

# Implications of Virtual Classroom Management: A Review of Challenges and Prospects

Muhammad Muhammad Suleiman, Surajo Musa Yakubu, Safiyanu Sulaiman Saleh, Haruna Ibrahim

Abstract: The COVID-19 pandemic has revolutionised the traditional educational system, requiring schools and universities to implement virtual classrooms as a viable way of continuing operations. This shift has presented several challenges to classroom management, yet it also presents educators with new prospects for engaging their students in the virtual learning space. This review assesses the implications of virtual classroom management, its relevance to current educational practice, and offers strategies for successful implementation. Finally, this review provides a comprehensive overview of the challenges and prospects of virtual classroom management. While the challenges are significant, the potential of virtual classrooms to create meaningful learning experiences is undeniable. It must be harnessed by schools and universities if educational outcomes are to be achieved in the post-pandemic environment.

Keywords: Virtual Classroom, Covid-19, ICT, e-Learning, Classroom Management.

#### I. INTRODUCTION

The recent emergence of virtual classrooms has sparked the curiosity of educators and researchers alike. Virtual classrooms have both potential advantages and potential challenges that must be addressed. This review summarises the current literature available on virtual classroom management, intending to examine both the challenges and prospects of this new teaching model (Singh & Meena, 2022) [9]. In the educational setting, the art of teaching and learning plays an essential role, which depends on the skills and tactics used by the teacher both within and outside the classroom (Biswas, Rajab Ali Nandi, 2020) [1]. Effective classroom management is undoubtedly one of the most critical responsibilities that educators confront in a variety of settings [11]. This may be especially true for new teachers [12]. "When teachers discuss the most challenging challenges they faced in their initial years of teaching, classroom management and discipline are frequently mentioned." (Sibanda, 2021) [8].

Manuscript received on 11 November 2024 | Revised Manuscript received on 10 December 2024 | Manuscript Accepted on 15 December 2024 | Manuscript published on 30 December 2024.

\* Correspondence Author (s)

**Muhammad Muhammad Suleiman\*,** Department of Computer Science, Federal Polytechnic, Kabo, Kano State, Nigeria. Email ID: <a href="mailto:muhddkd@gmail.com">muhddkd@gmail.com</a>, ORCID ID: <a href="mailto:0000-0002-3646-3715">0000-0002-3646-3715</a>

Surajo Musa Yakubu, Department of Micro-Finance & Entrepreneurship Development, Federal Polytechnic, Kabo, Kano State, Nigeria.

Safiyanu Sulaiman Saleh, Department of Business Administration & Management, Federal Polytechnic, Kabo, Kano State, Nigeria.

<u>Haruna Ibrahim</u>, Department of Social Development, Kano State Polytechnic, Nigeria.

© The Authors. Published by Lattice Science Publication (LSP). This is an  $\frac{\text{open}}{\text{access}}$  article under the CC-BY-NC-ND license  $\frac{\text{http://creativecommons.org/licenses/by-nc-nd/4.0/}{\text{open}}$ 

COVID-19 has had a significant impact on the rise of virtual classrooms Racheva (2018). The virtual classroom is an online learning environment that facilitates real-time engagement between teachers and students. Videoconferencing, online whiteboards, instant messaging platforms, and meeting spaces are some of the most commonly used virtual classroom tools. Rather than seeing the current situation as a barrier to learning, teachers can use virtual classrooms to learn how to teach differently so that when classrooms open, students can realise the benefits of collaborative learning (Piedra & Yudintseva, 2020) [7]: (Kiseleva & Pogosian, 2021) [4].

### II. THEORETICAL BACKGROUND

The theoretical underpinning of virtual classrooms draws on the idea of constructivism, an approach that recognises the diverse ways in which students learn best. It is based on the notion that learners need to actively construct their knowledge by connecting real-world experiences and abstract concepts. This is in opposition to the traditional transmission approach, which is based on the recitation of the teacher's prepared material (Kiseleva & Pogosian, 2021).

