



**ORIGINAL RESEARCH PAPER**

**Education**

**TECHNOLOGICAL ADVANCEMENTS AND THEIR IMPACT ON LEARNER AUTONOMY DURING THE PANDEMIC TIMES AMONG DEGREE LEVEL STUDENTS IN KERALA.**

**KEY WORDS:** Online learning, Learner autonomy, Digitisation, Covid-19

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**ABSTRACT**

Technological developments during the pandemic revolutionized the education sector and mode of learning. Degree level students were mostly dependent upon classroom lectures and prior to the pandemic situation, teacher authority was dominant among many institutions in Kerala. The prevalence of this classroom culture witnessed a radical change when students and teachers started to adopt the nuances in online classrooms. The traditional classroom culture was replaced by technologically supported digital classrooms due to the pandemic. The study aimed to identify the element of learner autonomy in the context of technological transformation and to understand the merits and demerits of technological advancements in fostering student independence in the context of the pandemic era. The methodology used for the study was qualitative in nature. The interview method was conducted among selected 25 degree-level students in Kerala to answer the research questions. The findings indicated that even though the adaptation process was difficult it has increased learner autonomy. The various factors such as internet facilities, digital skills, training, financial factors, availability, government policies etc have affected the technological adaptations

**1. INTRODUCTION**

The research in education has acknowledged the value of transformation, which helps us to rethink how appropriate and successful educational practices may be. (Leal Filho et al., 2018). The pandemic has speeded up the transformation process in the education sector. The whole world was stuck due to the outburst of coronavirus and schools, colleges and universities were closed. It opened new ways of education with the support of new technologies. Even though online education was prevalent in many countries, the Kerala education sector was basically institution and teacher-centred. Online education requires an instructional design approach that can lead to educational transformation. This is characterised by advanced flexibility, learner autonomy and extensive use of digital technologies to enhance learning outcomes. (Vlachopoulos & Makri, 2019) Learner autonomy is a term mostly used in the context of language learning whereas in this research, it is used to mention the autonomy of a student in general. Wide variety of online learning platforms and learning apps etc. caused a transformation in adapting fully online courses and increased students' engagement (Rudenko et al., 2020). Research increasingly suggests that when learners are engaged in shaping and leading strategy, they develop a greater sense of ownership over their learning (Healey et al, 2014).

Most of the higher education institutions adopted learner-centred models of learning that generated enthusiasm and equipped students with self-learning skills for the future. From access to the broadband and computers required for online education to the supportive surroundings required to focus on learning, to the lack of resources to fulfil the needs, the shift encountered many shortcomings and injustices in our education system. As a result of the lockdowns imposed in reaction to Covid-19, educators and students were forced to fully rely on online learning methods. More self-learning activities were required in the higher education industry. Educators, on the other hand, were constantly emphasising the importance of classroom lecture methods, which are not practical for some subjects which contain a vast area of topics which needs direct .Education during the pandemic possess advantages and disadvantages as well. The convenience to access educational content and creating individual pace for learning will always help students to develop self-esteem and self-awareness. Understanding one's own requirements and needs is a necessary skill to be developed among students who pursue higher education. Financial stability is a factor which affect the learning of several families. When everyone started to the new learning practices, the technical skills got fostered and that paved way to the flourishing of learner

autonomy. Lock down acted as a key factor which forced every learner to depend on their innate skills and potential to attain knowledge with the support of technology.

Learner participation is an essential element for active and engaged learning (Bloom, 1984; Chickering & Gamson, 1987; Fleming, 1987). While adopting a self-learning education the social interaction skills and interpersonal skills will also reduce and that may affect their social skills. Most of the students are textovers (People who prefer messaging instead of direct conversations) and their direct conversations with their friends and family is getting low. But direct online sessions with quality discussions can always resolve all kinds of conflicts. Learners may adopt new personas and may not feel obligated or pressured to participate in online communication when they do not see each other (Palloff & Pratt, 1999). The increased opportunities of the education system connected with technology are explored by many students who pursue the higher education system. Students who pursue arts subjects as their mainstream have lots of advantages. The availability of virtual laboratories and services can also rectify the troubles faced by students in science streams. Skilled learners can even develop their hands-on projects which can exhibit their potential.

There are numerous studies which ponder the significance of learner autonomy and digitisation. Various aspects such as Covid 19 transformation in education, effectiveness of online classrooms and tools, Future of digitisation after covid-19 etc. Examining the aspect of learner autonomy in the context of digitalisation for degree students is an important skill that demands attention. Every education system is created and centred on the learners. So the effectiveness of the transition is a factor to be considered.

