

Original research article

Role of Digital Education in Student Monitoring and Teacher Evaluation During Pandemic Period

Roshan Baa ^{1*}, Claber Minj ^{2*}

1 Department of Commerce, St. Xavier's College, Ranchi, (Jharkhand) India

2 Department of Human Resource Management, Xavier Institute of Social Service, Ranchi, (Jharkhand) India

* Correspondence: roshansjranchi@gmail.com

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Abstract: Digital education has played an important role in teacher evaluation and student monitoring activities during the recent COVID-19 pandemic situation. In digital education system, different kinds of tools and techniques are considered to monitor the important activities of the students. Diamond application is one of those strategies. On the other hand, educators also consider different kinds of strategies to evaluate the quality of the teaching activities of the teachers in the online education system in this pandemic situation. Overall, it can be acknowledged that digital education system plays a significant role in teacher evaluation and student monitoring activities during COVID-19 pandemic.

Keywords: digital Education; COVID-19; advanced technology; quality of teaching

1. Introduction

Millions of people have lost their lives due to the recent COVID-19 pandemic situation. Learning and teaching activities in the schools have been affected in the last two years due to the pandemic period. The governments of majority of the nations across the globe have restricted all kinds of social activities during the first few months of the pandemic. Similar to other social activities, the classroom based physical teaching and learning activities have been affected because the governments of majority of the developing and developed nations across the globe have ordered the schools to be closed for more than 18 months. In order to maintain continuation of the educational activities, the managements of different educational institutions and governments of different countries decided that the teachers and students will continue the academic activities through online education system. Now, online education has played an important role in teacher evaluation and student monitoring activities during the COVID-19 pandemic situation.

In the online education system, different kinds of technologically advanced tools are utilised by the managements of the schools to monitor the activities of the students. It is also important to accept that different kinds of technologically advanced tools are considered by the managements of different technological institutions to enhance teacher evaluation. Overall, it is important to accept that online education system plays an important role in the student monitoring and teacher evaluation activities through the consideration of different technologically advanced applications.

Research Objectives

The researcher will determine the roles of online education in education sector in this COVID-19 pandemic situation. The objectives of this research article are:

- To identify the role of online education in different kinds of student monitoring activities in this pandemic situation
- To analyse the role of online education in teacher evaluation process in this pandemic situation

2. Literature Review

This pandemic not only affected the economic sustainability of the world, but also social stability of several social regions has been affected. The emergence of online education system

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is greatly seen in this pandemic situation because people are avoiding traditional social activities. Majority of the developing and developed nations are getting habituated with the online education system. In an education system, monitoring of the activities of students is necessary to determine the quality of learning. On the other hand, evaluation of the teachers is also important in an education system to determine the quality of the teaching activities. In this online education system, the monitoring of the students' activities as well as the evaluation of the teaching activities of the teachers is important. Now, evaluators consider different kinds of monitoring techniques to understand the learning of the students. On the other hand, evaluators also consider different kinds of evaluation techniques to evaluate the teaching quality of the teachers. The monitoring as well as evaluation techniques are mentioned below.

2.1 Monitoring Techniques to Evaluate Students' Learning

First of all, reflection of the students can help the educators to realise whether the students have gained knowledge or not. Transparent communication and positive interactions can help the educators to monitor the learning procedure and knowledge level of the students. Secondly, revision of the knowledge base is also an important technique to monitor the learning activities and knowledge base of the students. Knowing about a critical content can help the educators to determine whether the students have become successful in gaining knowledge. Third of all, it is also important to determine whether the students are giving justified answers to the questions or not. The educators need to organise some surprise tests to determine whether the students have become successful in gaining knowledge or not. Out-of-context answers can indicate that the students need to improve the learning activities and knowledge development processes (Ionescu et al., 2020). These specific monitoring techniques are important for educators to monitor different kinds of important activities of the students. Now, educators monitor the activities of the students in online learning system through the consideration of different technologically advanced applications.

2.2 Evaluation Methods to Assess Teaching Qualities of Teachers

Similar to the monitoring techniques for students, educators also apply different kinds of evaluation techniques to evaluate the quality of the teaching of the teachers. Three types of evaluation techniques are considered to evaluate the teaching quality of the teachers. These are summative evaluation, formative evaluation, and diagnostic evaluation. In summative evaluation, evaluators generally assess the quality of the final output of the entire teaching approach. In formative evaluation, evaluators generally assess the entire process of teaching. In diagnostic evaluation, the evaluators or the educators usually diagnose the difficulties of students in the entire teaching practices (Basilaia and Kvavadze, 2020). These types of evaluation techniques are considered in traditional teaching activities. In case of contemporary online education system, different technologically advanced applications are used to evaluate the teaching quality of the teachers.

