The effect of the family environment, school environment, and community environment on students' independence through distance learning

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Abstract

This research aimed to investigate the effect of the three education centers on students' independence through distance learning. This study used a quantitative approach using a correlational survey method. This study involved 2263 students from Banten Province, Indonesia, who were selected using random cluster sampling. Research data was collected through independent learning questionnaires and family, school, and community environments. All data were analyzed using multiple linear regression analysis. The results of the descriptive statistical analysis show that the average score of female students' learning independence (96.45) is higher than the average score of male students' learning independence (93.38) through distance learning, and the average junior high school students' learning independence score (95.81) is higher than the average score of learning independence for high school/equivalent students (93.42) and tertiary institutions (94.21) through distance learning. While the results of inferential statistical testing show that in the implementation of distance learning, (1) the family environment has a significant positive influence on independence learning, (2) the school environment has no significant effect on independence learning, and (3) the community environment has a significant positive effect on learning independence. The findings can have implications for the assessment form in the learning process, which is not only the learning achievement from the content assessment but can also use another form, such as students’ independence, like in these findings.

Keywords: Community environment, Distance learning, Family environment, Independence learning, Learning assessment, School environment.

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1. Introduction

According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), COVID-19-related school closures have impacted more than 91% of the world's student population [1]. This condition ultimately requires almost all students in the world, including those at the tertiary level, to carry out the learning process remotely, including in Indonesia, to ensure that the rights of every child in the educational aspect are fulfilled without neglecting the quality of the learning process or instilling character. Distance learning is a dilemma, considering the readiness and circumstances that require it to be taken.

Distance learning in Indonesia is implemented at all levels of education without exception, starting from Early Childhood Education to tertiary institutions. Distance learning is difficult to do because it is very different from face-to-face learning. However, Rifqiawati, et al. [2] found that student learning motivation is in a good category through distance learning. Additionally, Salsa, et al. [3] found no relationship between motivation and learning outcomes in biology through distance learning. The distance learning pattern provides a flexible time frame for students to study to be more independent and improve their learning abilities at their own pace [4]. Thus, distance learning focuses more on student independence.

A person needs to have independence in order to manage all of his or her personal activities, competencies, and skills, including the learning process [5]. According to Suhendri [6], an activity that is independent of others might be perceived as independence. If it has to do with education, then the pupils can take the initiative to learn on their own and be accountable for their work. Students who are independent learners will be able to take responsibility for their own learning and take initiative to complete tasks and provide the best results. Independence is a trait that must be learned; it is not a personality trait that is present from birth. However, a number of elements, including genes or parental inheritance, parenting style, the educational system in schools, and societal living systems, have an impact on its presence [7]. Learning independence is a personal attitude that is learned over time as a person develops. People will continue to learn independence as they interact with diverse environmental challenges and eventually develop the ability to think and act independently. Creating a more secure life can reveal one's independence [8].

Many studies on self-regulated learning, or what is usually equivalent to the term self-regulated learning, have been carried out and developed, one of which is by Pintrich. Pintrich stated that self-regulated learning involves the learners and their environment, which will influence the learner's achievement [9]. This means that students with self-regulated learning will involve themselves and their surroundings in learning so that it can affect their learning achievement. Hurlock [10] argues that independent learning is students' behavior in realizing their will or desires in a real way by not depending on others. In this case, the student can learn independently, determine how to study effectively, carry out tasks to learn well, and carry out learning activities alone.

Bandura originally put forward learning independence [11] through the social cognitive theory of self-regulation. The theory explains that three main factors shape learning independence: personal, environment, and behavior. The interrelationship of these three factors can be shown in Figure 1.

