



THE EFFECT OF LOCUS OF CONTROL (LOC) ON IMPROVING STUDENT LEARNING OUTCOMES

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Abstract

The study aims to determine the effect of LoC on improving social studies learning outcomes using quasi-experimental research with time series design. This research uses a quantitative approach with a quasi-experimental method. The population was all 5th grade students of SDN Penjarangan 08 Pagi & Penjarangan 01 and the sample was students of class VB of SDN Penjarangan 08 Pagi. In addition, the instruments used to measure learning outcomes were multiple choice & Likert scale for LoC. This research revealed three findings as follows: 1) The students' external & internal LoC values are 61.7% & 72.6%; 2) Based on the analysis of service quality variables, the t value (5.155) > t table (2.043) & sig value (0.000) < 0.05 with the regression coefficient value = 0.329, internal LoC variables on improving learning outcomes and the t value (3.847) > t table (2, 043) and sig value (0.001) < 0.05 with regression coefficient = 0.253 & based on one lane ANOVA test, sig value = 0.000 < 0.05, it is concluded that there is a significant influence & simultaneously and together internal & external LoC on improving social studies learning outcomes; 3) Based on the results of SPSS analysis, $R = 0.748$. So, this value explains the relationship between internal and external LoC on improving learning outcomes is very strong, significant, and positive and Adjusted R square = 0.527. This value is interpreted that all LoC contribute 52.7% to improving social studies learning outcomes.

Keywords: *LoC, learning, social studies, learning outcomes*

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INTRODUCTION

Learning is a process to help students learn properly. The success of the learning process can be known how good student learning outcomes are characterized by improved student learning outcomes (Nortvig et al., 2018) (Laughlin et al., 2011). Meanwhile Rusman (2014) dan Pratiwi et al., (2019) explain that learning outcomes are the results that have been achieved by students in understanding the knowledge & skills that are combined when learning is generally represented by numbers or quantitative. Furthermore, Maksum et al., (2021) serta Dede (2007) show that learning outcomes are outputs resulting from the interaction of learning and teaching behavioral transformations obtained through learning activities. The results of the study conducted by Saefullah (2012, p. 204) dan Suyanti et al., (2017) also show that learning outcomes are behavioral transformations obtained due to learning activities.

Meanwhile, according to Fathurrahman & Sulistyorini (2012), learning outcomes can be known from the transformation of character from the achievements achieved by students who gain knowledge from a learning mechanism/sequence. Robbins & Timothy (2008, p. 138) added that the improvement of learning outcomes is influenced by a number of factors, one of which is LoC or LoC. added that the improvement of learning outcomes is influenced by a number of factors, one of which is LoC or LoC (Karaman et al., 2018). The social learning approach explains about LoC that the inventor of the LoC concept is an individual from the United States, Julian Rotter (Nowicki et al., 2021) (Tsuda et al., 2020) (Steca, 2020). The concept of LoC or LoC is a sub of personality-related social learning theory & represents a universal desire about the problem of factors that influence success, praise, & sanctions in people's lives (Sujadi et al., 2016) (Zainun et al., 2021). The LoC is the student's perspective on an event whether he feels he can or cannot be in control of the events that happen to him try to see in Rotter's guidelines (Ayudiati, 2010). LoC is a personality variable that means the belief of people or students on whether or not they are able to exert control over their destiny (Wang & Su, 2013) (Smith, 2003).

Furthermore, with reference to the background that has been described, the focus of this research is how the LoC influences the improvement of student learning outcomes at SDN Penjaringan 08 Pagi, North Jakarta. Next, this LoC is very urgent or important for students, especially in KBM because LoC is the student's belief about the extent to which the student feels how the effect of the correlation between the efforts made and the output obtained as this matter is also linked to his personal behavior or relies on controls that are not his control (Nugraha, 2022) (Aremu et al., 2009).

In addition, it is widely known that a number of people have the opinion that effort and ability are factors that influence people to achieve their success (Ginanjar et al., 2019), but a number of other people also have the view that factors from outside their control can have a

positive impact on them towards success including lucky, opportunity, fate, & destiny (Griban et al., 2020) (Kuh & Hu, 2001). Meanwhile, researchers often hear the saying in the community that "smart people lose to lucky people" & after carrying out observations, the situation of students at SDN Penjaringan 08 Pagi, when viewed about their learning outcomes, many of them have learning outcomes that are not good as evidenced by the fact that many still get quite low PTS scores. Thus, there is a chance that the influence of LoC is to blame if the learning outcomes of pupils in this elementary school are not sufficient. The Septikasari et al., (2021) research findings support this.