**1.1 Higher education sector and technology**

Digitized organizations has to focus on both technology domain and social domain for a successful transformation (Castro Benavides et al., 2020). Integral progress of higher education is very much necessary in this era of transformation. It needs to utilize all the opportunities opened by the pandemic challenges .The transformation is a challenging task but the pandemic increased the speed of the transformative phase. Technology impacts every aspect of an educational institution's operation and business, therefore, every level of stakeholder has a vested interest in the formulation of a digital learning strategy (Jewitt, 2020) Education is a lifetime process and every learner must attain the necessary knowledge and skills to continue the

process of learning. The higher education sector in Kerala provides numerous opportunities for learners to identify and learn by analysis and observation methods in classrooms. And when the technology before Covid-19 was mostly related to the Microsoft office services such as PowerPoint Presentation, Excel, and Google Classroom etc. The pandemic familiarised learners and teachers with the unending plethora of technology which can increase learner independence and progress.

**1.2. Learner autonomy in the context of online learning**

Research increasingly suggests that when learners are engaged in shaping and leading strategy, they develop a greater sense of ownership over their learning (Healey et al, 2014).Learner autonomy can be defined as the ability of a learner to take control of their own learning, either in a classroom or independently. Humans seek to satisfy three basic psychological needs for autonomy, competence, and relatedness(Ryan & Deci, 2017).As vocabulary learning is such a vast area, encouraging learner autonomy is the most effective way of helping learners. Learner autonomy develops learner motivation and that can improve the performance of students by improving their intrinsic motivation. Every student have their own independent learning styles, and online learning allows them to follow their own thought processes and insights. Some students may require an additional guidance and they may be find it difficult to follow the self-paced learning style. The CIEL Handbook states, “Learner autonomy indicates a number of dimensions in which learners move away from dependence on the teacher and: - Take responsibility for their own learning and learn to learn; - Involve themselves in an interactive process in which they set short and long term learning objectives, reflect on and evaluate progress” (CIEL Handbook,2000, p.5).

**2. Objectives**

To identify the element of learner autonomy in the context of technological transformation among the degree students of Kerala.

To understand the merits and demerits of technological advancements on learner autonomy in the context of the pandemic era.

**3. Methodology**

This study was conducted among the Degree students in Kerala in order to answer the above-stated research questions. The research was qualitative in nature. Degree students who are studying different subjects and in different colleges of Kerala were selected for the interview. Thirty students participated and their answers and ideas helped to collect data. Semi-structured questions were prepared for the interview in order to understand learner autonomy in the context of the pandemic era and technological advancements.

**4. RESULTS AND DISCUSSION.**

Technological transformation in the covid era changed the perception of learning in the higher education sector.it is not only a technological progress, but also more transcendental. It makes changes of meaning, affects the culture of the universities and colleges in the administrative, formative activities and their evaluations, the pedagogical approaches, the teaching, research, extension and administrative processes, as well as the people immersed in it.(Castro Benavides et al., 2020). Current research identified a number of challenges faced by the degree level students while learning with the technological advancements.

Most of the students adopted the nuances in the learning process and the advancements in the online learning method. Students expressed their anxiety and sense of isolation while attending sessions inside the four walls.30% students

expressed their desire to learn in a campus ambience.5 percent of the students revealed that they pursued online extra courses to improve their employability and learning. They also mentioned that according to the educator and their technical skills and up gradation to the new system severely influence the classes. Students spend most of their time in front of the screens due to the assignments and tasks which are not planned in an effective manner.15 percent of the students mentioned that they enjoyed doing collaborative tasks and peer review process and they found it memorable. Students expressed that many of them encountered physical problems due to larger amount of screen time. A student remembered how the professor in her institution managed the sessions by employing tasks and lectures without creating hindrance for the students.75 Percent agreed that their confidence level increased and they felt that learning process is enjoyable and insightful in online learning practice. The rest of the students found that they can only perceive new ideas with the complete guidance of an experienced educator with the support of a classroom ambience.

