
"ASSESSING THE PROBLEMS AND STATUS OF VIRTUAL CLASSROOM PROJECT (VCP): AN OPINION SURVEY OF STUDENTS, TEACHERS, PRINCIPALS, AND (D.I.E.T) LECTURERS"

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Abstract

The primary instrument for blended learning is the virtual classroom, which enables the instructor and student to communicate across time and geography. Educators should have various abilities connected with computerized innovation dominance and a comprehension of understudies' emotional and conduct states to create and execute a higher investigations course utilizing this device. They should likewise utilize proper correspondence strategies to convey course material and prepare understudies for this state of the art educating technique. To construct a hypothetical model that depicts the sorts of abilities those educators should secure to accomplish understudy cooperation in scholastic exercises; this review assesses instructive exploration writing on virtual homerooms, instructor conduct, and understudy commitment. Three categories—technical, emotive, and communicative—are used to group these skills. Also, a number of learning theories (including constructivism, connectives, and objectivism) are examined in order to create and implement a virtual classroom that is suitable for the individual learning requirements of each student. These theoretical claims are further explored via proposed empirical research lines in the future.

KEYWORDS: Virtual Classroom, Virtual Learning Environments, Student Engagement, Teacher Behaviour, Teacher-Student Relationship

1. INTRODUCTION

By the utilisation of online learning, distance learning significantly contributes to satisfying the educational needs of the twenty-first century. An adult learner, in particular, have more options because to online learning's egalitarian atmosphere of free access. Virtual classrooms might be used to provide learner-centred educational experiences that would meet their desire for convenient offers while also maximising their usage of online learning. Definitely, this will reduce the actual presence in a study hall setting. The utilization of experiential learning drew in learning, separated guidance, and the improvement of character through imaginative and compelling showing techniques and procedures are likewise suggested by the utilization of virtual study halls, which recommends a diminished dependence on retention, redundant testing, and a "one size fits all" way to deal with guidance. In doing as such, the parts of content, connection, joint effort, and assessment make the establishments whereupon the possibility of the virtual study hall is understood. Profiting from these factors, Open University Malaysia (OUM) presently serves 89,000 students throughout Malaysia via its 47 learning centres. Along with nearby understudies, OUM has concurrences with Yemen, Bahrain, the Maldives, Ghana, and Sri Lanka to execute its projects there. Thus, it is truly reasonable for the college to ponder fostering the possibility of a virtual homeroom using its own virtual learning climate, known as my VLE for grown-up students.

A part of training known as distance learning centres on utilizing innovation to give guidance to understudies who are absent genuinely "on location" to get it. The modern era will see a rise in popularity and acceptance of distance learning as a method of education. Several factors have contributed to the global acceptance and on-going expansion of distant learning. First, it is acknowledged that education has a significant role in both social and economic growth.

Activities for distance learning are tailored to the particular learning context, the subject matter, the learner's needs and objectives, the student's environmental factors, and educational innovation draws near. The use of online learning for educational purposes is pervasive and expanding quickly. Several university programmes have been created to be delivered totally online. This strategy encourages instructors to develop online versions of their courses as more schools and institutions push for it. One of the most thrilling and compensating kinds of distance learning accessible today is the internet based course. Distance training, which has been portrayed as the proper conveyance of guidance in which time and geology separate understudies and educators, incorporates online courses as a subset.

An internet learning climate is known as a virtual homeroom. Distance instruction highlights incorporate those of online courses. E-learning, Web learning, conveyed learning, arranged learning, tele-learning, virtual learning, or online learning are a portion of the terms for the conveyance strategy (WCET, 2004). Online synchronous learning resembles traditional classroom instruction in many respects. For instance, both real-world and online classrooms provide guided activities, peer and teacher interaction, and instant feedback to encourage and

improve student learning. In a setting of education, synchronous systems have four equally strong benefits, according to Collis (1996).

- Synchronous learning environments encourage distant learners to stay up with their classmates.
- Real-time tele-presence contact empowers the development of gathering cohesiveness and a sensation of local area.
- Effective synchronous feedback systems enhance group decision-making and consensus-building by providing prompt feedback.
- Pacing synchronous events promotes academic discipline and aids students in setting priorities for their study.