Based on some of these preliminary studies, researchers want to test what is stated by Robbins & Timothy (2008, p. 138) that improving learning outcomes is influenced by a number of factors, one of which is LoC or in Indonesian known as LoC. Thus, this article examines the effect of LoC on improving cognitive learning outcomes C1-C4 in social studies in class V SD N Penjaringan 08 Pagi, North Jakarta, DKI Jakarta.

METHODS

The method used in this research is the quasi-experimental method or pseudo-experiment. The quasi-experimental method is a research method that is almost the same as a real experiment & only has disparities in the use of subjects (Ali, 1982, p. 140). On the other hand, according to Danim (2013) dan Gopalan et al., (2020) quasi-experimentation is research in which the researcher in a situation that cannot control all related or related variables. So, from these opinions, it can be concluded that the quasi-experimental method is a method that is almost the same as the actual experiment and only has disparities in the use of subjects, namely researchers in situations that cannot control all related or related variables. Therefore, this study is expected to show a cause-and-effect relationship between the independent & dependent variables. In addition, this study uses a time series design. This design is a sub of the quasi-experimental method which shows that this design does not require a control group so it only requires one group (Sugiyono, 2019, p. 115). The following is a table of the design.

Table 1. Time Series Research Design

O	X_1	O_3
O_2	X_2	O_5
O_3	X_3	O_6

Place & Time of Research

This research was conducted in one school, namely SD N Penjaringan 08 Pagi which is located at Jl. Bandengan Utara Raya No.80, RT.005/RW.016, Penjaringan, North Jakarta, DKI Jakarta & SD N Penjaringan 01 (as an instrument trial) which is located at Jl. Luar

Batang V, Penjaringan, Jakarta Utara, DKI Jakarta. Meanwhile, the time of this research was held from January to April 2023.

Research Subject

The population of this study, namely students of SD Negeri Penjaringan 08 Pagi & SDN Penjaringan 01 class V, Penjaringan, Jakarta Utara, DKI Jakarta. The population was chosen because it was sufficiently representative of the criteria for sampling. While quoting the opinion of (Sugiyono, 2013, pp. 218–219) (Andrade, 2021) shows that when determining the subject of this research by purposive means, namely the technique of taking informants with certain considerations, such as the population one has been verified or reviewed.

Data Processing & Analysis Techniques

After the data is collected from the existing instruments, then the instrument is scored on the data, then the data is tabulated, & analyzed. Social Science learning outcomes test instrument the score obtained if the answer is correct is 1 & 0 for incorrect answer. After that, the instruments used need to be tested for validity and reliability. Validity is a measure that shows how much validity or validity of the measuring instrument used (Heale & Twycross, 2015) (Rahardja et al., 2019) (Sürücü & Maslakci, 2020). If the measuring instrument is not correct, it will show the same results as the measuring instrument. In this study, in order to determine its validity, the instrument was submitted to the supervisor to be checked. After that, the instrument was tested for validity at SDN Penjaringan 01 & using the help of the SPSS version 16 application, while reliability has another name, namely consistency & reliability (Bartko & Carpenter, 1976). A good instrument is one that has a high reliability test value.

Table 2. Validity Test of Internal LoC Instrument

No	<i>Pearson Correlation</i>	<i>Sig (2-tailed)</i>	Description
1	0.607	0,000	V & K
2	0.765	0,000	V & K
3	0.661	0,000	V & K
4	0.621	0,000	V & K
5	0.745	0,000	V & K
6	0.677	0,000	V & K
7	0.805	0,000	V & K
8	0.691	0,000	V & K
9	0,616	0,000	V & K
10	0,743	0,000	V & K

V= Validasi, K= Korelasi

By referring to the table, it can be seen that 10 statements are classified as valid because the significance value is smaller than 0.05 (sig <0.05). So that the questionnaire can be used to collect data.