### III. RECENT LITERATURE REVIEW

The literature review revealed several important findings. First, virtual classrooms can provide the necessary support to individualise instruction and enable students to work at their own pace. This could be especially beneficial for students who are working remotely or who may need additional support. Second, virtual classrooms can enable collaboration and engagement among students in meaningful ways. This could improve the overall learning experience for students. Finally, the literature identified potential challenges that virtual classroom management could face. These include privacy issues, technical difficulties, and the potential for student distraction (Khalid, 2022) [5].

### IV. TRADITIONAL CLASSROOM

A classroom, often known as a schoolroom, is a place where both children and adults can learn. Classrooms can be found at a variety of educational institutions, from preschools to colleges, as well as other venues that provide instruction or training, such as corporations and religious and humanitarian groups. The classroom provides a platform where students can learn without being distracted by outside factors.

### Implications of Virtual Classroom Management: A Review of Challenges and Prospects

#### V. TRADITIONAL CLASSROOM MANAGEMENT

"The act of supervising interactions, attitudes, instructional settings, and lessons for communities of learners" is one definition of classroom management. Classroom management is a preventive activity that leads to fewer discipline issues. "Preventive management is the perspective that many classroom problems can be remedied by solid preparation, interesting and relevant lessons, and effective teaching," taking the preventive element of classroom management a step further. This paper will look at the unique issues of implementing classroom management in an online context (Kiseleva & Pogosian, 2021).

### VI. VIRTUAL CLASSROOM

A virtual classroom is an interactive educational system in which learners and tutors/teachers connect in the same way that they would in a physical classroom, but from different geographical locations. All of the essential tools needed to manage an effective classroom are included in the system. Participants can communicate using a variety of methods, including text chat, live video, live audio, and so on. The whiteboard, which appears eerily identical to a chalkboard in a real classroom, is one of the most basic instruments. In general, there is a lot of software that supports this type of learning and provides all of the necessary tools (Sibanda, 2021), (Dung, 2020), (Khalid, 2022) [2].

### VII. VIRTUAL CLASSROOM MANAGEMENT

Learning settings that are organised or carried out online are known as virtual classrooms (Wang, 2001). Furthermore, he deduced that a virtual classroom is an online learning environment that includes all necessary materials. He further said that a virtual classroom is a learning system that allows lecturers and students to conduct teaching and learning activities outside of the actual confines of the classroom (Wang, 2001).

The act of supervising the relationships, behaviour, and learning arrangements for the community of learners is known as virtual classroom management. He saw class management as a preventative measure for reducing indiscipline. Preventative management is the belief that many classroom problems can be solved via good preparation, interesting and relevant lessons, and effective teaching (Martin et al., 2011) [6].

## VIII. CONCEPTUAL MODEL OF VIRTUAL CLASSROOM MANAGEMENT

Virtual classes require a different approach known as virtual pedagogy. Use Students develop high-level learning and critical thinking skills because of virtual learning. The Maye Conceptualisation Cycle is one of three pedagogical learning models for e-learning. The conceptualisation cycle is a three-stage process in the Maye Model (Martin et al., 2011).

a) First Phase: A conceptualisation of e-learning is utilised to provide students with an understanding of what they wish to investigate and comprehend. The instructor uploads the resource, as well as a presentation document or phrase handout, to the web-based learning

- environment (WBLE), Moodle, or category sites. Mayes refers to online resources like this as "Main Course Tools," and their purpose is to provide students with the data they need to know to determine whether they want to succeed in that particular method.
- b) Second Phase: The e-learning phase of the project (students do assignments). Students are given online assignments at this step that allow them to apply the principles they learnt in the conception stage. Typically, this stage involves students filling out their order form, which is then followed by comments based on their responses or final grades.
- c) Third Phase: The stage of e-learning discussion (students are given feedback). This is the stage where students learn using technology, and the benefits can be seen in both terms of the student experience and in terms of increasing effectiveness in running online courses, allowing students to gain a common understanding of the topic and thus relieving the tutor of some of the pressure.

### IX. STRATEGIES FOR THE VIRTUAL CLASSROOM MANAGEMENT

These five (5) suggestions will help you avoid some of the most typical sources of irritation when delivering online, in the spirit of collaboration with eager learners. Also, make sure you get the most out of your students (Kiseleva & Pogosian, 2021).