3. Research Methodology

The researchers are responsible for the selection of justified research method depending on the nature of the research title and nature of the study. The researchers have to choose among two types of research methods. These are qualitative methodology and quantitative methodology. In qualitative methodology, researchers usually consider the views and thoughts of other authors as well as experts in the related subject matter to carry out the investigation. Most importantly, the researchers apply individual knowledge and perceptions in qualitative methodology to analyse the information gathered from other individuals like industry experts or other researchers or authors. In quantitative research methodology, researchers use different statistical techniques, scientific methods, and mathematical formulas to analyse the numerical data. In this quantitative methodology, the researchers deal with number and statistics. Major objective of this assignment is to identify the role of the online education system in student monitoring and teacher evaluation activities. Therefore, it will be important here to consider the views of other authors or researchers or experts, who have knowledge on this domain. Depending on the nature of this research title and characteristics of the study, consideration of qualitative methodology will be highly justified.

It is also important to select a justified data collection method. Consideration of primary data collection method helps in collecting raw, fresh, and live information from real field works like surveys and interviews. On the other hand, researchers can gather huge number of data from existing data sources in secondary data collection method. Secondary data collection method is highly flexible, cost-effective, and time-saving data collection method

compared to the primary data collection method. Therefore, consideration of the secondary data collection method is highly justified in this research work. Different authentic scholarly journal articles are considered in this research work to collect the relevant information for the research.

4. Research Analysis and Discussions

This is already determined from the above literature review section that student monitoring activities as well as teacher evaluation processes are completed through some specific techniques. Now, the dynamic of the education process and infrastructure has changed in this pandemic COVID-19 situation. The schools, teachers, and students have become highly oriented with online education activities (kaup et al., 2020). In online education system, educators consider some renowned, efficient, and user-friendly technological applications to monitor the activities of the students and evaluate the quality of the teaching activities of the teachers. These two aspects are analysed below.

Different kinds of tools, techniques, and technological applications are considered by the contemporary educators in this pandemic COVID-19 situation to monitor necessary activities of the students and evaluate the teaching quality of the teachers.

4.1 *Monitoring the Activities of Students*

First of all, the analysis of the monitoring of necessary activities of the students is important. Example of participation activities of the students in online education system can be given here. Teachers or educators in this contemporary era are using diamond tool to monitor the participation activity of the students in this online education system. Through the use of this diamond tool, the quality of the online education system can be enhanced because this diamond tool can help the educators to understand the participation level of the students. Basically this diamond application is run on technologically advanced data management techniques. The framework of this technologically advanced application is developed on the basis of three important components, such as collection, analysis, and interpretation (Aliyyah et al., 2020). This diamond application can automatically run the collected information and make the educators understand about the numbers or percentage of the participated students. Most importantly, it will be easy for the educators to determine whether the percentage of student participation in the online education system is increasing or decreasing. Hence, it can be acknowledged that online education system plays an important role in monitoring important activities of the students.

Secondly, other kinds of technologically advanced applications are considered in the online education system to monitor important activities of the students. Baseline program-level engagement reporting is considered as another important technologically advanced technique, which is considered by educators to monitor the percentage of the engagement level of the students in the online education system. This particular technologically advanced system helps the instructors or the educators to filter out any discrepancy. As a result the actual numbers of engaged or participated students are determined through this system. The evaluators or the educators also have to monitor different kinds of activities of the students engaged in the online education system (Gopal et al., 2021). The evaluation or monitoring of the knowledge development activities is also important. Regular feedbacks from the students through the particular online media platforms can help in determining the knowledge level of the students developed through the online education system. All of these activities can be done through online education system.

Thirdly, monitoring of the information accessibility in online education system is also important for the educators. It is important to acknowledge that the students must have the accessibility to all the information in online education system. Lack of accessibility to any information in online education system can affect the quality of the knowledge development activities. Consideration of technologically advanced dashboard system and basic report summarising approach can help the educators or the instructors to determine whether the students are becoming successful to develop their knowledge in this online education system. These are some tools and applications, which are used in the online learning system to monitor the effectiveness of the important activities of the students.

4.2 *Evaluation of Teaching Activities of Teachers*

Similar to the monitoring of the important activities of the students, this is also essential for the educators or the evaluators to evaluate the quality of the teaching practices of the teachers in the online education system. The evaluators have developed some important

criteria to evaluate the quality of the teaching practices. First of all, the expertise of the teachers or the instructors is evaluated in online education system. The expertise of the teachers in the online education system can be of two types (Hong et al., 2021). For example, the evaluators may investigate whether the teachers are knowledgeable enough regarding the subject of the study. On the other hand, the evaluators also may investigate whether the teachers to knowledgeable enough regarding online teaching activities.