An teacher may use synchronous systems to determine the expertise levels of the class's participants and adjust the course content accordingly. A set time likewise adds the thought (or reality) that the educator and different understudies are giving outside impetus and are empowering students to take an interest, which might prompt more noteworthy maintenance and finishing rates.

Internet connectivity, audio and video equipment, server and client software, and other crucial elements make up VC setups. The system and necessary tools do not, however, ensure that the VC activities will provide the intended learning results. When factors like organisation, instructional strategies, and the instructor's and students' motivation are taken into account, VC activity design becomes more successful. Determining the crucial elements that play crucial roles in the design, implementation, and assessment processes of VC practises is critical.

The synchronous VC may be used for both main and auxiliary purposes. The motivation behind this exploration is to recognize the fundamental components that add to the procedure and environment of fruitful VC meetings. The setup, conduct, and assessment of VC sessions would be improved with the identification of these crucial elements. The data used came from instructors', students', and technical staff members' firsthand accounts of participating in VC sessions. With the above objective, this research makes an effort to pinpoint the crucial elements and function of the instructional strategies utilised in a successful VC session.

2. LITERATURE REVIEW

Online instruction, in-person instruction, and self-directed learning all fall under the umbrella of blended learning at OUM (MansorFadzil&LatifahAbdolLatif, 2010). The in-person instructional exercises empower understudies to speak with their educators straightforwardly in the genuine homerooms made open at OUM's learning places. To study on the web, understudies should utilize my VLE, which upgrades up close and personal connections (MansorFadzil and LatifahAbdolLatif, 2010). Independent learning is when understudies do autonomous home review. At OUM, independent learning is a critical part since understudies spend more than 70% of their review time as such. Online training is proposed to help understudies in dealing with their own review (MansorFadzil&LatifahAbdolLatif, 2010).

Technology advancements have been leveraged to promote distant education as a preferred option, particularly for adult learners. The use of virtual classrooms is one instance. A web based learning climate that incorporates the course materials is all called a virtual homeroom. The virtual study hall, as indicated by Hsu, Marques, Khalid Hamza, and Alhalabi (1999), is a framework that offers similar opportunities for the instructing and growing experience beyond the bounds of customary homeroom walls (Hsu et al., 1999). Executions of virtual study halls utilizing an internet learning mode are by and large online (Hsu et al., 1999).

Learning environments that are relevant and constructivist may now be created by students by using the advantages of the Internet thanks to the development of the virtual classroom (Gabriel, 2004). Along these lines, qualities of a genuine study hall have been changed over into a virtual homeroom with further developed qualities. A virtual study hall, rather than a customary one, is student focused. The students have the freedom to attend class whenever it is convenient for them. The virtual classroom often uses resources including online calendars, assistance manuals, grading books, exams, and quizzes, notwithstanding messages, texting, discussion channels, conversation gatherings, and document moves. It advances dynamic advancing by giving a setting the essential learning assets, opportunities for relevant discussion, and learning instruments (Yang and Liu, 2007). This empowers the understudies to partake in instructive exercises as opposed to simply perusing the materials presented in the virtual study hall (Phillips, 2005).

A virtual classroom offers understudies a live, pertinent, and intuitive climate as well as conveying course data. Likewise, educators have a similar degree of command over the educating and growing experience in a normal classroom (Yang & Liu, 2007). A virtual classroom cannot, however, be implemented in a single, rigid manner. There are several methods that may be used, as done by educators, to establish a virtual classroom. Bower (2006) implemented the virtual classroom using the Macromedia Breeze meeting platform.

Asynchronous learning networks (ALNs) were employed by Hiltz and Wellman (1997) to build the virtual classroom. On the other hand, Koppelman and Vranken (2008) implemented the virtual classroom using synchronous technology. In putting her virtual classroom into practise, Hiltz (1988) placed a strong focus on collaborative learning. Bower has looked at the possibility of using group work activities in synchronous online classroom settings (2007). Shared 3D virtual worlds might potentially be used as virtual classrooms (Bailey & Moar, 2002).