- a) Practice with the Technology: Nothing can disrupt your online lecture faster than a technical glitch with your slideshow or video conference. It's tempting to download and check out every new app that appears. The most effective online teachers, on the other hand, aren't swayed by the newest app. They concentrate on mastering only a few tools.
- b) Engage Students in Norm-Setting: Are you concerned about students wearing their pyjamas to class? Online dress guidelines are causing some teachers a lot of stress. Others are unconcerned (Khalid, 2022).
- c) Encourage Participation: Engagement is a "good to have" in a regular classroom. We'd like to get our pupils involved. When choosing between involvement and order or engagement and standards, however, engagement loses out. When it comes to teaching online, the priorities are reversed. It is simple for pupils to cease coming to class if we cannot engage them. We may never see them again if they quit showing up.
- d) Reach Out Frequently and Early: The first stage in developing an online community is to reach out early and often; under this technique, students are advised to identify themselves immediately as a way of building empathy. Sending messages to students at the start of the school year and during the semester is one technique to establish and strengthen ties with them in the online program. One way to make a class more active is to get to know students from an early age.
- e) Employ Small-Group Sessions to Build Relationships. Students, like the rest of us, are in desperate need of personal connections right now. Meetings with the entire

class can help restore a sense of normalcy (Singh & Meena, 2022).





- f) Begin Slowly: The transition to online learning has been jarring again. We will not be able to continue teaching at our usual rate. We will all need some time to get used to one another. Recognise that the first day or two will be spent focusing on the online learning procedure. Students must adjust to new expectations, timetables, software, and other factors. There are also emotional and psychological adaptations to be made for many of them (and us).
- g) Reduce lectures and increase the number of discussions. Interaction between people is made easier. As a result, peer interaction in the context of online learning can help make the class more functional. In online classes, one method is to reduce lecture time and enhance discussion time. Limiting the number of lecturers and adding more discussion time has an impact on students' ability to widen their horizons (Kiseleva & Pogosian, 2021).

### X. CHALLENGES OF VIRTUAL CLASSROOM MODE

From the perspectives of the teacher and the students, the problems in a virtual classroom might be both internal and external. As teachers, we should possibly look at the internal issues first so that we can reflect on them and improve the teaching-learning environment for all (Biswas, Rajab Ali Nandi, 2020), (Watson, 2006) [10]. The following are some of the challenges/obstacles found within:

- a) Technology Issues: One of the most significant disadvantages of a virtual classroom is the infrastructure [13]. To carry enormous traffic, the initial adoption of the technology may necessitate a large and good network infrastructure [14]. Although we now have very reasonable options, the cost of putting such infrastructure in place is extremely high, which certain institutions may not be able to afford [15].
- b) E-Learning Can Lead to Social Isolation: Current e-learning approaches in schools tend to lead to reflection, remoteness, and a lack of connection among students. As a result, many students and teachers who inevitably spend a significant amount of time online may begin to show signs of social exclusion because of the lack of human interaction in their lives. The combination of social isolation and poor communication can lead to a variety of mental health difficulties, including increased stress, anxiety, and negative thinking.
- c) Lack of face-to-face interaction: The link between the learners and the teachers is not available.
- d) Extra Training is required: One downside of the virtual classroom is that some educators and students are hesitant to use digital e-learning tools. Some teachers have trouble acquiring and adopting technology, and the majority of them have technical issues. Aside from that, some online instructors have difficulty creating study materials in a soft style.
- e) Reluctance to Learn and Apply ICT in the Classroom: Even if the techniques are learnt, there is a fear of putting them into practice in the classroom. Teachers are hesitant to offer it in front of students or an audience.

- f) An Age-Old Conviction in the Efficacy of the Chalkand-Talk Style of Teaching: Teachers who refuse to adapt to technology sometimes emphasise the efficacy of the age-old approach.
- g) Time-Consuming in Terms of Lecture Content Preparation: Teachers frequently believe that preparing for virtual classrooms is a waste of time, especially in the early stages (Martin et al., 2011).

