Innovative Paths to Character: Online Learning's Role in Instilling Independence and Responsibility in Islamic Education

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Abstract

Every youngster in the digital world must exhibit the attributes of independence and responsibility. Equipped with the qualities of autonomy and accountability, youngsters residing in the digital age will possess the ability to endure. The objective of this study is to ascertain the impact of online learning on the assimilation of the qualities of self-reliance and accountability among high school (SMA) students. This study employed a quantitative methodology utilizing random sampling procedures. A total of 179 students were included in the sample. The data were gathered through the use of a questionnaire and examined using a basic linear regression analysis. The findings indicate a substantial impact of 47.9% of online learning on the acquisition of independence and 31% on the development of responsibility. The qualities of autonomy and accountability can be absorbed through the process of habituation and the influence of exemplary educators, both within and outside the confines of the classroom. The study's findings emphasize the necessity of a comprehensive approach to education in the digital age, recognizing the substantial influence of online learning on the development of students' personality. By considering these consequences, it is possible to develop purposeful and efficient character education approaches in the changing realm of digital education.

INTRODUCTION

We are living in the dynamics of a digital society, where we already know that the foundation of society in this era is a society that is literate in technology. It is undeniable that most of the activities carried out by society today, more or less, must intersect with technology and become a new challenge for the education sector. Among the many subjects that must be given to students, learning about student character must be one of the lessons that must be the main focus in dealing with digital era society because it is undeniable that character is a long-term investment that an individual must own to face life[1].

Online learning seems to provide new hope in character education, especially in learning in the digital era, whereas we know that the digital era is a period that requires humans to be more active in using technology[2]. In this digital era, new technologies are increasing and require us to get used to situations like this. The advantage of learning online is that apart from saving space, it also saves time, whereas online learning does not require as much time to prepare as in-person learning[3]. Online learning also allows learning to be attended by all those who have a strong desire to learn without having to be afraid of being hindered by distance. Also, online learning tends to be more cost-effective because it eliminates accommodation costs or room maintenance costs compared to direct learning[4].

The advancement of learning facilities in the digital era in the form of online learning, especially in the realm of character, should

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[1] D. Goldstick, "Moral Responsibility and Character Formation," *Philosophical Papers*, October 6, 2022, 1–9, https://doi.org/10.1080/05568641.2022.2107056.

[2] Praveen Kumar Reddy Maddikunta et al., "Industry 5.0: A Survey on Enabling Technologies and Potential Applications," in *Journal of Industrial Information Integration*, vol. 26, 2022, 100257, https://doi.org/10.1016/j.jii.2021.100257.

[3] Liyan Song et al., "Improving Online Learning: Student Perceptions of Useful and Challenging Characteristics," *The Internet and Higher Education* 7, no. 1 (January 2004): 59–70, https://doi.org/10.1016/j.iheduc.2003.11.003.

[4] Andrianto Roman Pangondian, Insap Paulus Santosa, and Eko Nugroho, "Faktor - Faktor Yang Mempengaruhi Kesuksesan Pembelajaran Daring Dalam Revolusi Industri 4.0," in *Sainteks 2019*, 2019, 56–60, https://seminar-id.com/semnas-sainteks2019.html.

also be encouraged because, as we know, character education itself will be able to create good people whose results can be seen. The implementation of character education is also supported by interactions between students and educators or between one student and another. Character education has the same meaning as moral education. The goal is to achieve a good child personality. All character education in Indonesia must be based on the Indonesian nation's culture to foster the next generation's personality [5]. In addition, the learning carried out must be centered on students or student center learning. Instilling character education can also be carried out by providing regulations related to learning [6]. In addition, online learning that is currently being carried out is also called 21st-century learning. This learning is characterized by learning skills, which include cooperation, communication, and critical and creative thinking[7]. Therefore, inculcating independent character and responsible character becomes more convenient.

Ideally, distance learning or online learning can have a good effect on education, especially in the formation of independent character and making responsibility easier to implement[8]. Because as we know that online learning requires students to be more independent both in managing their time and learning to be more responsible towards themselves[9]. This will later affect the formation of character in students. This condition is formed because online

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[5]   Sadam Fajar Shodiq, "Pendidikan Karakter Melalui Pendekatan Penanaman Nilai Dan Pendekatan Perkembangan Moral Kognitif," *At-Tajdid : Jurnal Pendidikan Dan Pemikiran Islam* 1, no. 01 (January 10, 2017), https://doi.org/10.24127/att.v1i01.332.