![Figure 1](image1.png)

**Figure 1.** Triadic analysis of self-regulated functioning.

It can be seen in Figure 1 that the environment is one of the factors forming a child's learning independence. The family environment is the main responsibility for maintaining the child's nature. Second, a school environment that develops all human talents and potential according to their nature is necessary to avoid various irregularities. Third, the community environment is a place for social interaction that forms religious and social values [12]. These three environments, according to Ki Hadjar Dewantara, are called the three centers of education [12]. We must recognize the concept of the three education centers. Vembriarto [13] suggests that the family can be interpreted as a group of two or more persons related by blood, marriage, or adoption. This explains that a group is a family of two or more individuals living together because of blood relations, marriage, or adoption. In Islam, family is known as usrah, nasl, ali, and nasb, where families are created through offspring (children, grandchildren), marriage (husband, wife), brotherhood, and independence [14]. The first educational setting that parents provide as natural educators is the family. They are considered natural educators because they are given
the gift of instinct. With their instincts, they will grow affection for their children so that they are morally burdened with the responsibility to maintain, supervise, protect, and guide their offspring [15]. The family has an essential role in developing children's life values. Education in the family does not run on formal provisions but instead grows from true moral awareness between parents and children. Thus, value education in the family is built not on a rational basis but on a natural emotional bond [16].

The family environment can be interpreted as the first place for a child to receive education to shape the behavior and personality of the child with the dimensions of the techniques used by the family in providing education, harmonious family relationships, the atmosphere in the family, family economic conditions, and understanding of both parents and background family culture [17]. Due to family limitations regarding children's educational needs amid the demands of the times, schools are in second place, which plays an essential role in children's lives and learning development.

Sukmadinata [18] asserts that a student's school environment has a significant impact on their capacity to learn. This environment includes the physical surroundings of the school, including the existing infrastructure, educational resources, and media. This social environment focuses on how kids interact with their peers, teachers, and other school staff. The school environment also has an impact on the academic environment, which includes how teaching and learning take place as well as the setting for other extracurricular activities. According to Wahyuningsih and Djazari [19], the academic environment (academic environment) and the social environment (physical environment) are both parts of the school environment that have an effect on and have meaning for students during the teaching and learning process in schools. Similar to this, Yana and Jayanti [20] assert that the school environment is one external factor that can affect student learning results. The environment of a school can influence one's personality and attitude. As a result, it can be said that the study's interpretation of the school environment is that it's a place where a child can pursue formal education to shape the child's behavior and personality using factors like teaching methods, curriculum, teacher and student relationships, etc.

After the family and school environments, the community environment is the third environment that influences children's learning success after the family and school environments. This is because children are also part of society. Ihsan [21] states that when viewed according to the concept of education, society can be interpreted as a large group of people with various qualities ranging from uneducated to highly educated. Society is intended to nurture community members to become good citizens based on values, norms, ethics, and good habits in society. There are various social institutions in social life [22].

Researchers' first observations and brief interviews with a few students yielded several preliminary conclusions about the implementation of distance learning, one of which was that it fell well short of what students had anticipated. The teacher appeared to present content before assigning a significant number of tasks to the students, so that student-submitted answers to assignments serve as a more accurate gauge of learning accomplishment. The current distance learning process emphasizes that the three education centers are also important to the success of education, in addition to teachers and students. As a result, it is impossible to separate the development of student character, including independence, from the three education centers when using distance learning.

Research that can describe the state of student independence through distance learning, particularly in Indonesia's Banten Province, has not yet fully supported the previously developed narrative. This prompted researchers to study the influence of the three education centers on the independence of Banten Province students learning through distance learning. The hypotheses tested in this study are: (1) there is an influence of the family environment on the learning independence of Banten Province students through distance learning; (2) there is an influence of the school environment on the independent learning of Banten Province students through distance learning; (3) there is the influence of the community environment on the independent learning of Banten Province students through the distance learning; and (4) there is a simultaneous influence of the family environment, school environment, and community environment on the independence of Banten Province student learning through distance learning.

2. Methodology
2.1. Research Design
This research used a quantitative approach using a correlational survey method. This research method was chosen by considering the problems. This research aims to describe the independence of Banten Province students through distance learning regarding the role and participation of the three education centers.

2.2. Sample and Data Collection
This study involved 2263 students from Banten Province, Indonesia, who were selected using random cluster sampling. We collect data using independent learning questionnaires, family environments, school environments, and community environments. All data were analyzed using multiple linear regression analysis with independent variables consisting of family environment (X1), school environment (X2), community environment (X3), and learning independence (Y) as the dependent variables.