Table 3 Validity Test of External LoC Instrument

No	<i>Pearson Correlation</i>	<i>Sig (2-tailed)</i>	Descriptions
1	0.544	0,002	V & K
2	0.699	0,000	V & K
3	0.692	0,000	V & K
4	0.682	0,000	V & K
5	0.591	0,000	V & K
6	0.620	0,000	V & K
7	0.769	0,000	V & K
8	0.726	0,000	V & K
9	0,792	0,000	V & K
10	0,808	0,000	V & K
11	0,765	0,000	V & K
12	0,550	0,001	V & K
13	0,763	0,000	V & K
V= Validation, K= Correlation			

By referring to the table, it can be seen that 13 statements are classified as valid because the significance value is smaller than 0.05 (sig <0.05). So that the questionnaire can be used to collect data.

Table 4. Validity Test of Learning Outcomes Instrument

No	<i>Pearson Correlation</i>	<i>Sig (2-tailed)</i>	Descriptions
1	0.841	0,000	V & K
2	0.380	0,000	V & K
3	0.864	0,000	V & K
4	0.783	0,000	V & K
5	0.746	0,000	V & K
6	0.715	0,000	V & K
7	0.826	0,000	V & K
8	0.488	0,000	V & K
9	0,488	0,000	V & K
10	0,675	0,000	V & K
V= Validation, K= Correlation			

By referring to the table, it can be seen that 10 questions are classified as valid because the significance value is smaller than 0.05 (sig <0.05). So that the questionnaire can be used to collect data.

Table 5. Reliability Test of LoC and Learning Outcomes Instruments

No	<i>cronbach's Alpha</i>	Description
Learning Outcomes	0,873	Reliable
<i>LoC internal</i>	0,876	Reliable
<i>LoC external</i>	0,908	Very Reliable

Based on the reliability test analysis conducted, it was found that the Cronbach's Alpha value of the learning outcomes variable was 0.873, the internal LoC variable was 0.876, and the external LoC variable was 0.908. The results of this analysis if referring to Guilford's provisions can be concluded that the learning outcomes variable and the internal LoC variable have very high reliability, while the external LoC variable has very high reliability (Guilford, 1967) (Guilford, 1956) (Guilford, 1975). With reference to the validity and reliability tests, the results are in line with the opinion of Bartneck et al., (2009) dan Hans et al., (2017) showing that if the test output of the instrument has a consistent output or has constancy on something that is measured, then the instrument is tested for reliability using the SPSS version 16 application because the application already represents to test the reliability of the instrument.

RESULTS AND DISCUSSION

Internal & External LoC of SDN Penjaringan 08 Pagi Students

Following the distribution of surveys to SD Penjaringan 08 Pagi class VB pupils, the quantity of internal LoC variable scores obtained through questionnaires that have been completed by students is shown. The score amounted to 1,126 & the total ideal score of 1,550. So, the internal LoC in students of SDN Penjaringan 08 Pagi is $1,126 : 1,550 = 0.726 = 72.6\%$, while the external LoC can be known that the total score of the external LoC variable is 1,244. The ideal total score is 2,015. So, the external LoC in these students is $1,244 : 2.015 = 0,617 = 61,7 \%$. So, the value of the internal LoC of these students is 72.6% & the value of the external LoC or external locus of recognition of these students is 61.7%. The results of this analysis are reinforced by research Septikasari et al., (2021) dan Chhabra, (2013).

By referring to the results of the students' internal LoC, these students have a fairly good LoC and this is in line with the results of research (Nugroho et al., 2015) (Anderson et al., 2005) showing that this value is in the high category, while the external LoC has a value of around 61.7%.

State of Social Studies Learning Outcomes of Students of SDN Penjaringan 08 Pagi

In order to measure student learning outcomes, the instrument used is an objective question with multiple choices. According to the results of research by Zapata-Rivera et al., (2017) show that multiple-choice tests are used as a way to assess more complex learning abilities and cover aspects of C1-C4 (Sutrisno et al., 2019). This test consists of a number of answer options related to the subject matter that has been presented. In addition, the results of Sadler's (2016) research show that students' learning outcomes can be known via tests which are then assessed whether they pass the KKM or not. After distributing question instruments to Penjaringan 08 Pagi elementary school students to VB welding, it can be seen that the total score of the social studies learning outcomes variable is 110 & the total ideal score is 310 So, the social studies learning outcomes of Penjaringan 08 Pagi elementary school students are $110 : 310 = 0,354 = 35,4 \%$. So, the value of the learning outcomes of these students is 35.4%. The results of this analysis are reinforced by the research of Septikasari et al., (2021).