[6]   Yayuk Hidayah, Meiwatizal Trihastuti, and Bali Widodo, "Online Learning Model in Improving Civic Responsibility as a Solution during Covid-19 Pandemic in Indonesia," *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah* 6, no. 1 (June 29, 2021): 195–206, https://doi.org/10.24042/tadris.v6i1.6227.

[7]   Richard R. Ernst, "Heading towards a Better World. Part 1: Wisdom, Compassion, and Personal Responsibility," *Toxicological & Environmental Chemistry* 98, no. 9 (October 20, 2016): 1084–91, https://doi.org/10.1080/02772248.2015.1134531.

[8]   Hidayah, Trihastuti, and Widodo, "Online Learning Model in Improving Civic Responsibility as a Solution during Covid-19 Pandemic in Indonesia."

[9]   Chih-Hsuan Wang, David M. Shannon, and Margaret E. Ross, "Students' Characteristics, Self-Regulated Learning, Technology Self-Efficacy, and Course Outcomes in Online Learning," *Distance Education* 34, no. 3 (November 2013): 302–23, https://doi.org/10.1080/01587919.2013.835779.

learning is not directly supervised by the teacher, such as direct learning, which is conducive, and the teacher fully supervises students' focus. This online learning can be a good situation for developing children's character education in the family environment. In the online learning period that is carried out at home, several character values can be developed, such as religious character values, discipline character values, creative character values, independent character values, responsibility character values , and curiosity character values. The development of children's character values is the result of cooperation between parents and educators in carrying out positive activities, interacting, and coordinating in guiding with patience. Thus building cooperation by continuing to coordinate with each other related to child development can be a preventive measure to achieve success in order to create a peaceful and advanced social civilization[10].

In reality, distance learning is still underestimated. Because it is considered that the internalization of character values in students experiences obstacles and is not optimal due to the limited interaction and intensity of meetings between teachers and students, teachers experience difficulties monitoring and supervising students' character formation[11]. Many students think that real education is a classroom and that virtual space is just a new system that is less efficient[12].

The results of the East Java IPNU (Nahdlatul Ulama Student Association) survey in April 2020 revealed that assessing the online learning system that is being implemented for students at this time is considered ineffective, as many as 92.29% of East Java students want learning methods, especially in this online situation, to be more creative and innovative. This is supported by 88.75% of respondents who consider the current learning process boring and stressful.

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[10] Daniel Lapsley and Ryan Woodbury, "Moral-Character Development for Teacher Education," *Action in Teacher Education* 38, no. 3 (July 2, 2016): 194–206, https://doi.org/10.1080/01626620.2016.1194785.

[11] William Simkulet, "On Diminished Moral Responsibility," *AJOB Neuroscience* 7, no. 4 (October 12, 2016): 204–5, https://doi.org/10.1080/21507740.2016.1244127.

[12] Lapsley and Woodbury, "Moral-Character Development for Teacher Education."

Innovative Paths to Character: Online Learning's Role in Instilling Independence and
Responsibility in Islamic Education

97

Online learning divides children into 25% listening, 50% listening but not fully, and 25% do not listen[13]. Distance or online learning is deemed very ineffective, and many students underestimate educators teaching in virtual classes. This will be worse if high-capacity classes with teacher-to-teacher ratios are very far away, resulting in a lack of focus on students receiving learning and difficulties for educators to master all class components. Distance learning is considered difficult to grow and develop student character, especially independent character, and student responsibility because this education requires live reciprocity between educators, students, or fellow students. Some students only fill in attendance when learning is carried out. This will, in fact, create corrupt souls in the future. It can be said that they have failed to implement character education, especially in developing the potential of students[14]. As the headlines prove[15], online learning has broken the chain of meetings between students and educators, so educators cannot guide directly if students make a mistake[16], even though this guidance is a form of character education that must be implemented. In addition, in online learning, educators are only able to monitor remotely, such as monitoring student behavior through activity on the WhatsApp Group and questionnaires when students carry out learning at home, but this is prone to be manipulated by students. In addition, online learning only emphasizes the process of transferring knowledge[17]. This is clearly a bad signal for character education during a pandemic which is carried out through online learning.

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[13] Sita Aulia Rahmah, Siti Komariah, and Siti Nurbayani K, "Facing Online Learning Problems Trough Character Buiding, a Teacher Strategy," *PEDAGOGIK: Jurnal Pendidikan* 8, no. 1 (June 10, 2021): 123–55, https://doi.org/10.33650/pjp.v8i1.2168.

