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Learning Motivation and Student Engagement as Predictors of Social Studies Understanding in Pre-Service Elementary Teachers

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ABSTRACT

Students' understanding of elementary school social studies courses can be influenced by various internal and external factors, namely learning motivation and activity in the lecture process. This study aims to analyze the relationship between learning motivation and student activity with the understanding of basic elementary school social studies concepts in elementary school teacher education students. The approach in this study is a quantitative survey design with a cross-sectional design. There were 82 respondents, consisting of study groups E and F. The instruments used were questionnaires on learning motivation, activity, and understanding of elementary school social studies concepts. Data analysis was performed using descriptive statistics with JASP and Spearman's correlation test because the data were not normally distributed. The results of this study indicate a positive relationship between student activity and understanding of basic social studies concepts ($p = 0.808$; $p < 0.001$). Learning motivation has a significant positive relationship in the moderate category ($p = 0.396$; $p < 0.001$). In addition, there was a strong relationship between learning motivation and activity ($p = 0.637$; $p < 0.001$). These findings indicate that motivation and activity are important factors in building students' understanding of basic social studies concepts. The interrelationship between these two aspects is expected to support the effectiveness of the learning process in elementary school social studies basic concepts courses.

Keywords
Learning Motivation
Social Studies
Student Activity
Student Engagement
Understanding

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Introduction

Social studies education is an integral part of the Indonesian curriculum, especially at the elementary school level [1]. Social studies learning integrates many social disciplines, including history, economics, geography, and sociology [2]. The aim of social studies learning is to support students in developing sensitivity to their surroundings and community, fostering a positive attitude toward problems, and enabling them to overcome issues in daily life, whether involving themselves or other groups.

As a future educator, who is not only expected to master the subject matter but also to know how to deliver learning effectively, meaningfully, and in accordance with the needs of students. The role of the elementary school social studies basic concepts course is something that needs to be considered as the foundation for students' understanding of the scope, aspects, and principles of social sciences that are relevant to be taught to students [3]. By mastering these basic concepts, students will be able to develop and present social studies learning in a more interesting, contextual, and cognitively appropriate manner for students. Thus, studying this course becomes a process of shaping students' understanding to minimize misconceptions in their delivery to students. However, it cannot be denied that to achieve optimal understanding, it is important to develop self-determination and student involvement to investigate the effectiveness of pedagogical approaches of prospective educators [4].

According to Crotti, et al. [5] linear and non-linear pedagogy increases children's learning activities and motivation. Substantial research shows that student behavior is influenced by the environment created by institutions, supported by educators, and individual intrinsic factors [6]. This is especially true for students as learners who must adapt to significant changes and are required to think critically. Therefore, the motivation and sense of empowerment formed by the learner's internal drive mechanism will be the most powerful force for their growth [7].

Empirical studies have found that a person's level of motivation is an important predictor of polarization in classroom learning [8]. Meanwhile, extrinsic factors are factors external to the individual concerned, such as family, facilities and infrastructure, friends, and so on [9]. One of the factors that motivates a person's understanding of a subject is their internal motivation to learn. Motivation shapes or drives a person to do something to achieve

a specific goal [10]. For someone who enjoys learning, motivation plays a role in determining their perseverance in learning [11].

Learning motivation is still a special concern today, because the level of achievement of a learner's abilities and competencies is influenced by their motivation towards the learning material [12]. Motivation is an important requirement in learning because it not only functions as a catalyst for achieving learning goals, but also for determining the direction and actions of a person in the learning process [13]. Furthermore, according to Sulaksana et al. [14] explains that motivation is the main force or driver within an individual that generates learning activities and provides direction to achieve the desired goals. However, each individual has different levels of motivation, some high and some low.

However, based on the results of observations conducted, it was found that there were still some students who did not show a strong motivation to learn the basic concepts of elementary school social studies during lectures. This was evident in their lack of preparation before lectures, motivation to seek information or other learning resources, lack of competitiveness in the lecture process, and low enthusiasm in following the discussion of the material. Of course, this is a special concern as it supports learning success and shapes students' understanding of the material being discussed.

Remembering the importance of individual motivation as a factor supporting student activity in the context of academic discussion, this is a critical aspect that needs to be considered at the university level [15]. These learning activities include all activities carried out by students to support the learning process, including student involvement in discussions, completing assignments, and attendance at each meeting. Learning activity itself is defined as an effort made by a person to develop their potential through a series of learning processes, both through direct learning and distance learning, to achieve learning objectives [16].