2.3. Analyzing of Data
The learning independence scores for each respondent were categorized using learning independence categorization intervals consisting of five categories, as shown in Table 1.
3. Findings/Results

3.1. Description of the Learning Independence Score

Learning independence variable data were obtained by filling out a questionnaire consisting of 28 items with a theoretical score range between 28 and 112. What was found in the descriptive analysis was that the average score for students’ independence through distance learning was 94.52, with a median score of 94.00, a mode score of 94.00, a standard deviation of 6.71, and a variance of 45.05. By paying attention to Table 1, the average learning independence of students through distance learning is very high.

3.2. Hypothesis Testing

The Table 2 obtained based on the multiple regression analysis carried out on research data in general.

$$\begin{array}{cccc}
\text{Regression} & \beta & \text{p-value} & \text{Result} & \text{Simultaneous effect} \\
\text{Constanta} & -6.395 & & & \\
X_1 \text{ on } Y & 0.766 & 0.000 & \text{Tested hypothesis} & 0.000 \\
X_2 \text{ on } Y & 0.015 & 0.770 & \text{Untested hypothesis} & 0.05 \\
X_3 \text{ on } Y & 0.801 & 0.000 & \text{Tested hypothesis} & 0.989 \\
\end{array}$$

Multiple linear regression equations: $$Y = -6.395 + 0.766X_1 + 0.015X_2 + 0.801X_3$$

3.3. The Effect of the Family Environment on the Learning Independence of Banten Province Students through Distance Learning

Based on the results of the analysis that has been carried out, information has been obtained that the family environment has an influence on the learning independence of students through distance learning. The influence of the family environment on the learning independence of students through distance learning is 0.766, with a significant probability of 0.000. Thus, the family environment significantly positively influences the learning independence of students through distance learning, which means that every increase of one unit of family environment will increase the learning independence of Banten Province students through distance learning by 0.766.

3.4. The Influence of the School Environment on Student Learning Independence in Banten Province through Distance Learning

According to the analysis's findings, students who are enrolled in remote learning do not significantly benefit from the school setting in terms of their ability to learn independently. The impact of the learning environment on distance learning students from Banten Province is 0.015, with a significant probability of 0.770. However, every additional school environment unit will result in a 0.015 rise in the degree of learning independence for distant learning students.

3.5. The Influence of the Community Environment on the Learning Independence of Banten Province Students through Distance Learning

The community environment has an impact on students' ability to learn independently through distance learning, according to the findings of the analysis that was done. The community environment has an impact on students' ability to learn independently through distance learning by an average of 0.801, with a significant probability of 0.000. As a result, the community environment has a strong positive impact on students' ability to study independently through distance learning. As a result, every unit increase in the community environment will result in a 0.801 rise in students' ability to learn independently through distance learning.

3.6. The Influence of the Family Environment, School Environment, and Community Environment on the Learning Independence of Students through Distance Learning

Based on the findings of the analysis, it is known that the three education centers have an impact on how independently students learn through distant learning. In other words, a student's family, school, and community environments all have an impact on their capacity to study independently through remote learning. The environments of the family, the school, and the community all contribute 98.90% to how well students learn independently through distant learning. Comparatively, factors that are not the focus of this study have an impact on 1.10%.

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**Table 1.**

Categorization of research respondents' learning independence scores.

<table>
<thead>
<tr>
<th>No.</th>
<th>Interval</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Score &gt; 84.01</td>
<td>Very high</td>
</tr>
<tr>
<td>2.</td>
<td>65.34 &lt; Score ≤ 84.01</td>
<td>High</td>
</tr>
<tr>
<td>3.</td>
<td>46.66 &lt; Score ≤ 65.34</td>
<td>Moderate</td>
</tr>
<tr>
<td>4.</td>
<td>27.99 &lt; Score ≤ 46.66</td>
<td>Low</td>
</tr>
<tr>
<td>5.</td>
<td>Score ≤ 27.99</td>
<td>Very low</td>
</tr>
</tbody>
</table>
4. Discussion