[14] Redjeki Agoestyowati, "Dampak Positif Dan Negatif Tentang Pembelajaran Online Saat Pandemi Covid-19 Melanda (April, Mei, Juni 2020) Di Institut Stiami Jakarta," *Aksara Publik* 4, no. 3 (2020): 117–23.

[15] Hidayah, Trihastuti, and Widodo, "Online Learning Model in Improving Civic Responsibility as a Solution during Covid-19 Pandemic in Indonesia."

[16] Jakub Svatos et al., "Online Teaching of Practical Classes under the Covid-19 Restrictions," *Measurement: Sensors*, May 2022, 100378, https://doi.org/10.1016/j.measen.2022.100378.

[17] Florence Martin, Ting Sun, and Carl D. Westine, "A Systematic Review of Research on Online Teaching and Learning from 2009 to 2018," *Computers and Education* 159, no. September (2020): 104009, https://doi.org/10.1016/j.compedu.2020.104009.

As a result, character education is not formed properly. In fact, the process is only a formality because the application of online learning and the absence of direct interaction between educators and students makes students less obedient to educators[18]. In addition, students are indifferent to the distance learning process. Thus, the implementation of character education is difficult because of the limited space for movement, considering that the implementation of character education requires space for movement and good interaction. The growth of independent character and student responsibility is also hampered because this character will grow if the application and development of education in students are not optimally achieved[19].

Therefore, this research is important because seeing the sad news about the difficulty of inculcating character education during online learning negatively impacts the growth of independent character and the responsibilities of students. This research will pay more attention to the implementation of online learning so that it is able to apply independent character and student responsibility.

RESEARCH METHOD

Approach

This study employs quantitative research methods to analyze specific samples and populations, with the aim of gathering data in numerical form. Quantitative research seeks to empirically validate ideas, establish causal linkages and influences among variables, offer numerical representations, and subsequently interpret the findings. This study employed a quantitative methodology to substantiate the premise that online learning has an impact on one's independent disposition and sense of responsibility.

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[18] Ishtiyaque Haji, "Alternative Possibilities, Moral Obligation, and Moral Responsibility," *Philosophical Papers* 22, no. 1 (April 1993): 41–50, https://doi.org/10.1080/05568649309506392.

[19] Yi Xu et al., "Chinese Character Instruction Online: A Technology Acceptance Perspective in Emergency Remote Teaching," *System* 100, no. October 2020 (2021), https://doi.org/10.1016/j.system.2021.102542.

Research Samples

The study focused on a population of 321 high school students in class XI in Yogyakarta City. The selection of the subject was determined using statistical calculations utilizing the Slovin algorithm. A sample size of 179 high school students in class XI was obtained by the conducted calculations.

Instruments and Procedures

The data gathering methodology employed in this study was the utilization of a questionnaire administered through Google forms. The questionnaire comprises a series of systematically organized questions that adhere to established norms, enabling consistent inquiry among various respondents. Consequently, a closed questionnaire was utilized. Respondents are required to provide replies in closed questionnaires by selecting an available option using a tick mark. The scoring criteria employed in this investigation utilized a Likert scale consisting of 5 statements: always, often, sometimes, seldom, and never.

Data Analysis

The acquired data was subsequently examined using a basic linear regression analysis technique with the assistance of the IBM SPSS 22 for Windows tool. This analysis aimed to ascertain the presence and extent of the influence. Prior to undergoing simple linear regression analysis, the acquired data must undergo assessments for validity and reliability. Validity refers to the degree of accuracy in a measurement. Validity is the degree to which an instrument accurately measures what it is intended to measure, serving as a standard of measurement[20]. Reliability refers to the consistent and accurate measurement of findings when a measurement is repeated using a series of measuring devices. The validity test findings indicate that out of the 66 respondents, 50 statement items had rcount values

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[20]   John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*, 4th ed. (California: SAGE Publications, Inc., 2013).

over the threshold of rtable (0.244). This suggests that these items are legitimate, since their reliability results exceed the threshold. Therefore, these questions can be considered consistent and suitable for use as a measuring instrument.

FINDINGS AND DISCUSSION

Findings

Based on the research conducted, it can be seen that descriptive analysis of online learning variables, as many as 37 students get a good score, 115 students get an adequate score, and 27 students get a poor score. Therefore it can be seen that the implementation of online learning as a whole is sufficient.