Additionally, after data from the respondents has been obtained and each instrument has been evaluated for validity and reliability, the data is then tested for hypotheses using the partial t test, simultaneous f test, correlation test, and coefficient of determination test.

Hypothesis Test

Partial T Test

Table 1 Partial T Test of Internal and External LoC Instruments

Variable	T count	sig.
Constant	4,847	.000
<i>LoC internal</i>	5,155	.000
<i>LoC external</i>	3,847	.001

The Effect of Internal LoC or Internal LoC on Learning Outcomes

Based on the analysis of the service quality variable, the calculated t value (5.155) > t table (2.043) & sig value = 0.000 and less than 0.05 with a regression coefficient value = 0.329, it can be concluded that there is a significant and positive influence, the internal LoC variable on improving learning outcomes, for example, these students are confident in their efforts to get learning achievements, always do homework or assignments on time, and so on. So, the hypothesis or temporary conjecture that states "there is an influence between internal LoC on learning outcomes" is accepted. Meanwhile, the hypothesis or temporary conjecture stating "there is no influence between internal LoC on learning outcomes" is rejected.

The findings of internal LoC at SDN Penjaringan 08 Pagi can be seen from the high activeness of students when studying and the absence of students who do homework at school, and there are also no students who cheat during exams. This explains that students

have made efforts to study at home so that they have the knowledge to discuss during class. This situation represents that students who have a good internal LoC can control activities in their lives. Students can divide their time between playing and studying. This phenomenon is reinforced by the opinion of Sujadi et al., (2016) which explains that students who have a good internal LoC will be able to control and control themselves.

The significant and positive effect of internal LoC on learning outcomes at SDN Penjaringan 08 Pagi is also due to the positive character of students. Students who believe in their own abilities have the character of responsibility, independence and expansion in doing assignments and homework given by the teacher (Hanifah, 2016). Students will be motivated to complete the task themselves and ask questions if they do not understand. This is supported by Teigen et al., (1999) assertion that pupils with an internal LoC will demonstrate independence, responsibility, and growth in their completion of the teacher's duties. Students will feel like a failure if they are unable to complete the task, so students will ask the teacher if they do not understand (Lam, 2019).

The results of internal LoC research have a significant and positive effect on learning outcomes reinforced by the results of research by Septikasari et al., (2021) Anggraini (2020), (Knowles & Kerkman, 2007) which explain that there is a significant and positive influence between internal LoC on learning outcomes due to high student motivation in learning.

The Effect of External LoC or External LoC on Learning Outcomes

Based on the analysis of the service quality variable, the calculated t value $(3.847) > t$ table (2.043) & sig value (0.001) is less than 0.05 with a regression coefficient value $= 0.253$, it can be concluded that there is a significant effect of the external LoC variable on improving learning outcomes. So, the hypothesis stating "there is an influence between external LoC on learning outcomes" is accepted. Meanwhile, the hypothesis stating "there is no influence between external LoC on learning outcomes" is not accepted. So, H_0 is accepted and H_1 is rejected & if this external LoC is too high then the student has a mindset that he is not sure about the efforts he takes to improve his learning outcomes.

The presence of an external LoC in students of SDN Penjaringan 08 Pagi will have a negative impact on the character of these students both in the present & future. It can be seen that students of SDN Penjaringan 08 Pagi who have external LoC tend to be passive during learning, lazy to do assignments and homework, and hesitate to ask questions if they do not understand. These students rely more on good luck to get good learning results. Kasilingam & Sudha, (2010) explained that students who have an external LoC tend to attribute their experiences to fate, chance, and luck. This causes students to have a nature of giving up and surrendering, students believe that getting high scores is a lucky and close relationship with the teacher (Bernardi, 1997). The results of research by Thomas et al (2006) also explain that

students who have an external LoC believe and think that the good learning results they get are lucky, this is because students do not have the motivation and fighting power to learn, students rely more on fate.

The results of external LoC research have a positive effect on work results in line with the results of research Findley, M. J., & Cooper, H. M. (1983) and Teigen et al., (1999) which explain luck and closeness to others can also produce good work. According to As'ad (2004) one of the factors of external LoC, namely closeness to others, has a big influence on learning outcomes, such as if you are friends with smart students, you can cheat on the answers to assignments and exams of smart students, then the grades of students who have an external LoC will also be good.