The virtual classroom, an online learning environment, includes benefits including extending the boundaries of time and space, flexibility, interaction, also, interoperability (Curran, 2002; Huang and Hu, 2000; Khalifa and Lam, 2002; Kinshuk and Yang, 2003; Wheeler, 2000). In spite of the fact that having a few advantages over traditional up close and personal learning, web based learning techniques have specific disadvantages that make learning more troublesome. Most of learning materials as of now accessible join message and illustrations, and they miss the mark on oral show by the teacher. They likewise need synchronization and match between the course materials and their clarifications, need context oriented

understanding, and without a moment to spare input and connections (Chou, 1999; Leidner&Jarvenpaa, 1995; Lim &Benbasat, 1997; Sloane, 1997; Weeler, 1998; Wulf, 2000).

Studies on the usage of asynchronous technologies, such as discussion boards, demonstrate that engagement and involvement are at least on par with classroom discussion (Hiltz, 1990; Pena-Shaff, Martin & Gay, 2001, Pena-Shaff& Nicholas, 2004). Online discussions work with cooperative learning, acknowledge the utilization of cooperative capacities, and cultivate information creation in a group environment, as per studies using content examination of electronic correspondences. In their trials, Hiltz and Wellman (1997) found that nonconcurrent banter is sufficient to empower the arrangement of a learning local area wherein the understudies build the parts of profound turn of events and mental development expected for productive learning. When Blanchette (2001) looked at how students interacted in asynchronous discussion, she discovered that these students had a higher level of cognitive involvement than their counterparts in face-to-face discussions.

An exploratory research was undertaken by Dewiyanti, Brand-Gruwel, Joachems, and Broers (2007) to get criticism from distance students about their encounters with learning in a nonconcurrent climate. The discoveries showed that students esteemed the opportunity to team up here. Despite the fact that there were examples when the understudies were disappointed with the communication cycle and level of the gathering conversation, Ocker and Yaverbaum's (1999) research shown that collaboration in a nonconcurrent learning climate is similarly pretty much as useful as in-person illustrations. This may be explained by the fact that just offering an asynchronous venue for the students' conversations, such as forums, does not always result in fruitful debates. Designing the forum itself in a manner that encourages learning is necessary.

Synchronous systems, in the eyes of the students, provide "just-in-time clarification and information" in the form of rapid feedback. When working with abstract subjects, this feedback is very beneficial. Real-time contact with teachers and other students may improve engagement in a way that traditional modes of communication cannot (Pan & Sullivan, 2005).

One more advantage of the internet based virtual homeroom is the capacity for student content, student teacher, and student connections (Hillman et al., 1994; Miltiadou and Savenye, 2003; Moore, 1989; Riel and Harasim, 1994). Whether utilized related to or in substitute of face to face guidance or nonconcurrent learning, simultaneous innovation might upgrade educating and learning procedures (Schullo et al., 2007). A few scholastics have noticed that contact in web-based courses is a huge perspective that could influence a course's prosperity or disappointment (Kearsley, 1995; Keegan, 1988; Moore, 1989; Miltiadou and Savenye, 2003; Ross, 1996; Tsui, 1996; Vrasidas and McIsaac,1999). Kearsley (1995) found that remote gaining courses benefit from having a lot of cooperation. Moore (1989) concentrated on a few types of communication in far off learning. As indicated by Tsui and Ki (1996), understudies connected all the more frequently over the semester as they became used to and more successful with using innovation.

As an alternative to the previous, dominant learning theories, connectivism was put out by Siemens (2005) and Downes (2007). It is based on these theories' shortcomings, with a particular emphasis on how poorly they took into account how technology affects learning. According to Downes (2007), connective knowledge is learning that results from interactions between many things and is significantly impacted by each person's pre-existing ideas. It is more in line with the interpretivist view of reality.

Kop & Hill (2008) assert that connectivism may close the gaps created by earlier ideas in the way that education is now practised. In particular: (1) adjusting to the unique characteristics of Millennials; (2) filtering the vast amount of information accessible; and (3) creating learning networks that have no direct connection to the official educational process.

Considering these outcomes, this examination tried to discover understudies' view of the live virtual material science homeroom utilized for distance learning at Istanbul College as well as the effect of live virtual study halls on understudies' prosperity.

3. METHODOLOGY

Prior to our empirical stages, a thorough literature assessment was conducted to establish a theoretical basis for addressing these study concerns. Research distributions regarding the matter of VC training and instructive examination from 2013 to Walk 2018 were found.