Student engagement in the lecture process is a benchmark for determining learning outcomes. Student activity can be seen in the lecturer's assessment during the lecture process [17]. Different forms of student activities as a form of activity in learning include participation in assignments, direct involvement in discussions, asking questions to friends or lecturers, attendance in lectures, and many other things that can represent the results of the report. Slameto in [18] mentions that learning that applies democracy, where the learning resources come from the students, is carried out, and has benefits for the students themselves, becomes a process in shaping a person's activity to learn, including students.

Based on observations in the classroom, it appears that student activity is still uneven, with only some students actively involved during the lecture process. Not many are actively involved in discussions with lecturers or peers, and some even fall into the passive category

and contribute little to the learning process. This is certainly a concern because there are various factors that underlie student activity in attending lectures.

Learning motivation and student activity have an influence on learning outcomes, particularly in understanding the basic concepts of elementary school social studies. The process of understanding and retaining taught material requires motivating factors from learners. Low motivation and limited student activity during the learning process may result in superficial conceptual understanding. In fact, a good understanding of basic social studies concepts, especially in primary education, is crucial because prospective teachers must be able to prepare social studies lessons that are engaging, creative, and relevant to the lives of elementary school children.

Based on the results of observations and analysis, there are still problems related to student motivation and activity in elementary school social studies concept lectures. This has an impact on the level of students' understanding of the knowledge, skills, and attitudes they possess. This study aims to determine the relationship between learning motivation and student activity in forming an understanding of basic social studies concepts in elementary school, so that it can provide a contextual overview and serve as evaluation material for improving the quality of learning in elementary education study programs.

Material and Methods

This study employed a quantitative cross-sectional survey design, in which data were collected at a single point in time to examine relationships among variables. States that cross-sectional research is research that seeks to identify risk factors and effects through approaches, observations, or simultaneous data collection [19]. The design was selected to analyze the association between learning motivation, student activity, and understanding of basic elementary social studies concepts. The study was conducted at Yogyakarta State University using random sampling, involving 82 first-semester pre-service elementary school teachers from groups E and F enrolled in the basic concepts of elementary school social studies course. Inclusion criteria comprised active enrollment, minimum attendance of 75%, voluntary participation, and complete questionnaire responses. Exclusion criteria included incomplete responses, academic leave, and lack of informed consent.

Learning motivation was measured using the Academic Motivation Scale (AMS) adapted from Stover et al. [20] based on the *Academic Motivation Scale* (AMS) Self-Determination Theory by Deci and Ryan. The study adopted the validated 27-item version established by the original instrument developers. The instrument was contextually adapted to the research setting and reviewed through expert judgment by lecturers in social sciences and education to ensure content relevance. A pilot test was conducted with students outside

the research sample to examine item clarity and field applicability. Preliminary analyses indicated violations of univariate and multivariate normality (critical ratio = 89.078). Therefore, Unweighted Least Squares (ULS) estimation was applied in factor analysis due to its robustness under non-normal data distributions.

Table 1. Student Learning Motivation Questionnaire Indicators

Indicator Type	Item Number
Intrinsic motivation orientation towards stimulating experiences	1, 8, 15, 22
Intrinsic motivation orientation towards achievement	2, 9, 16, 23
Intrinsic motivation orientation towards knowledge	3, 10, 17, 24
Identified external regulation	4, 11, 18, 25
Internalized external regulation	5, 12, 19, 26
External regulation	6, 13, 20
Amotivation	7, 14, 21, 28

Student activity was measured using a questionnaire adapted from Slemeto, consisting of 34 validated items adopted directly from the original instrument. Before use, the questionnaire underwent expert review by education lecturers and was pilot-tested on a class outside the research sample as a field test. The reliability analysis yielded a coefficient of r_i = 0.861, exceeding the critical value (r_{table}= 0.361, α = 0.05, n = 28), indicating high reliability.

Table 2. Student Learning Activity Questionnaire Indicators

Indicator Type	Item Number
Student activity in listening to lecturers' explanations	1, 2, 3, 4
Student activity in taking notes	5, 6
Student activity in asking questions	7, 8, 9
Student activity in reading	10, 11, 12, 13
Student activity in summarizing or compiling	14, 15, 16, 17
Student activity in positive interdependence	18, 19, 20
Student activity in individual accountability	21, 22, 23, 24
Student activity in face-to-face interaction	25, 26, 27
Student activity in communication between members	28, 29, 30, 31
Student activity in evaluating the group process	32, 33, 34

Meanwhile, student understanding was measured using a questionnaire that underwent expert validation and item analysis. Item validity was assessed using a validity test at a 5% significance level. If the r_{xy} value is greater than the r_{table} value, then the instrument item is considered valid. Conversely, if the r_{xy} value is less than the r_{table} value, then the instrument item is considered invalid.