Simultaneous F Test

Table 2 Simultaneous F Test of the Effect of Internal and External LoC on Improving Learning Outcomes

Variable	F count	<i>sig.</i>
<i>Between Groups</i>	17,738	.000

In addition, to test the effect of stimulus or independent variables (LoC) together on the output variable (improvement of Social Studies learning outcomes), the Simultaneous F test was tested. According to Ghazali (2012, p. 98) in principle or in essence the simultaneous F test shows whether each stimulus variable included in the model has a joint influence on the dependent variable. So, by referring to the results of the f test table analysis (one way anova), the sig value data = 0.000 is less than 0.05, then it can be concluded that there is a simultaneous & joint influence of internal and external LoC on improving student learning outcomes at SDN Penjaringan 08 Pagi. So, H_a is accepted and H_0 is not accepted.

Furthermore, the results of this analysis are reinforced by the opinion of Gujjar & Aijaz (2014) and Bahtiar (2017) who explain that internal and external LoC have a joint influence on learning outcomes. This is because internal and external LoC complement each other.

Table 3. Correlation Test of the Effect of Internal & External LoC on Improving Learning Outcomes

R	R Square	<i>Adjusted R Square</i>
0,748	0,559	0,527

In order to test the relationship between the independent & dependent variables, the correlation test is used. Meanwhile, according to Lind et al., (2008), Gogtay & Thatte (2017)

the correlation test is a group of ways to measure the correlation of two variables. By referring to the results of the table analysis above, the value of $R = 0.748$ is obtained. So, this value explains the correlation between internal & external LoC on improving learning outcomes at SDN Penjaringan 08 Pagi is very strong, significant, & positive

Table 4 Test of the Coefficient of Determination of the Effect of Internal & External LoC or LoC on Improving Learning Outcomes

<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>
0,748	0,559	0,527

Furthermore, in order to determine the extent of changes in the dependent variable caused by the stimulus variable, the coefficient of determination test is used. Meanwhile, the results of Sujarweni's (2015, p. 164) research show that the Coefficient of Determination (R^2) test is used to determine the percentage change in the dependent variable (Y) caused by the independent variable (X).

By referring to the results of the table analysis above, the data shows that the Adjusted R square value = 0.527. So, this value means that the internal and external LoC variables contribute about 52.7% to improving student learning outcomes at SDN Penjaringan 08 Pagi & the lack of 47.3% is due to a number of other factors not examined in this research.

Furthermore, the results of this analysis are reinforced by Janssen & Carton (1999) research showing that students who are grouped have an external LoC tendency because they are affected by a number of things, such as tasks that are not easy, resulting in a decrease in learning outcomes. Hasan & Khalid (2014) research explains that a high LoC in students will increase their efforts, abilities, and responsibility for the direction of their learning. This will bring success in terms of increasing high learning outcomes for students, so that the higher the LoC, the higher the learning outcomes and so is the antithesis.

CONCLUSION

With reference to the research results, the following conclusions were drawn.

- 1) The students' external & internal LoC scores are 61.7% & 72.6%;
- 2) Based on the analysis of service quality variables, the calculated t value (5.155) > t table (2.043) & sig value (0.000) < 0.05 with the regression coefficient value = 0.329, it can be concluded that there is a significant and positive effect, the internal LoC variable on improving learning outcomes and the calculated t value (3.847) > t table (2, 043) and sig value (0.001) < 0.05 with regression coefficient value = 0.253 & based on one way ANOVA test, obtained sig value = 0.000 smaller than 0.05 then it can be concluded that there is an influence that there is a significant influence &

simultaneously & together internal & external LoC on improving social studies learning outcomes, and

- 3) Based on the results of the SPSS analysis, the value of $R = 0.748$ is obtained. So, this value explains the relationship between internal and external LoC on improving learning outcomes is very strong, significant & positive and obtained Adjusted R square value = 0.527. This value can be interpreted that all LoC contributed 52.7% to the improvement of external learning outcomes to the improvement of social studies learning outcomes.

In addition, this study has a number of shortcomings, for example, there are different variables that form learning outcomes, and the research population is solely limited to two classes in different schools. So, our suggestion for future research is to add more variables that can affect the improvement of student learning outcomes, such as learning facilities and infrastructure, learning type, and so on, as well as increasing the sample & population.