The research is conducted in two steps. Initially, a list of articles was chosen based on a Boolean search using keywords like "Virtual Learning Environment," "Virtual Classroom," "Teacher Skills," "Student Engagement," "Objectivism," "Constructivism," and "Teacher" in specialist search engines like Google Scholar or Web of Knowledge. To figure out the present status of the workmanship and to distinguish the significant standards, it was necessary to take into consideration both recent studies and foundational works. Second, the study team reviewed the whole articles or their abstracts to review their contents, only taking into consideration those that had relevance to the issue under investigation. 67 articles were selected as a consequence of the procedure to create the theoretical explanatory model.

3.1. The teacher's use of learning theories in the VC

The last objective of this examination is to consider the many learning speculations that an instructor may use and how the VC might be handled using these three various techniques, even when they are combined. It is important to keep in mind that all theories may coexist; in fact, constructivism is a component of all objectivist designs (Perkins, 1998). The next section presents the three learning theories that were taken into account for this model: objectivism, constructivism, and connectivism.

3.2. Teaching abilities needed to master the VC

The review's second goal was to identify the most essential abilities instructors need in order to comprehend and manage the VC for instructional purposes. First and foremost, technical or computer abilities are essential for working in a setting where technology mediates all interactions between students, resources, and the instructor.

In order to successfully develop synchronous and asynchronous communication, the instructor must be aware of the tools and functionality that the VC provides. Instances of these instruments and abilities incorporate visits, discussions, asset capacity and sharing, and sound and video real time. Additionally, the educator ought to be familiar with different projects like Microsoft Office or video-sharing administrations like YouTube that might be utilized related to this product. Students may experience a "digital disconnect" in the classroom if this shift in teaching methods is not implemented fast. Both instructors and students are involved in this ongoing learning process, and both may always pick up new skills to employ in the classroom (Greenhow, Robelia& Hughes, 2009). The establishments for upgrading instructors' computerized proficiency likewise incorporate their web based composing skills. Due to synchronicity and its likeness to up close and personal oral exchange, including the use of emoticons, contractions, and hyperlinks as discourse changes, composing on a PC or cell phone contrasts essentially from traditional talk (Dealer, 2007). Online entertainment are additionally great instruments for combining formal and casual discovering that are custom-made to the learning pace of every individual student. Social media will aid students in connecting with others, working together on group projects, and building the information they get so that it has a broad context in addition to being helpful for managing their personal chores (Dabbagh&Kitsantas, 2012).

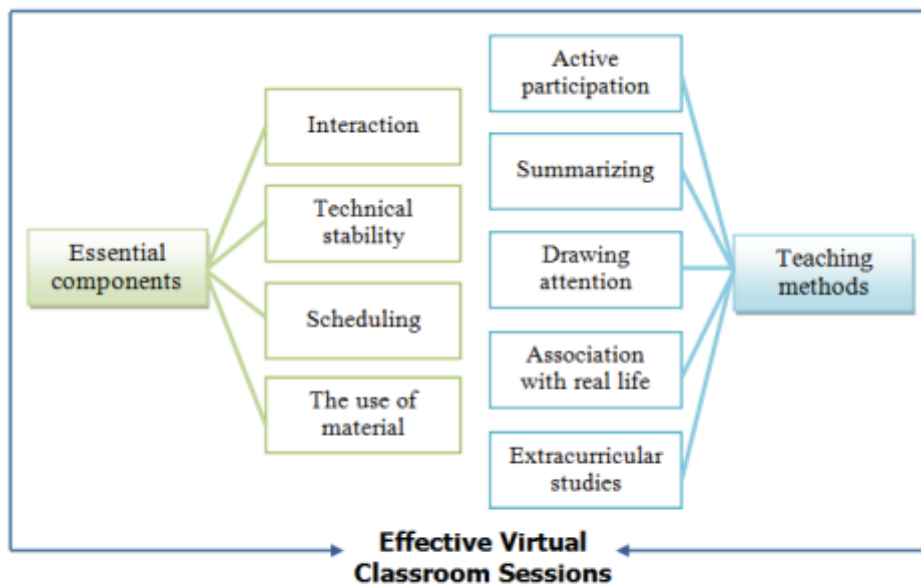


Figure: 1
Effective virtual classroom session

Second, the affective abilities that instructors will need in a digital world are very pertinent to the new student generations and their unique needs. The bulk of Millennial students they will encounter in the virtual classroom will be digital natives who are well-versed in using the internet and the many devices used to access it. Due to this connection to new technology, their psychology and social behaviour in relation to older age demographic groupings alter (Hauptfeld&Kummer, 2018).