Based on the results of the validity and reliability tests, three items were found to be invalid, namely Q4, Q7, and Q17. Meanwhile, the reliability results show that the instrument is highly reliable, with a *Cronbach's α* of 0.848 and a *McDonald's ω* of 0.861, as shown in Table 4. Therefore, after excluding the invalid items, the remaining questionnaire items were considered appropriate and consistent for measuring the intended construct.

Table 3. Basic Concept Understanding Questionnaire Indicators Social Studies

Aspect	Indicator Type	Item Number
Assimilation	Connecting material contextually	1, 2
	Re-explaining existing concepts	3
	Distinguishing aspects of social studies	5, 6
Accommodation	Adapting to updates	8
	Opening minds to new knowledge	9, 10
	Changing understanding	11, 12
Equilibration	Summarizing lectures	13, 14
	Balancing both components	15, 16
	Assimilation and accommodation of knowledge	18

Table 4. Frequentist Scale Reliability Statistics

Estimate	McDonald's ω	Cronbach's α
Point estimate	0.861	0.848
95% CI lower bound	0.800	0.771
95% CI upper bound	0.921	0.904

Furthermore, it is classified into 5 answer choices if respondents answer strongly agree (score 5), agree (score 4), undecided (3), disagree (2), and strongly disagree (1). Moreover, to measure student learning motivation and activity with an understanding of basic elementary social studies concepts, a normality and linearity test will be conducted to determine the correlation in the *Pearson Product-Moment* test. However, if the results are not normal, a *Spearman Rank* non-parametric correlation test (*Spearman's rho*) will be conducted.

Results and Discussions

A. Univariate Analysis

Based on the table above, it shows that respondents were dominated by group F with 42 students and group E with 40 students. The frequency distribution of gender shows that female students filled out the questionnaire the most, with 68 people (82.93%), while male students numbered 14 people (17.07%). See Table 5.

Table 5. Frequency Distribution of Respondents

Characteristics	Amount	Percentage
Group		
E	40	48.78%
F	42	51.22%
Gender		
Male	14	17.07%
Female	68	82.93%

Based on the results of Table 6, descriptive analysis of 82 respondents indicated that learning motivation was most frequently categorized as moderate (65%, n = 53). Similarly, student activity was predominantly in the moderate category (68%, n = 52), and conceptual

understanding of basic elementary social studies was also highest in the moderate category (68%, n = 56). These patterns suggest that while students exhibit moderate engagement and understanding, their levels have not reached high proficiency.

Table 6. Frequency Distribution of Learning Motivation, Activity, and Understanding of Social Studies Concepts in Elementary School Students

Variable	Amount	Percentage
Learning Motivation		
Low	11	13%
Medium	53	65%
High	18	22%
Activity		
Low	11	14%
Medium	52	68%
High	14	18%
Understanding of IPS Concepts in SD		
Low	12	15%
Medium	56	68%
High	14	17%

The results of this study are supported by an analysis of the questionnaire responses, indicating that students' participation in lectures tends to be driven more by external factors than by intrinsic motivation. Meanwhile, the analysis of student activity during the lecture process reveals relatively high levels of engagement, as reflected in indicators such as listening, note-taking, asking questions, and participating in class discussions. These findings are consistent with earlier observations that identified limited intrinsic motivation and uneven levels of student activity. Furthermore, student involvement, both individually and in groups, is quite high in terms of understanding the lecture material. This is supported by several previous studies confirming that students with higher intrinsic motivation tend to be more enthusiastic and persistent in participating in learning activities [21].

The tendency for motivation to remain moderate aligns with empirical evidence indicating that learning motivation and engagement are interrelated constructs, where moderate motivation often correlates with moderate engagement outcomes [22]. For instance, a recent study found a significant positive correlation between learning motivation and student engagement among secondary school students, suggesting that higher motivation is associated with better involvement in learning activities ($r = 0.783$, $p < 0.05$) and explaining a substantial portion of the variance in engagement ($r^2 = 61.3\%$) [23].

Based on the results of the prerequisite test, namely the normality test, it shows that the variables of learning motivation ($p = 0.0003$) and understanding of basic social studies concepts in elementary school ($p = 0.030$) are not normally distributed, while student activity ($p = 0.450$) is normally distributed. Because there are variables that are not normally distributed, the analysis of the relationship between variables was performed using

Spearman's rank correlation test (*Spearman's rho*) using JASP software. The linearity test was not performed because the Spearman test does not require a linear relationship, but only a monotonic relationship between variables.

B. Bivariate Analysis

Based on Table 7, the relationship between student activity and understanding of social studies is statistically significant, *p-value* <.001 (< 0.05) with a coefficient of r_s = 0.808, indicating a very strong and positive relationship between student activity and understanding of basic elementary social studies concepts.