REFERENCES

- Anderson, A., Hattie, J., & Hamilton, R. J. (2005). LoC, Self-Efficacy, and Motivation in Different Schools: Is moderation the key to success? *Educational Psychology*, 25(5), 517–535. <https://doi.org/10.1080/01443410500046754>
- Andrade, C. (2021). The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine*, 43(1), 86–88. DOI: <https://doi.org/10.1177/0253717620977000>
- Anggraini, N. (2020). Influence internal LoC, school environment and discipline on student achievement. *Advances in Economics, Business and Management Research* 328–333. DOI: 10.2991/aeblr.k.201126.036
- Aremu, A. O., Pakes, F., & Johnston, L. (2009). The effect of LoC in the reduction of corruption in the Nigerian police. *Policing: An International Journal of Police Strategies & Management*, 32(1), 144–156. DOI: DOI: 10.1108/13639510910937166
- As'ad, M. (2004). *Psikologi industri: Seri ilmu sumber daya manusia* (Edisi ke-4). Bandung: Penerbit Liberty.
- Ayudiati, S. (2010). *Pengaruh LoC Terhadap Kinerja dengan Etika Kerja Islam Sebagai Variabel Moderating*. Semarang: Universitas Diponegoro.
- Bahtiar, M. (2017). The influence of LoC, self-efficacy, and accounting achievement learning on accounting career maturity of the twelfth grade students of the accounting program in private vocational high schools. *International Journal of Education*, 10(1), 53–59. DOI: <https://doi.org/10.17509/ije.v10i1.4679>.

- Bartko, J. J., & Carpenter, W. T. (1976). On the methods and theory of reliability. *The Journal of Nervous and Mental Disease*, 163(5), 307–317. <https://doi.org/10.1097/00005053-197611000-00003>
- Bartneck, C., Kulić, D., Croft, E., & Zoghbi, S. (2009). Measurement instruments for the anthropomorphism, animacy, likeability, perceived intelligence, and perceived safety of robots. *International Journal of Social Robotics*, 1, 71–81. DOI: 10.1007/s12369-008-0001-3
- Bernardi, R. A. (1997). The relationships among LoC, perceptions of stress and performance. *Journal of Applied Business Research (JABR)*, 13(4), 1–8. DOI <https://doi.org/10.19030/jabr.v13i4.5736>
- Chhabra, B. (2013). LoC as A Mode Tor In The Relationship Between Job Satisfaction And Organizational Commitment: A Study Of Indian It Professionals. *Organizations and Markets in Emerging Economies*, 4(08), 25–41. DOI: 10.15388/omee.2013.4.2.14248.
- Danim, S. (2013). *Pengantar Kependidikan: Landasan, Teori, dan 234 Metafora Pendidikan*. Bandung: Alfabeta.
- Dede, C. (2007). Transforming education for the 21st century: New pedagogies that help all students attain sophisticated learning outcomes. *Commissioned by the NCSU Friday Institute, February*.
- Fathurrahman, M., & Sulistyorini, S. (2012). *Belajar dan Pembelajaran, meningkatkan mutu pembelajaran menurut standar nasional*. Yogyakarta: Gava Media.
- Findley, M. J., & Cooper, H. M. (1983). LoC and academic achievement: A literature review. *Journal of Personality and Social Psychology*, 44(2), 419–427.
- Furnham, A., & Steele, H. (1993). Measuring LoC: A critique of general, children's, health-and work-related LoC questionnaires. *British Journal of Psychology*, 84(4), 443–479. DOI: <https://doi.org/10.1111/j.2044-8295.1993.tb02495.x>
- Ginanjari, E. G., Darmawan, B., & Sriyono, S. (2019). Faktor-faktor yang mempengaruhi rendahnya partisipasi belajar peserta didik smk. *Journal of Mechanical Engineering Education*, 6(2), Article 2. <https://doi.org/10.17509/jmee.v6i2.21797>
- Gogtay, N., & Thatte, U. (2017). Principles of Correlation Analysis. *Journal of the Association of Physicians of India*, 65(4), 78–81. <https://www.japi.org/q274a4c4/principles-of-correlation-analysis>
- Gopalan, M., Rosinger, K., & Ahn, J. B. (2020). Use of quasi-experimental research designs in education research: Growth, promise, and challenges. *Review of Research in Education*, 44(1), 218–243. DOI: 10.3102/0091732X20903302.
- Griban, G. P., Dikhtiarenko, Z., Yeromenko, E., Lytvynenko, A., Kovalenko, A., Ramsey, I., & Muzhychok, V. (2020). Influence of positive and negative