In the descriptive analysis for the independent variable, as many as 34 students get a good score, 118 students get an adequate score, and 27 students get a poor score. Therefore it can be seen that the independence of students as a whole is sufficient.

Furthermore, for the descriptive analysis of the character variable of responsibility, 38 students received a good score, 108 students received an adequate score, and 33 students received a poor score. Therefore it can be seen that the character of the responsibility of students as a whole is considered sufficient. Furthermore, the results of the simple linear regression test for the effect of online learning on independence can be seen in table 1 and table 2:

Table 1. Simple linear regression test of Online Learning on Independence

Model	Sig.
Online Learning →	0.000

Based on the results above, it can be seen that the significance value is 0.000, which means that the value is <0.05, so it can be concluded that there is an effect of Online Learning (X) on Independence (Y1). Meanwhile, the magnitude of the influence of online learning on the independent character can be seen in table 2:

Table 2. The magnitude of the influence of the Online Learning variable on Independence

Model	R Square
Online Learning →	0.479

The magnitude of the influence of Online Learning (X) on Independence (Y1) in a simple linear regression analysis can be guided by the magnitude of the R Square value. The table above shows that the value of R Square has a value of 0.479. This value implies that the effect of online learning (X) on independence (Y1) is 47.9%, while other variables not examined by researchers influence the remaining 52.1% of independence.

The results of a simple linear regression test for the effect of online learning on the character of responsibility can be seen in table 3 and table 4:

Table 3. The magnitude of the influence of the Online Learning variable on Responsibility

Model	R Square
Online Learning →	0.000

Based on the results above, it can be seen that the significance value is 0.000, which means that the value is <0.05, so it can be concluded that there is an effect of Online Learning (X) on the Character of Responsibility (Y2). Meanwhile, the magnitude of the influence of online learning on the character of responsibility can be seen in table 4:

Table 4. The magnitude of the influence of the Online Learning variable on Responsibility

Model	Sig.
Online Learning →	0.310

The magnitude of the effect of Online Learning (X) on the Character of Responsibility (Y2) in a simple linear regression analysis can be guided by the magnitude of the R Square value. The table above shows that the value of R Square has a value of 0.310. This value implies that the influence of online learning (X) on the Character of Responsibility (Y2) is 31%, while other variables not examined by researchers influence the remaining 69% of the Character of Responsibility.

Discussion

Fostering Autonomous Character Development in Students Throughout The Era of Digital Technology

Based on this study's results, the questionnaire on online learning, independence, and responsibility were all in quite good categories. This indicates that online learning influences the independent character and the character of responsibility, but the influence given is sufficient because it does not influence more than 50%.

The character values conveyed and which should be carried out by students are not fully realized by students. For them, the most important thing right now is how to get a high score. The hypothesis set is that there is a significant influence between online learning, independence, and responsibility. According to the data processing results, it shows that the significance value of simple linear regression testing in online learning for independence is 0.000 with an R Square value of 0.479. This shows that online learning significantly influences independence, with an influence value of 47.9%. Thus, better online learning will be directly proportional to the independence of students. Therefore, the hypothesis that has been set can be accepted. Furthermore, for simple linear regression testing results in online learning for responsibility, a significance value of 0.000 is obtained with an R Square value of 0.31. This shows that online learning significantly influences student responsibilities, with an influence value of 31%. So that it can be seen that better

online learning is carried out, it will be directly proportional to the responsibilities of students. Therefore, the previously established hypothesis is accepted.

Repetition of good habits accompanied by good learning systems and management can improve the character of students[21]. Therefore, students' character can be improved through learning management at the school. Several factors can drive success in online learning, including 1) The structure of the material is clearly and concisely described. 2) Learning materials are presented in communicative language. 3) Learning objects in the form of text, images, audio, video, animation, and simulations are selected according to the needs of the students. 4) The visual display of learning is clear, the learning text is easy to read, the graphics are affixed with adequate labels, and they are free from visual distractions[22]. According to [23], there are several ways for online character learning to run massively, 1) There must be an effective instructional design in this online learning. The design should focus not only on the technological aspects of learning but also on learners' goals, objectives, and expectations. Exploring the most effective design model will gradually improve the quality of the design. 2) Time management, teachers can occasionally help students to manage study time. From this, the desire of students to be responsible for themselves will emerge. [24] said that the success of character building through online learning is also not spared from the students themselves, where a learner must have the desire to change himself by, for example, trying to always be on time in attending classes or finding a place that is conducive to conducting online learning.