More youthful understudies normally interface with intelligent stages and new innovation, which explains why they choose simple, engaging interfaces for learning (Giambatista, Hoover & Tribble, 2017). Since they grew up in a varied and dynamic environment, they are also receptive to variety and change in the events that surround their everyday lives (Becton, Walker & Jonas-Farmer, 2014). Also, they prioritise outcomes above processes, so putting in more time on a job does not guarantee the best results in their eyes (Anderson et al., 2017).

4. RESULTS

4.1. Development of VC publishing in the context of higher education

The creators originally expected to feature the importance that the VC and its utilization held in instructive examination, based on the systematic review. As a result, a further search for publications in Web of Science was carried out that included the terms "Virtual Classroom" and "Higher Education" in the text of the articles that were distributed somewhere in the range of 2013 and 2017. This assortment of distributions, which included 183 papers, was longer than the one used to foster the hypothetical model. Figure 1 displays the recent increase in interest in this issue while also illustrating how the number of articles resulting from this search is sorted by year of publication.

Figure 1: The subjects of "Higher Education" and "Virtual Classroom" have developed through time (2013-2017)

Year of publication	Number of publication
2013	30
2014	15
2015	40
2016	35
2017	60

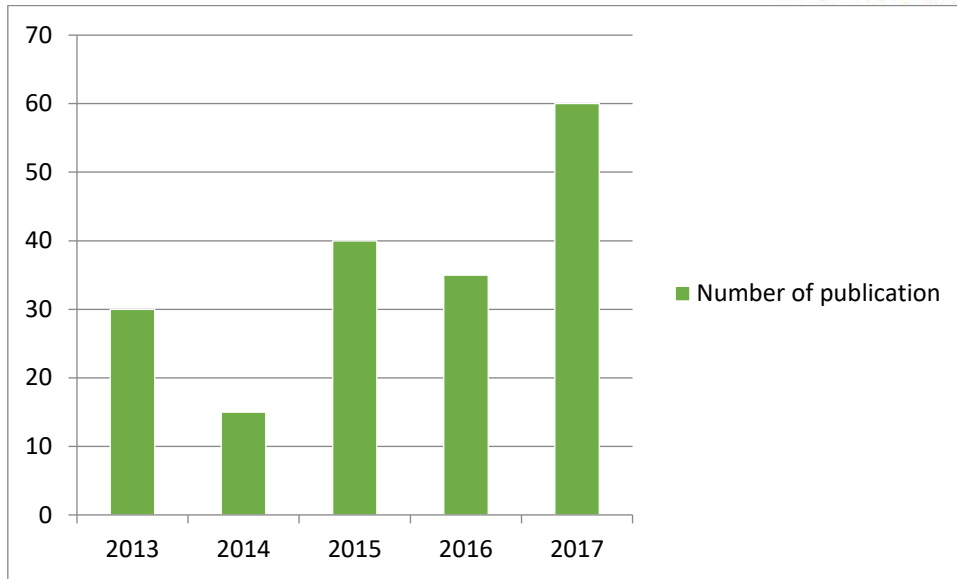


Figure 2: The subjects of "Higher Education" and "Virtual Classroom" have developed through time (2013-2017)

Also, younger kids feel better equipped than their elders to properly complete every task put forward in the classroom. This mindset, which some research in the area of social psychology have labelled as narcissistic, also makes people more receptive to remarks and judgements that contradict their preexisting notions (Hoover, 2014). Feedback must thus be continuous, appropriate, and always positive in order for VC communication to be effective (Tribble, Hoover & Giambatista, 2016). Enthusiasm for both verbal and nonverbal communication circumstances during classes is a vital attribute that Millennials value highly. Enthusiasm reawakens the student's good feelings, increases their attention span, and has a favourable impact on their cognitive engagement (Liew, Zin & Sahari, 2017).

At long last, a bunch of abilities associated with correspondence from the educator to the understudy and the obligations that the instructor is supposed to play are significant, along with specialized and profound necessities for the development and execution of a fruitful mixed advancing course. Here, two concepts are addressed. First, accepting and properly using the technology that mediates the whole process is a crucial initial step in order to create beneficial communication in a virtual setting. Second, in order for communication between teachers and students to be fluid and reciprocal, it must be based on emotional awareness and comprehension of the counterparty.