# XI. PROSPECTS FOR TEACHING AND LEARNING IN THE VIRTUAL CLASSROOM

For many of today's students, the opportunity to access a course from any computer with Internet connectivity, 24 hours a day, seven days a week, is a huge plus (Joshua, 2018) [3]. The following are some of the primary advantages of a virtual classroom:

- **a) Greater Convenience**: Access from any online computer 24 hours a day, 7 days a week; suits busy schedules; no commuting, no looking for parking (Dung, 2020).
- b) Improved Learning: Studies demonstrate that students have a greater grasp and recall of course information, have more meaningful debates, and place a greater focus on writing skills, technical abilities, and life skills like time management, independence, and self-discipline.
- c) Interaction & Network: Enhanced teacher-to-student and student-to-student interaction and conversation; a more student-centred learning environment; less passive listening and more active learning; a stronger sense of togetherness and synergy.
- **d) Modern Teaching:** Student-centred approaches; enhanced diversity and creativity of learning activities; accommodate various learning styles; adjustments and improvements can also be applied to on-ground courses.
- e) Instant feedback on examinations and tests: Another significant benefit of the virtual classroom is the ability to receive immediate feedback on examinations and tests. You do not have to wait days or weeks for your results if you are enrolled in an online degree program. Exams, assignments, and tests completed online are frequently scored as soon as the student completes them. This aids in tracking the student's development and identifies areas for improvement.
- **f)** Cost cutting: Take on more students; more student satisfaction equals higher retention and fewer repeats.
- g) Make the Most of Physical Resources: Reduce strain on limited campus infrastructure; reduce traffic at school and in parking lots.
- h) Affordability: Another advantage of virtual classrooms is their cost-effectiveness. The cost of setting up a classroom and distance learning management system is extremely low when compared to the expense of establishing or expanding new physical classrooms to accommodate additional students. These savings are often passed on to students, who are forced to pay a lower percentage of their school fees.



### Implications of Virtual Classroom Management: A Review of Challenges and Prospects

#### XII. CONCLUSION

In conclusion, virtual classrooms could offer potential advantages for student learning and engagement. However, the potential challenges associated with virtual classroom management must be addressed to ensure successful implementation. Further research should be conducted to explore the best practices for virtual classroom management, as well as the overall impact of this teaching model.

### **DECLARATION STATEMENT**

After aggregating input from all authors, I must verify the accuracy of the following information as the article's author.

- Conflicts of Interest/ Competing Interests: Based on my understanding, this article has no conflicts of interest.
- Funding Support: This article has not been sponsored or funded by any organization or agency. The independence of this research is a crucial factor in affirming its impartiality, as it has been conducted without any external sway.
- Ethical Approval and Consent to Participate: The data provided in this article is exempt from the requirement for ethical approval or participant consent.
- Data Access Statement and Material Availability: The adequate resources of this article are publicly accessible.
- Authors Contributions: The authorship of this article is contributed equally to all participating individuals.