Second of all, the evaluators need to evaluate in the online education system whether the teachers have included essential elements in the lesson plans or not. Lack of inclusion of the essential elements in the lesson plans in online education system can affect the quality of teaching. Absence of the essential elements in the lesson plans in online education system indicates that the teachers need more training and skill development sessions to develop more effective lesson plans for online education system (Hayat et al., 2021).

Third of all, it is also important for the educators to decide whether the teachers are treating all the students equally and fairly. In online education system, it is really very difficult to concentrate every student equally. Lack of equal concentration on every student can affect the quality of teaching activities in online education system. Therefore, the evaluators may supervise whether the teachers are equally observing the every student or not (Hoq, 2020). If the evaluators determine that the every student is not equally treated or focused, then they can term the quality of the teaching activities as poor.

Fourth of all, it is important for the educators or evaluators to determine whether the teachers are addressing the queries of the students in the online education system or not. Most importantly, the educators or the evaluators review the chat box of the online learning application to determine whether the questions or queries of the students are addressed by the teachers or not (Zalat et al., 2021). If it is identified that the teachers could not address the questions or queries of the students, then it can be stated that the quality of the teaching of the teachers is really low.

Last but not the least; the evaluators or the educators need to determine whether the teachers have incorporated new teaching techniques in the classroom or not. In online education system, teachers have to adopt different kinds of advanced, unique, and new teaching methods to make the students understand. If it is identified that the teachers are failing to adopt new techniques in online teaching activities, then it can be stated that the quality of the teaching of the teachers in the overall online education system is really low (Ilieva and Yankova, 2020). Overall, the degree of insights in a lecture period is evaluated to determine whether the quality of the teaching procedure is high or low.

5. Discussions and Result

The emergence of online education system is evident in the recent COVID-19 pandemic situation. In this recent COVID-19 pandemic situation, the governments of different countries have imposed socio-economic lockdowns to stop the spreading of the virus. As per government regulations, people should work from home and no social gathering will be allowed. The governments of different countries along with the managements of different educational institutions introduced online education system for teachers and students. Teachers and students are engaged in the online education system through the consideration of virtual educational platforms created through some advanced technological platforms and advanced technological devices. In any education system, the monitoring of the important activities of the students is important. Similarly, the evaluation of the teaching methods of the teachers is also important to determine the quality of the teaching process. In online education system, different technologically advanced applications and procedures are used to monitor the important activities of the students in online education activities (Budur, 2020). Some important activities of the students in online education system are engagement of students, asking queries in online class sessions, and developing knowledge base through the online classes. Most importantly, the educators or the evaluators consider technologically advanced applications and tools to determine whether the technologically advanced applications in the online education system can help in monitoring the important activities of the students in a positive way or not. From the above analysis, it is identified that the technologically advanced applications like diamond tool and chat box allows the evaluators to monitor the important activities of students like student engagement and student feedback activities in the online education system (Yuliejantiningasih, 2020). Hence, it can be acknowledged that online education system plays an important role in the student monitoring activities in which different important

activities of students are effectively monitored through the use of disruptive technological applications.

Similar to the monitoring of important activities of students in online learning, educators or evaluators are also responsible for the evaluation of the quality of the teaching activities. In any teaching method, the quality of the teaching of a teacher can be evaluated through the evaluation of quality of the lesson plan, quality of the student assessment, uniqueness of the teaching activities, and improvement in the academic performance of the students. In this case, the evaluation should be done by keeping online education in kind. First of all, it will be important for the evaluators or the educators to keep this thing in mind that the teachers should develop the lesson plan effectively. In online education system, teachers should be more cautious regarding integration of important elements in lesson plans (Wilcha, 2020). The evaluators should be responsible for determining that every important elements in mentioned in the lesson plan. Like this way, the quality of the teaching activities can be evaluated in the online teaching process. Secondly, evaluation of student assessment is important. This is an important aspect to discuss that knowledge level, skill level, and intelligence of a student can differ from the knowledge level, skill level, and intelligence of the other students. Therefore, assessment of the skill level of the students is highly important to any learning method. In online learning method, the assessment of the skill and competency level of the students can be done through frequent tests and other kinds of assessments. The assessment quality of the teachers also can be evaluated by how fast the teachers can give appropriate grading to the students. It can help the teachers in the online education system to identify the strengths as well as weaknesses of the students quite effectively. Frequent assessments and quick grading can indicate that the evaluation quality of the teachers in online education is really high (Asgari et al., 2021). Thirdly, the evaluators can evaluate the quality of the teaching activities of the teachers in online education mode by determining the degree of uniqueness of the online teaching activities. In the online teaching method, teachers have to follow different instructions as the nature of online education will be different from the nature of traditional teaching activities. Most importantly, different kinds of unique and attractive teaching approaches will be considered by the teachers to impress the students. Lack of uniqueness in online teaching activities can affect the growth of the business. Most importantly, the evaluators will assess whether the students are engaged with the teachers frequently or not. If the teachers engage the students frequently in online teaching activities, then it can be stated that the quality of the teaching evaluation of the teachers is high in the online education system (Rahayu and Wirza, 2020). Lastly, evaluation of the academic performance of the students also can help in evaluating the quality of the teaching of the teachers in the online education system. This is highly acceptable that the installation and consideration of machine learning technology as well as artificial intelligence can help in tracking the performance level as well as improvement of the students. If it is identified in the tracking system that the academic performance of the teachers is not improved, then it can be stated that the quality of the teaching activities of the teachers in the online education system is quite low. Most importantly, the improvement in student performance will significantly help in improving the quality of the teaching activities of the teachers in the online education system (Coman et al., 2020). The teachers should try to improve the IQ level of the students to improve their study performance, which will allow those teachers to improve the quality of teaching accordingly.