4.2. Demographics

According to Fig. 2, respondents' ages varied from 20 to 30. A number of Malaysian institutions have received 210 surveys in total. The age of the respondents is shown in Fig. 2. Most of the responders were generally thought to be young. Less than 20-year-olds made up the biggest age group (136, 64.8%). Ages 20 to 25 made up the second-largest group (73, 34.8%), followed by ages 25 to 30 (0.15%).

Table 1: Age Distribution of the Respondents

Age distribution	Percentage
Less than 20	75%
20-25	20%
20-30	5%

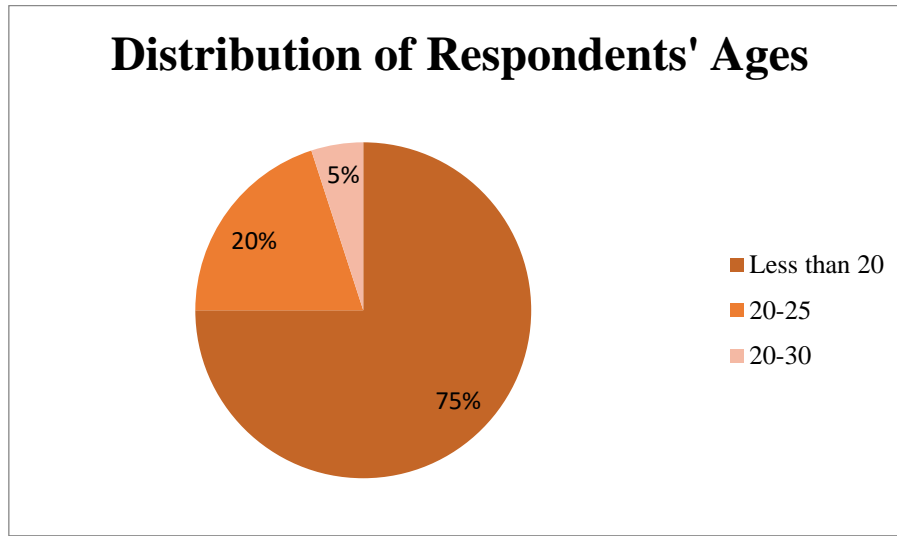


Figure 3: Distribution of Respondents' Ages

The respondents' gender breakdown is seen in Figure 3. A total of 177 out of the 210 respondents, or 84.3%, were male students, making up the bulk of the respondents. In addition, 33 respondents, or 15.7% of the total 210 respondents, were female students.

Table 3: The Respondents' Distribution by Gender

Gender distribution	Percentage
Male	85%
Female	15%

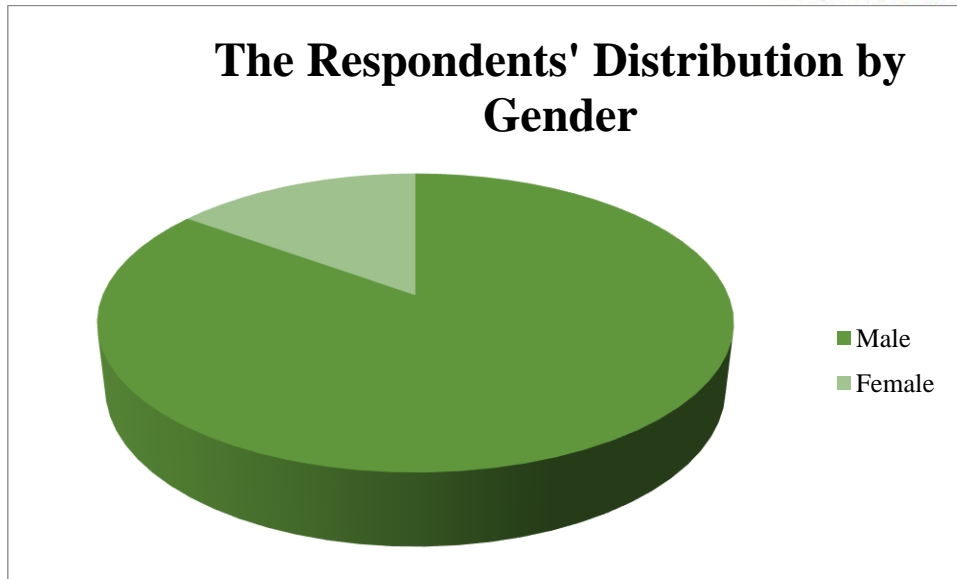


Figure 4: The Respondents' Distribution by Gender

The majority of survey participants, as shown in Fig. 4, are not first-year students. Of of 210 responders, 118 students, or 56% of them, are in their second or third year of a diploma or degree programme.