### REFERENCES

- Biswas, Rajab Ali Nandi, S. (2020). Teaching in Virtual Classroom: Challenges and Opportunities. International Journal of Engineering Applied Sciences and Technology, 5(1), 334–337. DOI: https://doi.org/10.33564/ijeast.2020.v05i01.052
- Dung, D. T. H. (2020). The Advantages and Disadvantages of Virtual Schools. IOSR Journal of Research & Method in Education (IOSR-JRME), 10(3), 45–48. DOI: <a href="https://doi.org/10.9790/7388-1003054548">https://doi.org/10.9790/7388-1003054548</a>
- Joshua, S. (2018). Introduction to Online Teaching and Learning. In The TESOL Encyclopedia of English Language Teaching (pp. 1–2). DOI: <a href="https://doi.org/10.1002/9781118784235.eeltv06b">https://doi.org/10.1002/9781118784235.eeltv06b</a>
- Khalid, T. M. H. (2022). Classroom Management in Virtual Learning: A Perceptions Study with School Teachers in Qatar. World Journal of English Language, 12(2), 93–101. DOI: <a href="https://doi.org/10.5430/wjel.v12n2p93">https://doi.org/10.5430/wjel.v12n2p93</a>
- Kiseleva, M., & Pogosian, V. (2021). Virtual Class Management. SHS Web of Conferences, 97, 1–8. DOI: https://doi.org/10.1051/shsconf/20219701023
- Martin, F., Parker, A. M., & Ndoye, A. (2011). Measuring Success in a Synchronous Virtual Classroom. In Student Satisfaction and Learning Outcomes in E-Learning: An Introduction to Empirical Research (Issue January, pp. 249–266). DOI: <a href="https://doi.org/10.4018/978-1-60960-615-2.ch011">https://doi.org/10.4018/978-1-60960-615-2.ch011</a>
- Piedra, D., & Yudintseva, A. (2020). Teaching in the virtual classroom: Strategies for success. In Journal of Higher Education Theory and Practice (Vol. 20, Issue 12, pp. 192–196). DOI: <a href="https://doi.org/10.33423/jhetp.v20i12.3790">https://doi.org/10.33423/jhetp.v20i12.3790</a>
- Sibanda, L. (2021). Managing Learner Behaviour in a Virtual Classroom: Experiences of Selected Private High School Teachers in Bulawayo Metropolitan Province, Zimbabwe. Journal of Education and Practice, 2(6), 1–15. DOI: <a href="https://doi.org/10.7176/jep/12-6-13">https://doi.org/10.7176/jep/12-6-13</a>
- Singh, A. K., & Meena, M. K. (2022). Challenges of virtual classroom during COVID-19 pandemic: An empirical analysis of Indian higher education. International Journal of Evaluation and Research in Education, 11(1), 207–212. DOI: https://doi.org/10.11591/ijere.v11i1.21712
- Watson, J. (2006). Development and validation of an analytical method for the determination of semicarbazide in fresh egg and egg powder based on the use of liquid chromatography-tandem mass spectrometry. In Analytica Chimica Acta (Vol. 572, Issue 1). DOI: https://doi.org/10.1016/j.aca.2006.05.012

- Sharma, P. (2023). Pedagogical Practices in the Technology Intervened Indian Education System. In Indian Journal of Social Science and Literature (Vol. 3, Issue 2, pp. 1–9). DOI: https://doi.org/10.54105/ijssl.k1632.123223
- Dr. Chitra S. (2024). Evaluating the Role of STEM Education in Empowering Secondary School Students. In International Journal of Emerging Science and Engineering (Vol. 12, Issue 8, pp. 7–12). DOI: https://doi.org/10.35940/ijese.i2581.12080724
- Columbano, M. Q. (2019). Development and Validation of Modules in Basic Mathematics to Enhance Students' Mathematics Performance. In International Journal of Innovative Technology and Exploring Engineering (Vol. 8, Issue 12, pp. 4203–4207). DOI: https://doi.org/10.35940/ijitee.12684.1081219
- 14. Gurav, R. B., & Lele, M. M. (2019). Development and Validation of Nusselt Number Correlations for Mixed Convection in an Arc-Shape Cavity. In International Journal of Engineering and Advanced Technology (Vol. 9, Issue 1, pp. 526–531). DOI: https://doi.org/10.35940/ijeat.a9646.109119
- Islam, M., Mohamed, S. F., Mahmud, S. H., M, A. K. A., & Saeed, K. A. (2020). Towards A Framework for Development of Operational and Maintenance Cost Model of Highway Project in Malaysia. In International Journal of Management and Humanities (Vol. 4, Issue 5, pp. 89–95).DOI: <a href="https://doi.org/10.35940/ijmh.e0530.014520">https://doi.org/10.35940/ijmh.e0530.014520</a>

### **AUTHORS PROFILE**



Muhammad Muhammad Suleiman, MCPN, MNCS, TRCN, MABEN, MBEAVE, IAENGR, MISCA, MSc, BSc, B.Ed, IADCNS, IDIT&C, NCE, The author obtained a Nigerian Certificate in Education (N.C.E) in Business Education (Secretarial Education) in 2004 from the Federal College of Education (Technical), Bichi,