Based on these findings, it is clear that a student's family environment has a big impact on their ability to learn independently through distance learning. The home is a kid's initial and most important learning environment, providing the necessary foundation before the youngster enters school or society [18]. For the benefit of children's success, all of their learning requirements, regardless of their variety, are taken into account and met. Even when children have studied in schools, according to Barnadib [23], it is still up to families to educate their children and create a comfortable environment for learning, especially at home. In order to educate and shape students' attitudes towards learning, including fostering children's freedom in learning or, in the sense of independence, affecting student independence in learning, the home environment is the most important setting.

Indah [24], student learning freedom will be attained if they actively manage all they do, assess their progress, and then design a deeper aspect of their current learning. Students actively participate in the learning process as well. The home environment has a big impact on a child's education, but so does learning independence. This is in line with Hasnida [25] assertion that one of the exogenous (outside of a person's control) factors influences a student's capacity for independent learning. Environmental variables are those that are entirely a result of external impacts or events. Living circumstances have a tremendous impact on how people's personalities develop, both positively and negatively. A healthy family and community environment, especially in the areas of values and lifestyle choices, will shape a person's personality, including their independence.

Parents, especially mothers, are responsible for instilling character qualities in children, and the effectiveness of this process depends greatly on the parenting style that parents choose. The treatment of parents, especially mothers, in caring for, educating, and leading their children is the intended parenting style, claims [26]. This is consistent with studies by Mulyawati and Christine [27], who found that a child's familial environment has a big impact on how independent they become in their learning. Parenting practices have the most significant effect on the family environment.

Students will become more autonomous in every way, controlling themselves, being responsible, making decisions, addressing their problems, taking the initiative, and being progressive in a family setting that encourages student learning activities. The degree of a student's independence is also reflected in how he acts in class and interacts with his peers. The way students interact with their family, particularly with their mothers and fathers, will affect how they behave.

These findings suggest that the school environment has little impact on a student's ability to learn independently through distance learning. The school environment has a negative impact on students' ability to learn independently through online learning, even in some groups; however, this effect is not considerable. Children around the country are expected to develop their morals and character in schools. Character education plays a significant role in helping schools, especially those that provide basic education, form students' personalities. As previously mentioned, the goal of national education is to help students develop their character, including their faith and purity, noble character, health, knowledge, capability, creativity, independence, and citizenship in a democratic and responsible nation. Therefore, the role of the school is to develop individuals with character, one of which is autonomous character, to improve the quality of human resources.

This is in line with Djaali [28] assertion that education serves as a form of student personality. Schools are a source of education about independence through the learning process. Even so, the family plays a more critical role in forming a student's character. This is because the family is the main educational institution for a child.

The research results obtained by Ariah [29] show that schools can shape and enhance a child's learning independence. Formation and increase of independence can be done by implementing full-day school. The findings of the study by Tasak and Tusikal [30] demonstrated the critical role that teachers play in fostering and forming independent attitudes in a child's learning process. This is different from the results obtained, where the school environment does not significantly influence student learning independence through distance learning. The reason is that during the implementation of distance learning, the school cannot interact directly with students. So, schools' role in forming children's learning independence is drastically reduced.

The school environment does not significantly influence student learning independence through distance learning. The teacher/lecturer only provides the material with an explanation, followed by giving assignments in large numbers to students without any additional learning activities that can direct students to develop independence in learning. So that the success of learning is more measured through the answers to assignments submitted by students. At this time, distance learning ignores the learning process that students go through. In addition, learning is only focused on following the learning hours or the weight of credits owned by a course. Whereas according to the distance learning implementation guidelines, the duration of learning is not only focused on the learning hours or credits owned by the subject but can be carried out in one week.