Table 4: First Year Students Distribution of the Respondents

First year students distribution	Percentage
Yes	60%
No	40%

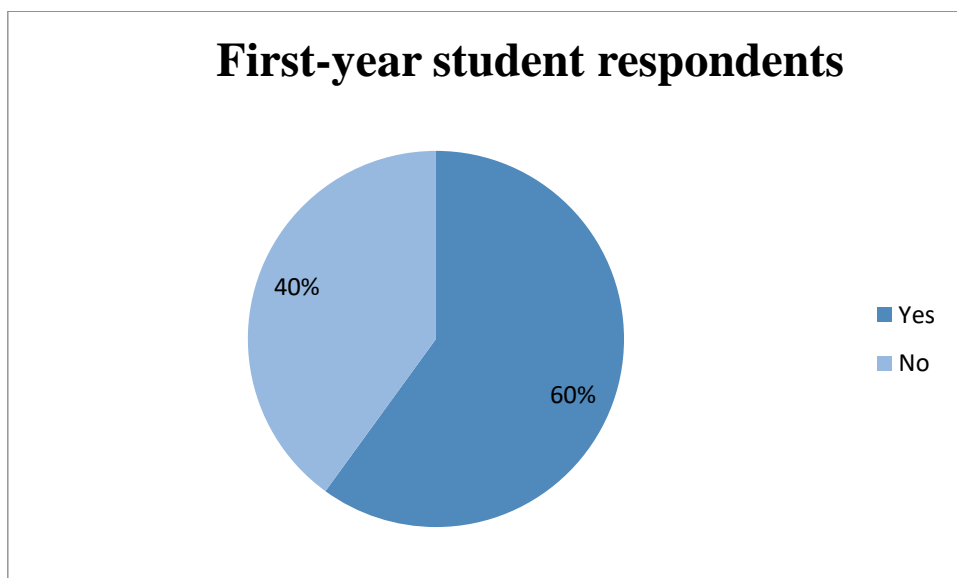


Figure 5: First-year student respondents

Likewise, the teacher will act as a mentor or facilitator during the growing experience, which is where students themselves offer and receive information. In a virtual setting, the instructor will be the primary conversation-starter or engager to help pupils understand that learning is a communal process rather than an isolated one. To guarantee inspiration and commitment for the understudies as a whole, the educator ought to set middle targets, plan ordinary gatherings, and sporadically speak with all of them. This is on the grounds that cooperation is one of the incomplete business in training today (Giambatista, Hoover, & Tribble, 2017). Indeed, the students prefer the instructor to assist them in using the materials and assignments, to validate their understanding, and to encourage their engagement (Kop, 2011). The instructor has an extra problem since in order to increase student engagement and demonstrable outcomes, new learning strategies must be used.

5. CONCLUSIONS

The discoveries of the review propose that how well a virtual study hall functions in hypothetical and practical areas has a significant impact on how students see distance learning in a virtual classroom. Students felt that virtual classrooms might impart theoretical and practical courses more effectively than conventional classrooms in this respect. Also, pupils felt that a virtual classroom made it simpler for them to learn about theoretical and practical issues. Research has shown that recorded video courses are valuable and effective for teaching scientific and multimedia topics. According to the findings of the study, it is recommended that virtual classrooms be videotaped and shared with students for review or to improve their comprehension of both theoretical and practical topics. The survey findings, however, indicate a little correlation between understudies' view of remote learning in a virtual study hall and their encounters utilizing computerized learning devices. It showed that when it comes to the delivery of virtual courses, students do not understand the value of digital learning tools like MMLS. That can be connected to their existing knowledge of utilising digital learning resources prior to the introduction of the virtual classroom. While the majority of the students had used digital learning tools in traditional classroom settings, they were less interested in remote learning in a virtual setting. It needs in-depth knowledge of how students had used ICT tools to support their learning. Positive behaviours will impact students' intentions to utilise ICT resources for learning, according to a prior research. The suggested solution is to make sure that lecturers and educators include digital learning tools to foster students' positive attitudes and encourage them to utilise the tools to increase their interest in distance learning. According to the findings, students' perceptions of remote learning in a virtual classroom are adversely correlated with the problems of that learning environment. Students thought that their lack of desire would cause them to lag behind in their online course work. Another frequent issue is time management since students are less motivated to study the material and accomplish the tasks given by lecturers as a result of the flexibility and ease of remote learning. Earlier studies emphasised the need of providing rapid, constructive comments to demonstrate the support of the lecturer to students participating in online learning. It also showed that students need professors' assistance and encouragement to help them stay focused while studying online. As a result, it is advised that instructors keep track of students' progress over time so that they may tell them about it. For