- factors on the university students' health. *Wiadomości Lekarskie*, 73 (8), 1735–1746.
- Guilford, J. P. (1956). The structure of intellect. *Psychological Bulletin*, 53(4), 267. DOI: <https://doi.org/10.1037/h0040755>
- Guilford, J. P. (1967). Creativity: Yesterday, today and tomorrow. *The Journal of Creative Behavior*, 1(1), 3–14.
- Guilford, J. P. (1975). Factors and factors of personality. *Psychological Bulletin*, 82(5), 802.
- Gujjar, A., & Aijaz, R. (2014). Research Papers a Study To Investigate the Relationship Between Locus of. *I Manager's Journal on Educational Psychology*, 8(1), 1–9.
- Hanifah, N. (2016). Transformasi Nilai-Nilai Kearifan Lokal Sebagai Upaya Pengembangan Karakter dalam Menyongsong Generasi Emas Indonesia. *Proseding Didaktis: Seminar Nasional Pendidikan Dasar*, 1(1), Article 1.
- Hans, A., Deshpande, A., Pillai, A. E., Fernandes, C. J., Arora, S., Kariya, P., & Uppoor, A. (2017). A Study on Self-Efficacy, LoC and Commitment in Select Private Management Colleges in Oman. *Amity Journal of Management Research*, 2(1), 1–9.
- Hasan, S. S., & Khalid, R. (2014). Academic LoC of High and Low Achieving Students. *Journal of Research & Reflections in Education (JRRE)*, 8(1).
- Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-Based Nursing*, 18(3), 66–67. <https://doi.org/10.1136/eb-2015-102129>
- Janssen, T., & Carton, J. S. (1999). The effects of LoC and task difficulty on procrastination. *The Journal of Genetic Psychology*, 160(4), 436–442. DOI: 10.1080/00221329909595557.
- Karaman, M. A., Nelson, K. M., & Cavazos Vela, J. (2018). The mediation effects of achievement motivation and LoC between academic stress and life satisfaction in undergraduate students. *British Journal of Guidance & Counselling*, 46(4), 375–384. <https://doi.org/10.1080/03069885.2017.1346233>
- Kasilingam, R., & Sudha, S. (2010). Influence of LoC on Investment Behaviour of Individual Investor. *Vidwat: The Indian Journal of Management*, 3(1).
- Knowles, E., & Kerkman, D. (2007). An investigation of students attitude and motivation toward online learning. *InSight: A Collection of Faculty Scholarship*, 2, 70–80.
- Kuh, G. D., & Hu, S. (2001). The effects of student-faculty interaction in the 1990s. *The Review of Higher Education*, 24(3), 309–332.
- Lam, R. (2019). What students do when encountering failure in collaborative tasks. *Npj Science of Learning*, 4(1), 6. <https://doi.org/10.1038/s41539-019-0045-1>
- Laughlin, K., Nelson, P., & Donaldson, S. (2011). Successfully Applying Team Teaching with Adult Learners. *Journal of Adult Education*, 40(1), 11–18.