6. Conclusions

The online education system has a strong impact on student monitoring and teacher evaluation activities. During the ongoing COVID-19 pandemic situation, schools, colleges, and different educational institutions have adopted an online education system to attain overall growth. In the online education system, different technological applications help educators to evaluate the important monitoring activities of the students. Similarly, different strategies are followed to evaluate the quality of the teaching activities of the teachers. From the above analysis, it is identified that the student monitoring activities and teacher evaluation activities can become positive in nature if certain techniques and strategies are followed

References

- Aliyyah, R.R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The perceptions of primary school teachers of online learning during the COVID-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies*, 7(2), 90-109.
- Asgari, S., Trajkovic, J., Rahmani, M., Zhang, W., Lo, R. C., & Sciortino, A. (2021). An observational study of engineering online education during the COVID-19 pandemic. *PLoS One*, 16(4), p.e0250041.
- Basilaia, G., & Kvavadze, D. (2020). Transition to online education in schools during a SARS-CoV-2 coronavirus (COVID-19) pandemic in Georgia. *Pedagogical Research*, 5(4).
- Budur, T. (2020). The role of online teaching tools on the perception of the students during the lockdown of Covid-19. *International Journal of Social Sciences & Educational Studies*, 7(3), 178-190.
- Coman, C., Țiru, L.G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M.C. (2020). Online teaching and learning in higher education during the coronavirus pandemic: Students' perspective. *Sustainability*, 12(24), 10367.
- Gopal, R., Singh, V., & Aggarwal, A. (2021). Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Education and Information Technologies*, 26(6), 6923-6947.
- Hayat, A. A., Keshavarzi, M. H., Zare, S., Bazrafcan, L., Rezaee, R., Faghihi, S. A., Amini, M., & Kojuri, J. (2021). Challenges and opportunities from the COVID-19 pandemic in medical education: a qualitative study. *BMC Medical Education*, 21(1), 1-13.
- Hong, J. C., Lee, Y. F., & Ye, J. H. (2021). Procrastination predicts online self-regulated learning and online learning ineffectiveness during the coronavirus lockdown. *Personality and individual differences*, 174, 110673.
- Hoq, M. Z. (2020). E-Learning during the period of pandemic (COVID-19) in the kingdom of Saudi Arabia: an empirical study. *American Journal of Educational Research*, 8(7), 457-464.
- Ilieva, G., & Yankova, T. (2020). IoT in distance learning during the COVID-19 pandemic. *TEM J*, 9(4), 1669-1674.
- Ionescu, C. A., Paschia, L., Gudanesu Nicolau, N. L., Stanescu, S. G., Neacsu Stancescu, V. M., Coman, M. D., & Uzlau, M. C. (2020). Sustainability analysis of the e-learning education system during pandemic period—covid-19 in Romania. *Sustainability*, 12(21), 9030.
- Kaup, S., Jain, R., Shivalli, S., Pandey, S., & Kaup, S. (2020). Sustaining academics during COVID-19 pandemic: the role of online teaching-learning. *Indian Journal of Ophthalmology*, 68(6), 1220.
- Rahayu, R. P., & Wirza, Y. (2020). Teachers' perception of online learning during pandemic covid-19. *Jurnal Penelitian Pendidikan*, 20(3), 392-406.
- Wilcha, R. J. (2020). Effectiveness of virtual medical teaching during the COVID-19 crisis: systematic review. *JMIR medical education*, 6(2), p.e20963.
- Yuliejantiningih, Y. (2020). The implementation of online learning in early childhood education during the COVID-19 Pandemic. *Jurnal Pendidikan Usia Dini*, 14(2), 247-261.
- Zalat, M. M., Hamed, M. S., & Bolbol, S. A. (2021). The experiences, challenges, and acceptance of e-learning as a tool for teaching during the COVID-19 pandemic among university medical staff. *PLoS One*, 16(3), p.e0248758.