understudies to feel associated with their learning while in a virtual homeroom, lecturers are advised to maintain contact with them and provide assistance. Future studies should concentrate on the elements that affect students' virtual classroom experiences. Future research might also examine students' preferences for actual classrooms vs. virtual classrooms.

REFERENCES

1. Alt, D. (2015). Assessing the contribution of a constructivist learning environment to academic self-efficacy in higher education. *Learning Environments Research*, 18(1), 47-67.
2. Anderson, H. J., Baur, J. E., Griffith, J. A., & Buckley, M. R. (2017). What works for you may not work for (Gen) Me: Limitations of present leadership theories for the new generation. *The Leadership Quarterly*, 28(1), 245-260.
3. Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology*, 44(5), 427-445.
4. Arbaugh, J. B. (2018). One Bridge,(at Least) Two Paths: Reflections on “Virtual Classroom Characteristics and Student Satisfaction in Internet-Based MBA Courses”. *Journal of Management Education*, 42(4), 524-532.
5. Becton, J. B., Walker, H. J., & Jones-Farmer, A. (2014). Generational differences in workplace behavior. *Journal of Applied Social Psychology*, 44(3), 175-189.
6. Callahan, R. E. (1962). *Education and the cult of efficiency*. Chicago: University of Chicago Press
7. Chen, B., Chang, Y. H., Ouyang, F., & Zhou, W. (2018). Fostering student engagement in online discussion through social learning analytics. *The Internet and Higher Education*, 37(2), 21-30.
8. Collins, A., Brown, J. S., & Holum, A. (1991). Cognitive apprenticeship: Making thinking visible. *American educator*, 15(3), 6-11.
9. Cziko, G. A. (1989). Unpredictability and indeterminism in human behavior: Arguments and implications for educational research. *Educational Researcher*, 18(3), 17-25.
10. Dabbagh, N., & Kitsantas, A. (2012). Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *The Internet and higher education*, 15(1), 3-8.
11. Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education*, 57(3), 300-314.
12. De Freitas, S. I., Morgan, J., & Gibson, D. (2015). Will MOOCs transform learning and teaching in higher education? Engagement and course retention in online learning provision. *British Journal of Educational Technology*, 46(3), 455-471.
13. Downes, S. (2007). An Introduction to Connective Knowledge. In Hug, T. (Ed.), *Media, Knowledge & Education - Exploring new Spaces, Relations and Dynamics in Digital Media Ecologies* (pp.77-102). Innsbruck: Innsbruck University Press.

14. Elander, K. R. (2012). Merging paradigms: The integration of objectivist and constructivist approaches in university settings. Minneapolis: Capella University
15. Imenda, S. (2017). In Search of a Psychology of Teaching and Learning for the 21st Century. *Journal of Psychology*, 8(2), 83-94.
16. Kahu, E. R. (2013). Framing student engagement in higher education. *Studies in Higher Education*, 38(5), 758-773.
17. Kaiser, J., Retelsdorf, J., Südkamp, A., & Möller, J. (2013). Achievement and engagement: How student characteristics influence teacher judgments. *Learning and Instruction*, 28, 73-84.
18. Kaplan, A. M., & Haenlein, M. (2016). Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster. *Business Horizons*, 59(4), 441-450.
19. Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74(7), 262-273.
20. Kop, R. (2011). The challenges to connectivist learning on open online networks: Learning experiences during a massive open online course. *The International Review of Research in Open and Distributed Learning*, 12(3), 19-38.

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