Xu et al., explain there are several important roles behind the success of instilling character values with online learning methods[25], 1) The role of parents in forming a conducive environment for

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[21] Eva Imania Eliasa, "Increasing Values of Teamwork and Responsibility of the Students through Games: Integrating Education Character in Lectures," *Procedia - Social and Behavioral Sciences* 123 (2014): 196–203, https://doi.org/10.1016/j.sbspro.2014.01.1415.

[22] Hidayah, Trihastuti, and Widodo, "Online Learning Model in Improving Civic Responsibility as a Solution during Covid-19 Pandemic in Indonesia."

[23] Song et al., (2004)

[24] Wang et al., (2013)

[25] Xu et al., (2021)

learning at home and parental support in supporting the child's abilities. 2) The teacher's role is to understand each student's background so that they can address and control student behavior even from a distance. 4) The role of the environment, a comfortable environment will support students to explore their potential and form a character responsible for themselves and their future. 5) The role of schools, schools also have a very important role in the continuation of online character building. Such as providing online facilities, such as modules, videos, and unique learning that can be done online. In addition, several factors encourage the success of independence, including 1) Believe in yourself. 2) Be and act initiatively. 3) Do not depend on other people in their learning activities. 4) Able to adapt to their environment. Some factors support the success of the character of responsibility, including 1) Being able to consider consequences. 2) Able to perform obligations within the scope of learning wholeheartedly. 3) Do your best to complete school assignments. 4) Be orderly in doing something. 5) Doing things in high spirits [26]. If all of these factors exist and are met, then good learning will be created, which can also create good character in students. In addition, character cultivation is also influenced by the methods used by educators. Usually, the habituation method aims to make students acquire new, more positive habits of action because the habituation method emphasizes agreed behavior and directs behavior to achieve the desired goals [27]. The results that have been obtained indicate that instilling independence and responsibility in students can be carried out even through online learning.

Cultivating Ethical Traits in Students in the Era of Technology

Nurturing a sense of responsibility in youngsters is a challenging task in the current digital age[28]. It necessitates greater patience and exertion, particularly from parents and the surrounding family. Self-

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[26] Goldstick, "Moral Responsibility and Character Formation."

[27] Giuliana Mandich, "Turning to Character: Teachers' Narratives of Youth Futurity and Educational Responsibility," *Discourse: Studies in the Cultural Politics of Education*, January 4, 2022, 1–14, https://doi.org/10.1080/01596306.2021.2012425.

[28] Nelva Rolina, "Developing Responsibility Character for University Student in ECE through Project Method," *Procedia - Social and Behavioral Sciences* 123 (March 2014): 170–74, https://doi.org/10.1016/j.sbspro.2014.01.1411.

responsibility, as described by Stahl et al., refers to the mindset of being capable of assuming responsibility and experiencing a sense of accomplishment when completing duties in a reliable, autonomous, and dedicated manner. An individual might be considered responsible if they possess certain defining traits[29]. Ardila et al. state that one of the features of responsibility is the fulfillment of all tasks and exercises that fall under one's obligation. 2) Executing the instructions with utmost precision during the learning process. 3) It is possible to establish a predetermined time. 4) Committed to undertaking a task. 4) Concentrate and maintain a steady approach. 5) Refrain from engaging in dishonest behavior. 5) Exercise caution and 6) Display diligence throughout the learning process. Moreover, as stated by Triyani et al., the attributes of responsibility encompass: 1) proficiently completing assignments and homework, 2) assuming accountability for every activity, 3) adhering to a defined schedule for pickets, and 4) collaborating on group assignments[30].

Based on research conducted by Melati et al., stated that the challenge in cultivating the character of responsibility in a self-participant is the laziness within him[31]. Where can we know that the lack of direct monitoring from the teacher makes students a little negligent about their duties? Therefore the role of parents is needed in this case. Nugraha & Nurani, reveals the role of parents in cultivating the character of responsibility in children in online learning[32], 1) giving children opportunities to discover their interests and talents so that children are able to receive guidance from both parents and teachers. 2) the opportunity to provide a variety of information according to the talents and interests of children. 3) awareness of providing learning facilities needed by children to facilitate the learning process. Meanwhile, according to, the role of parents is divided into 4. 1) As caregivers and educators. 2) As a mentor. 3) As a motivator. 4) As a facilitator[33].