International Diploma (Information Communication Technology) and International Advanced Diploma (Computer and Networks Security) in 2012 and 2013 from Informatics Academy, Singapore. He has also earned a Bachelor of Education (Business Education) from Ahmadu Bello University, Zaria, and a Bachelor of Information Technology from the International University of East Africa, Kampala, Uganda, in 2012 and 2014, respectively; the author also obtained a Master of Science in Computer Application (Information Technology) from Lovely Professional University, Phagwara, India, in 2020. He is a professional member of several professional organisations, including the Computer Professionals (Registration Council) of Nigeria (CPN), Nigerian Computer Society (CPN), Teachers' Registration Council of Nigeria (TRCN), International Association of Engineers (IAEngr), Association of Business Educators of Nigeria (ABEN), Business Educators Association in Vocational Education (BEAVE), Indian Science Congress Association, Kolkata (ISCA). Among the hobbies of the author are ICT, education, data mining, information security, grid computing, and cloud computing. The author published more than 35 articles in many reputable journals and presented papers at more than 23 conferences and workshops, both locally and globally. The author has adequate skill in many citations, referencing, and data analysis tools, including Mendeley, SPSS, spreadsheets, LaTeX, RapidMiner, Weka, and plagiarism-minimising/fixing tools like Turnitin, Grammarly, QuillBot, and SpoilBot, etc. He is currently a head/principal lecturer in the Department of Computer Science, Federal Polytechnic Kabo, Kano State, Nigeria.

Surajo Musa Yakubu, PhD (Islamic Finance and Banking), University Utara Malaysia (UUM) 2021; MBF Masters Banking and Finance 2007; B.Sc. Economic Bayero University, Kano 1999. A professional member of the International Council of Islamic Finance Educators (ICife), I was a planning officer at the Kano State Budget and Planning Commission Department of Monitoring and Evaluation from 2001 to 2002, an ad-hoc staff member at the Kano State Board of Internal Revenue, Gyadi-Gyadi Area Office, in 2003, and I was elected as local government councillor and represented the Faragai Ward Albasu Local Government Council from 2004 to 2006. I was a principal lecturer at the Department of Banking and Finance, Kano State Polytechnic, from 2008 to 2024, and I am presently the head of the Department of Microfinance and Enterprise at the Federal Polytechnic Kabo from 2024 to the present.

**Safiyanu Sulaiman Saleh,** obtained a BSc and MSc (Business Administration) in the years 1994 and 2019 at Bayero University Kano and Open University of Nigeria, respectively, and is a PhD (Management)

scholar at Northwest University
Kano, Nigeria. I have computer
proficiency where I obtained a
certificate in Computer Appreciation
in 2005, Advanced Digital





Appreciation Programme for Tertiary Institutions (ADAPTI) Training in 2012, as well as ICDL Africa (The Digital Skills Standard) in 2021. I am a professional member of the Institute of Corporate Administration (ICAD) from 2019 to date. I taught at a secondary school between 1995 and 1997. I worked as a sales officer at Nigerian Bottling Company Public Limited Company between 1997 and 2008. Principal Lecturer at Kano State Polytechnic between 2008 and 2024 and presently a Head/Principal Lecturer in the Department of Business Administration and Management, Federal Polytechnic Kabo, Kano. I have great enthusiasm for sharing knowledge and like meeting people who will impart positively on my life to reach self-esteem but are moderately in need of materialistic wealth.

Haruna Ibrahim obtained a diploma in social administration in the year 1994 at Kano State Polytechnic, BSc Ed. (Physical and Health Education) in the year 2010 from Bayero University Kano, and is currently undergoing MSc Ed. (Physical and Health Education) at the same university. I have computer proficiency, and I obtained a certificate in the Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPTI) Training in 2015. I am a registered member of the National Association of Social Workers of Nigeria (NASOW). I am currently a lecturer I in the Department of Social Development, School of Rural Technology and Entrepreneurship Development, Rano, Kano State Polytechnic, Nigeria.

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of the Lattice Science Publication (LSP)/ journal and/ or the editor(s). The Lattice Science Publication (LSP)/ journal and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.

