the right textbook begins with a sense of pleasure (enjoy reading) before doing reading activities. Then the first step, which is to read faster, then read again (read more), and read again for the purpose of understanding the text (understanding better).

Prijana and Rohman (2016b) in an experimental study found that students have different reading skills. A finding that is quite meaningful to be developed. Furthermore, it was found that those with higher academic achievement had faster reading times, compared to those with lower grades. This finding is important to open the veil that has not been widely known. They also have different reading speeds (read faster). Those who have higher academic achievement have different reading habits than those who have lower ones. Those who have higher academic achievement often engage in reading activities. While those who have lower academic

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achievement, do less reading activities. Here the intensity of reading is defined as training. So it can be said that the more trained to read, the faster the reading time.

Prijana and Rohman (2016a) in an experimental study examined the relationship between reading knowledge texts through the good reading method and academic achievement scores, with population N = 34, and if α = 0.25, then student's academic achievement scores have a significant relationship with reading skills through good reading method. If α = 0.10 then the student's academic achievement score has a non-significant relationship with reading ability. Here it is important to continue to develop studies on the reading dimension.

After that, Prijana and Rohman (2016a) in an experimental study examined the relationship between students reading ability through the good reading method and the ability to answer multiple-choice questions, with population N = 34, and if α = 0.10, then the ability to answer multiple-choice questions has a significant relationship with the good reading method. Here the ability to answer multiple choice questions has a significant relationship with the good reading method.

Furthermore, Prijana and Yanto (2020) in an experimental study, conducted the correlation test on academic achievement with the student reading method, with a population N = 34, and if α = 0.01 then student academic achievement has a significant relationship with the good reading method. Here, student's academic achievement has a significant relationship with the good reading method.

Methods

The research method used is quantitative research, namely modern positivist or post positivist. The post-positivist method is causal, which means that cause-and-effect relationship bends to space and time. The post-positivist method is based on data and the verification method, namely hypothesis testing. While the method of observation is experiment. Here the observation method used is experiment. Krathwohl (1993) says that the experimental method is a method for testing hypotheses, namely testing the relationship between the independent variable and the dependent variable. The independent variable is the manipulation variable. While the dependent variable is constant. The results of the manipulation of independent variables on the dependent variable can be measured and tested (measurable).

Results and Discussion

We will discuss the 3rd experiment results regarding the reading dimension. The first experiment with a post-test covered only non-equivalent group, with the hypothesis: academic achievement has a significant relationship with the good reading method. In the experimental group the following results were obtained (Table 1).

It is known that Chi-squarecount = 5.70. If α 0.10 then it is known that Chi-squaretable = 4.61; it means that the Chi-squarecount is greater than the Chi-squaretable. If the Chi-squarecount is greater than the Chi-squaretable, then academic achievement has a significant relationship with the use of the good reading method, meaning that the hypothesis is accepted. Furthermore, the control group obtained the following results (Table 2).

Table 1

Academic achievement and good reading method in the experimental group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.700[a]	2	.058
Likelihood Ratio	6.666	2	.036
Linear-by-Linear Association	3.844	1	.050
N of Valid Cases	34		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.15.

$$\lambda^2 = 5.70$$

Table 2

Academic achievement and reading habits in control group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.349[a]	3	.039
Likelihood Ratio	9.926	3	.019
Linear-by-Linear Association	6.769	1	.009
N of Valid Cases	40		

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is 1.13.

$$\lambda^2 = 8.34$$

It is known that Chi-squarecount = 8.34. If α 0.10 then Chi-squaretable = 6.25; it means that the Chi-squarecount is greater than the Chi-squaretable. If the Chi-squarecount is greater than the Chi-squaretable, academic achievement has a significant relationship with reading habits, meaning that the hypothesis is accepted.

If you look closely, the results of the first experiment show that there is no difference between the experimental group and the control group, meaning that academic achievement has a significant relationship with students reading methods, or it can be said that the good reading method is equivalent to students' reading habits.

The second post-test experiment covered only non-equivalent group, with the hypothesis: academic achievement has a significant relationship with students' reading ability. In the experimental group, the following results are known:

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Table 3

Academic achievement and reading ability in the experimental group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.190[b]	1	.041		
Continuity Correction [a]	2.712	1	.100		
Likelihood Ratio	4.129	1	.042		
Fisher's Exact Test				.057	.051
Linear-by-Linear Association	4.066	1	.044		
N of Valid Cases	34				

a. Computed only for a 2x2 table
b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.44.