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[29] Stahl et al., (2021)
[30] Ardila et al., (2017)
[31] Melati et al., (2021)
[32] Nugraha & Nurani, (2021)
[33] Hidayah, Trihastuti, and Widodo, "Online Learning Model in Improving Civic Responsibility as a Solution during Covid-19 Pandemic in Indonesia."

The researcher derives an outline from the research findings by aligning them with prior studies, which indicate the existence of factors that can impact the effectiveness of instilling a learner's sense of responsibility through online learning. To categorize it, researchers classify it into two distinct groups: internal and external factors. The internal influence referred to by researchers is the contribution made by the pupils themselves. The students' input, consisting of their will and ability, plays a crucial role in the internalization of online learning. This input serves as the primary foundation for attaining the objective of fostering independence and responsibility. If the external influences are of high quality but the input from the students is weak, it is inevitable that the resulting output will not be optimal. While external factors may have an impact, the ultimate responsibility lies with the individual students. If, at the start of the learning process, the pupils' level of responsibility and independence is deemed insufficient, but they possess a strong determination and perseverance to rectify this. In such a scenario, the process of internalizing the character would undoubtedly advance swiftly. Conversely, if external causes and resources provide assistance, but pupils lack the will and effort, the progress in internalizing this character learning will be sluggish.

The external factors referred to by researchers are the influences exerted by the surrounding environment on these students. 1) The parental role in facilitating their children's optimal learning. This encompasses the responsibility of parents in reminding their child to be vigilant and encourage them to take breaks by going for a walk when they become disinterested in online learning routines. Parents can also assume the role of providing rewards as children demonstrate incremental improvements in their self-responsibility. Bestowing this prize on a large scale will greatly enhance a child's eagerness to transform into a more virtuous individual in the future. Parents can also facilitate the establishment of a favorable atmosphere for student learning within the confines of their house. Being aware of a child's study schedule is an additional means of providing support. Having knowledge of a child's study schedule enables parents to

establish a favorable setting and reduce interference to the child's learning at home caused by external factors. Although it may appear insignificant, it is of utmost importance for student learning. In the context of online learning, parents are required to assume the role of secondary educators for their children. This is due to the fact that learning takes place at home, making the involvement of parents as teachers crucial. Consequently, children will engage in more talks with their parents inside the household. 2) The instructor plays a crucial role in fostering a sense of responsibility among students. This can be considered a primary duty that the instructor must do. In the context of online learning, the teacher assumes the position of a facilitator[34].

This is encouraging kids to actively learn without teacher guidance. Teachers do this by asking thought-provoking questions that help pupils understand and absorb their material. Traditional classrooms use this method. Instead of answering background-heavy inquiries, students will feel more comfortable sharing their issues and progress at home[35]. This will avoid instructor pressure from making students uncomfortable. Even online, the teacher must offer an egalitarian learning environment for all pupils. Students are motivated and eager to study when attention is distributed fairly. If the teacher gives everyone equal attention, students will be more engaged. Unfortunately, many lecturers selectively focus on certain students, causing some to think they don't need to listen. The instructor is also a sympathetic ear for student complaints. In this situation, the instructor must set an example for the students. This will let kids open up to the teacher about their problems, allowing the teacher to listen and give solutions. 3) School. Despite the change to online learning, schools must have smart and inventive designs to keep students engaged and comfortable. Knowledge acquisition goes beyond Zoom. Schools can produce instructive videos, graphics,

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[34] Eliasa, "Increasing Values of Teamwork and Responsibility of the Students through Games: Integrating Education Character in Lectures."

[35] Wardono et al., "Development of Innovative Problem Based Learning Model with PMRI-Scientific Approach Using ICT to Increase Mathematics Literacy and Independence-Character of Junior High School Students," in *Journal of Physics: Conference Series*, vol. 983, 2018, 012099, https://doi.org/10.1088/1742-6596/983/1/012099.

or interactive games that make learning fun and motivate pupils[36]. E-learning in schools can help students focus on their studies. This E-learning platform lets schools use engaging digital literacy content to encourage independent and responsible learning. Systematic evaluation of prior designs is also needed. This improves online education and ensures learning goals are met.

Conclusion

Based on the results of the research and discussion above, it can be concluded that every child must be nurtured with the character of independence and responsibility to survive in the digital era. Internalization of the character of independence and responsibility can be carried out effectively online if it is equipped with adequate facilities. In addition, it requires the joint commitment of all school members to implement the program that has been prepared. Internalization of the character of independence and responsibility in the digital era can be done by habituation and exemplary behavior by teachers inside and outside the classroom.

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