Table 7. The Relationship of Learning Motivation and Activities of Pre-service Primary School Teachers on Understanding Social Studies Concepts

Spearman's Correlations				
Variable		**Activity**	**Understanding of Social Studies**	**Motivation**
Activity	Spearman's rho	—		
	p-value	—		
Understanding of Social Studies	Spearman's rho	0.808	—	
	p-value	< .001	—	
Motivation	Spearman's rho	0.637	0.396	—
	p-value	< .001	< .001	—

This explains that the more active students are in participating in the learning process, the higher their understanding of the material on basic social studies concepts in elementary school. According to research that has been conducted [12], it was found that student involvement has a major influence on learning, which can be seen through each individual's learning style. A person's learning involvement is inseparable from their motivation, which consistently influences their learning outcomes. Therefore, according to Dornyei [24], motivation is an effort to begin learning, which then pushes a person to be actively involved during the long and often boring learning process.

In addition, the relationship between motivation and understanding of basic elementary school social studies concepts is indicated by a value of r_s = 0.396, which shows a positive relationship with moderate strength. Because the *p-value* is <.001, this relationship is statistically significant. Thus, it can be stated that higher levels of students' learning motivation are associated with better understanding of basic social studies concepts, although the strength of this influence is relatively modest. This is in line with previous research, which states that learning motivation is the driving force within students that ensures the continuity of the lecture process, both in terms of learning activities and guidance on learning activities, so that the desired goals can be achieved [25]. However, in this case, motivation plays a role in improving students' understanding but is not the only dominant factor, as learning activity has

a more significant value. Meanwhile, the correlation between motivation and activity has a significant value (p <.001) and a coefficient of r_s = 0.637, indicating a strong and positive relationship. This means that the higher the motivation of students, the more active they will be in participating in lecture activities. This is in line with previous studies that have found a significant relationship between individual academic participation and learning outcomes that are closely related to a learner's level of information mastery, collaboration, and responsibility [22]. So, motivation is really needed for students to be actively involved in the learning process.

Relatedly, research in higher education underscores that motivation and engagement are pivotal for academic success, and contextual factors such as learning environments significantly influence these constructs. For example, Ferrer et al. [26] reported that students' attitudes toward learning environments mediated the relationship between motivation and engagement in tertiary contexts, emphasizing the role of instructional design in promoting engagement and motivation. Because active learning emphasizes students' direct involvement in the learning process through a range of activities, such as discussion, experiments, and practical, hands-on tasks [27].

Moreover, recent empirical studies have consistently demonstrated that student motivation and engagement are closely linked to improved learning outcomes. A correlational study involving 385 university students found a statistically significant positive relationship between motivation and engagement in learning activities, indicating that higher motivation levels tend to increase student involvement in academic tasks ($\rho = 0.559$, $p < 0.01$) [28]. Additionally, research on blended learning environments reported that effective engagement spanning behavioral, cognitive, and affective dimensions is associated with higher academic achievement and sustained student participation in learning processes [29]. These findings align with broader educational research that positions both motivation and engagement as key antecedents of successful learning performance, reinforcing the present study's conclusion that activity plays a major role in understanding basic social studies concepts, while motivation supports increased engagement and conceptual comprehension.

Accordingly, it can be concluded that there is a positive and significant relationship between learning motivation and student activity with understanding basic elementary social studies concepts. This is demonstrated by the strongest relationship occurring in learning activity and understanding basic elementary social studies concepts. Of course, these results explain that student activity in the learning process plays a major role in understanding basic social studies concepts in elementary school, while learning motivation indirectly relates to understanding social studies through increased student activity during the lecture process.

Conclusion

This study found a relationship between learning motivation and the level of activity of pre-service elementary school teachers in understanding basic social studies concepts, especially among undergraduate students majoring in elementary school teacher education at Yogyakarta State University. However, these findings show that the relationship between learning motivation has a significant relationship with moderate strength between motivation and understanding of elementary school social studies. Therefore, learning motivation is not the only strongest factor in shaping students' understanding of social studies during the lecture process. Meanwhile, the relationship between student activity shows that there is a very strong and significant positive relationship with elementary school social studies comprehension. Direct student involvement during the lecture process through questioning, discussion, answering, and so on has a significant impact on their comprehension. Then, the relationship between the two, namely student motivation and activity, shows a strong and significant relationship, which means that students with high learning motivation tend to be more active in the learning process, which has an impact on the high level of student understanding of basic elementary school social studies concepts, which will be useful for future educators.

Conflict of Interest

The authors declare that there is no conflict of interest.

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