$\lambda^2 = 4.19$

It is known that Chi-squarecount = 4.19. If we determine α = 0.10 then Chi-squaretable = 4.61 (table result); meaning that the Chi-squarecount is smaller than the Chi-squaretable. If the Chi-squarecount is smaller than the Chi-squaretable, the relationship between academic achievement and students reading ability is non-significant, which means that the hypothesis is rejected. Furthermore, the control group obtained the following results:

Table 4

Academic achievement and reading ability in control group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.234[a]	2	.006
Likelihood Ratio	10.059	2	.007
Linear-by-Linear Association	9.989	1	.002
N of Valid Cases	44		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .27.

$\lambda^2 = 10.23$

It is known that Chi-squarecount = 10.23 (calculated result). If α 0.10 then Chi-squaretable = 4.61; it means that the calculated Chi-squarecount is greater than the Chi-squaretable. If the Chi-squarecount is greater than the Chi-squaretable, then the relationship between academic achievement and students reading ability is significant, meaning that the hypothesis is accepted.

The third experiment with a single group used the interrupted time-series design, namely the relationship between academic achievement and access to information sources. Here in the experimental group the following results are obtained:

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Table 5

Academic achievement and access to information resources

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.966[a]	8	.345
Likelihood Ratio	10.426	8	.236
Linear-by-Linear Association	3.323	1	.068
N of Valid Cases	37		

a. 13 cells (86.7%) have expected count less than 5. The minimum expected count is .24.

$λ^2 = 8.96$

It is known that Chi-squarecount = 8.96. If α 0.10 then Chi-squaretable = 13.40; meaning that the Chi-squarecount is smaller than the Chi-squaretable; If the Chi-squarecount is smaller than the Chi-squaretable, then academic achievement has a non-significant relationship with access to information sources, meaning that the hypothesis is rejected.

Conclusion

In the first experiment, it was found that students' academic achievement had a significant relationship with the good reading method, meaning that the good reading method led students to improve their academic achievement. However, students reading habits that have been carried out so far also have a significant relationship with their academic achievement. Both reading methods have the power to boost academic achievement. Both reading methods can be used to support academic achievement. In the second experiment, it was found that students academic achievement had a non-significant relationship with reading ability. However, in the control group, student academic achievement had a significant relationship with reading ability. It is assumed that the population characteristics between the experimental group and the control group are different. The characteristic difference in question is the number of male and female sexes in the experimental group that differs from the number of male and female sexes in the control group. Perhaps this is a correction to the second experiment. In the third experiment, it was found that student academic achievement had a non-significant relationship with access to information sources. In this third experiment, there is a weakness in the single group with interrupted time-series design model. The third experiment was performed only once, yet it should have been done several times.

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Зв'язок академічної успішності студентів і можливістю читання підручників із бібліотечного фонду

Мета. Академічна успішність студентів пов'язана з їхнім інтелектом (IQ). Дослідження факторів, які впливають на академічні досягнення студентів, все ще відносно обмежені та нечисленні. Метою даного дослідження є врахування навчальних досягнень студентів з навичкою читання підручників із фонду бібліотеки. **Методика.** Використаний метод дослідження – кількісне дослідження. Тоді як метод спостереження – експеримент. **Результати.** Перша гіпотеза полягає в тому, що академічні досягнення мають значний зв'язок із хорошим методом читання. Гіпотезу прийнято, оскільки академічні досягнення мають значний зв'язок зі звичками читання. Як експериментальна, так і контрольна групи показали, що академічні досягнення мають значний зв'язок із методами читання студентів, або можна сказати, що хороший метод читання еквівалентний читацьким звичкам студентів. Другу гіпотезу, що навчальні досягнення мають значний зв'язок з навичкою студентів читати, прийнято. Розраховане число хі-квадрат більше, ніж таблиця хі-квадрат. Третя гіпотеза: академічні досягнення не мають значущого зв'язку з доступом до джерел інформації, що означає, що гіпотезу відхилено. **Висновки.** Академічна успішність студента мала значний зв'язок із хорошим методом читання та незначний зв'язок із навичкою читати. Академічна успішність студентів мала незначний зв'язок із доступом до джерел інформації.

Ключові слова: академічна успішність студентів; фонд; підручники; бібліотечний фонд