By paying attention to these results, the community environment significantly influences student learning independence through distance learning. The failure of the learning process so far is due to the need for more synergy between the school as a formal institution and the community as the macro environment in learning activities. A community environment is a tool for controlling behavior and student learning outcomes in class or school. The involvement of the community environment becomes very important; moreover, it shapes the personality of students with character. One form of community involvement in the success of the educational process is the formation of committees in each school. This shows that the role of the community is a form of integration between schools and communities that cannot be separated. Law Number 20 of 2003 concerning the National Education System also states that community participation in education includes individuals, groups, families, professional organizations, employers, and community organizations in administering and controlling educational services [31]. Communities can give messages as sources, implementers, and users of educational outcomes.

The findings of this study are also in line with Olasehinde and Olatoye [32] assertion that a child's peer group, particularly their classmates' friends, is another environment that is just as crucial in fostering a child's learning independence.
Classmates or those with similar characters will allow them to influence one another's beliefs and behavior. Another impact of the learning process with peers is the formation of self-reliance, self-adjustment, and good learning planning among each friend member [33]. In line with this, peer groups reflect that they will shape one's self-efficacy and learning abilities, ultimately spurring children to become independent figures [34].

The multiple regression equation obtained based on the general analysis results is \( Y = -6.395 + 0.766X_1 + 0.015X_2 + 0.801X_3 \). Based on the regression equation, the community environment is the factor that has the most significant influence on the learning independence of students through distance learning. According to Syam [35], the factors that influence learning independence [24] are divided into two categories. The first factor is an internal factor that is characterized by an indicator of the growth of independent learning that is reflected in phenomena such as (1) the attitude of being responsible for what is entrusted and assigned, (2) awareness of students' moral rights and obligations, specifically the character that becomes behavior, and (3) self-maturity, starting from self-concept and motivation to the development of thoughts, initiatives, creativity, and work. (4) understanding of the need for eating well, keeping oneself clean, and exercising; (5) self-discipline through adherence to legal requirements, knowledge of one's rights and duties, road safety, respect for others, and performance of duties. This is also in line with Rachman [36] assertion that factors influencing independence can take the form of parental genes or heredity, parenting style, the student education system at school, and the life system in society. Djaali [28] emphasizes the same thing: external factors that influence learning independence can be grouped into three factors, namely family factors, school factors, and community factors.

4.1. Family Factor
The family is made up of several individuals who, because of the marriage connection that unites them, recognize and feel that they make a special combination and who work together to strengthen this combination for the wellbeing and security of all family members. The family will have an impact on students' learning through the relationships between family members, the environment at home, and the financial situation of the family.

4.2. School Factor
School is a place to provide knowledge, which forms the personality of students. Schools are a source of education about independence through the learning process.

4.3. Community Factor
Society is an influential external factor because students are in society, socializing with peers or with more mature people. All forms of activities that are followed in social life also play a role in forming a child's independence.

Thus, the educational process in the context of acculturation and character building can be carried out through the involvement of the three educational centers: the family, school, and community. These three components must work together and synergize in realizing the goals of education and the formation of good character, including in implementing distance learning.

5. Conclusion
Based on the results of the research presented in the previous section, it can be concluded that: (1) the family environment has a significant (0.766; \( p = 0.000 \)) positive influence on the learning independence of Banten Province students through distance learning; (2) the school environment has no significant effect (0.015; \( p = 0.770 \)) on the independent learning of Banten Province students through distance learning; (3) the community environment has a significant positive (0.801; \( p = 0.000 \)) effect on the independent learning of Banten Province students through distance learning; and (4) three education centers simultaneously influence the learning independence of Banten Province students through distance learning. The present study examines the extent to which the home environment, school environment, and community environment contribute to the development of learning independence among students in Banten Province, Indonesia, specifically in the context of distance learning. The findings reveal that these three factors collectively account for a substantial proportion of 98.90% of the variance in students' learning independence. In contrast, a proportion of 1.10% is subject to the influence of other factors that fall outside the scope of investigation in this study.

6. Recommendations
This research recommends that future research look for deep information related to the three education centers using qualitative research. Practitioners are recommended to use these findings to develop learning in the online learning post-pandemic situation.

7. Limitations
This research only focused on the quantitative aspect. So, it needs to look for deep information related to the three education centers using qualitative research.

References