- Lind, E., Ekkekakis, P., & Vazou, S. (2008). The Affective Impact of Exercise Intensity That Slightly Exceeds the Preferred Level: "Pain'for No Additional'Gain." *Journal of Health Psychology*, 13(4), 464–468.
- Maksum, A., Widiyana, I. W., & Marini, A. (2021). Path Analysis of Self-Regulation, Social Skills, Critical Thinking and Problem-Solving Ability on Social Studies Learning Outcomes. *International Journal of Instruction*, 14(3), 613–628.
- Nortvig, A.-M., Petersen, A. K., & Balle, S. H. (2018). A literature review of the factors influencing e-learning and blended learning in relation to learning outcome, student satisfaction and engagement. *Electronic Journal of E-Learning*, 16(1), pp46-55.
- Nowicki, S., Iles-Caven, Y., Kalechstein, A., & Golding, J. (2021). Editorial: LoC: Antecedents, Consequences and Interventions Using Rotter's Definition. *Frontiers in Psychology*, 12. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.698917>
- Nugraha, D. (2022). Pengembangan Media Digital Berbasis Motion Graphic pada Pendalaman Materi IPS Sekolah Dasar. *Jurnal Basicedu*, 6(3), Article 3. <https://doi.org/10.31004/basicedu.v6i3.2642>
- Nugroho, D. A., Hardjajani, T., & Karyanta, N. A. (2015). Hubungan antara LoC internal dan kecerdasan emosi dengan perilaku prososial pada mahasiswa program studi psikologi uns. *Wacana*, 7(2).
- Pratiwi, S., Cari, C., Aminah, N., & Affandy, H. (2019). *Problem-based learning with argumentation skills to improve students' concept understanding*. 1155(1), 012065.
- Rahardja, U., Aini, Q., Graha, Y. I., & Lutfiani, N. (2019). *Validity of test instruments*. 1364(1), 012050.
- Robbins, S. P., & Timothy, A. (2008). Judge. *Organizational Behavior*, 12th Ed. Jakarta: Salemba Empat.
- Sadler, D. R. (2016). Three in-course assessment reforms to improve higher education learning outcomes. *Assessment & Evaluation in Higher Education*, 41(7), 1081–1099.
- Septikasari, R., Dewi, T. R., Yuliantoro, A. T., Dewi, S. E. K., & Pertiwi, R. P. (2021). Pengaruh LoC Terhadap Prestasi Belajar Peserta Didik. *Titian Ilmu: Jurnal Ilmiah Multi Sciences*, 13(2), 27–33. <https://doi.org/10.30599/jti.v13i2.941>
- Smith, V. L. (2003). *Analysis of LoC and educational level utilizing the internal control index*. Marshall University.
- Spector, P. E. (1988). Development of the work LoC scale. *Journal of Occupational Psychology*, 61(4), 335–340.
- Steca, P. (2020). LoC. In F. Maggino (Ed.), *Encyclopedia of Quality of Life and Well-Being Research* (pp. 1–4). Springer International Publishing. https://doi.org/10.1007/978-3-319-69909-7_1688-2

- Sugiyono, S. (2019). *Metode Penelitian Pendidikan (Kuantitatif, Kualitatif, Kombinasi, R&D dan Penelitian Pendidikan)*. Alfabeta.
- Sujadi, E., Yusuf, A. M., & Marjohan, M. (2016). Hubungan antara LoC dan efektivitas komunikasi antar pribadi dengan problem focused coping. *Konselor*, 5(1), 24–32.
- Sürücü, L., & Maslakci, A. (2020). Validity and reliability in quantitative research. *Business & Management Studies: An International Journal*, 8(3), 2694–2726.
- Sutrisno, S., Winahyo, A. E., & Dardiri, A. (2019). *Organising The Distribution of Thinking Levels at Different Education Levels in Indonesia*. 197–199. <https://doi.org/10.2991/icovet-18.2019.50>
- Suyanti, P., Hanifah, N., & Sunarya, dede T. (2017). Penerapan Model Pembelajaran Examples Nonexamples Pada Materi Tokoh-Tokoh Sejarah Untuk Meningkatkan Hasil Belajar Siswa Kelas V Sdn Gunungsari. *Jurnal Pena Ilmiah*, 2(1), Article 1. <https://doi.org/10.17509/jpi.v2i1.12418>
- Teigen, K. H., Evensen, P. C., Samoilow, D. K., & Vatne, K. B. (1999). Good luck and bad luck: How to tell the difference. *European Journal of Social Psychology*, 29(8), 981–1010.
- Thomas W.H.NG, K . T. (2006). Good luck and bad luck: How to tell the difference. *Journal of Organizational Behavior*.
- Tsuda, A., Tanaka, Y., & Matsuda, E. (2020). LoC, Personality Correlates of. In *The Wiley Encyclopedia of Personality and Individual Differences* (pp. 281–285). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119547174.ch225>
- Wang, Z., & Su, I. (2013). Longitudinal Factor Structure of General Self-Concept and LoC Among High School Students. *Journal of Psychoeducational Assessment*, 31(6), 554–565. <https://doi.org/10.1177/0734282913481651>
- Zainun, N. F. H., Johari, J., & Adnan, Z. (2021). Machiavellianism, LoC, moral identity, and ethical leadership among public service leaders in Malaysia: The moderating effect of ethical role modelling. *International Journal of Sociology and Social Policy*, 41(9/10), 1108–1133.
- Zapata-Rivera, D., Liu, L., Chen, L., Hao, J., & von Davier, A. A. (2017). Assessing science inquiry skills in an immersive, conversation-based scenario. *Big Data and Learning Analytics in Higher Education: Current Theory and Practice*, 237–252.