**4.1 Merits of new learning pattern in promoting learner autonomy**

Recorded classes helped to listen to it repeatedly at any time based on the needs of the students. It saved a lot of time as there is no journey. Even the students with stage fear can also become more active. Students can find some more time for extracurricular activities and even they can have part time jobs, work from home etc. there are many options to learn different courses based on their tastes and interests. Assessment practices became more constructive and easier. Digital classrooms are disciplined and there are no other disturbances by default. There are facilities for group discussions and collaborations. Teachers are facilitators and the level of self-learning has increased. The online learning platforms were helpful for conducting revisions and extra sessions for those who find it difficult. Platforms such as google classroom and Mendely supported the teacher and student to share useful articles and notes. Peer group discussions in class can support the extroverts who always struggle to interact with others. Direct presentations in classroom was not easier for all students whereas online presentations are comfortable for many. They are able to convey their ideas in technology assisted presentations. Students are able to track their own progress and the evaluations have more privacy in online mode. Students get equal respect, opportunities and many comparisons are avoided. Self-regulation can be imbibed by following the self-learning process. Students can track their progress in digital platforms and that will gradually aid in the growth of intrinsic motivation. All these elements foster the learner autonomy in the technology assisted digital classroom.

**4.2 Demerits of new learning pattern**

Even Though digital classrooms have its own merits the students point out many defects also. The socialisation process is very limited only in digital transformation. Students are missing their face to face interaction with teachers and friends and there is no mutual relationship among them. Some students really care and pay attention in studies. Many students are passive in the class and they may not have clear understanding also. There are a lot of incidents of communication gap between teachers and students. Teachers are not able to help them in online learning unless they demand it. Continuous use of digital gadgets causes a lot of health issues and some are becoming addicted to mobile phones. The excessive use of it reduces the concentration capacity. Continuous exposure to technology creates physical problems such as musculoskeletal Problems, eye strain, and sleep deprivation for many students. Over usage of phone, decreasing relationship with teachers and students, lack of college life experiences, doubts not cleared as such, health issues like headache, eye strain etc. There are chances to develop addictions when students spent hours in front of their

screens. Those students who are not much interested in studies may get demotivated. Students will lack the valuable experiences shared by their educators and most of the online sessions fail to maintain good teacher-student relations. There may be some students who need special attention from teachers to progress, it may be lost during online sessions. Availability of proper interactions during class must be cultivated in order to rectify the issues.

**5. Limitation and Recommendations**

The study was conducted among different students from different colleges. The technical, as well as faculty support, were different. It varies from colleges and also based on the residential areas of the students. Contextual support is very important for online learners (Chen & Jang, 2010). Online learners need a variety of support from instructors as well as peers. Factors such as internet facilities, financial factors, technical support, training, government support etc are mediating factors which influence the autonomy of learners.

Lack of previous research studies which is directly related to learner autonomy and technology integrated learning during the pandemic. Future research can be done as a comparative study which involves elements from both traditional and online learning methods. Further research can be initiated by analysing students of various levels of study (undergraduate, graduate and postgraduate) and that will allow researchers to identify other crucial factors as well as effective tools and techniques that are instrumental for enhancing students' autonomy in online college classes.

**6. CONCLUSION**

Online learning has opened up rich opportunities for unlimited, life-long learning. Continuous professional development, retooling and upgrading expected from members of the knowledge society count on an individual's developed ability to learn independently (Serdyukova, 2013). The purpose of higher education is to equip learner to follow their own path in learning. As the results explained, majority of the degree level students were able to follow the self-learning models. At the same time, students preferred the lively ambience which gives them more happiness. Students adapted with the new phase of learning and when the pandemic is over, there will be a mixed approach which combines the traditional and online learning strategies. The mixing of both can satisfy all kinds of learners. Online sessions must focus on the interaction between students and collaborative learning activities during class sessions is also mandatory to increase progress among learners. Adults are intrinsically motivated by internal incentives and curiosity, rather than external rewards. Intrinsic motivation is the key to independent learning (Gagne and Deci, 2005).

An online learner, being separated from the school and instructor by space and time, gains the benefits of a more convenient self-study environment, individual learning style and pace, flexibility of scheduling, together with access to unlimited internet resources, but loses organized, mandatory, bonding face-to-face classroom activities (Serdyukov and Serdyukova, 2012, 42). There are numerous advantages and disadvantages for online learning. Availability of continuous, open and productive interactions, relationships, communication and collaborative group work in the class is an important factor to maintain enthusiasm and progress. Students can learn from each other and benefit from methods such as peer evaluation and collaborative tasks. Online learning provides opportunities for the learners to collaborate with students and educators all over the world. And the self-learning method develops a sense of independence and that will always improve their self-learning strategies for future. The AI powered learning helps the students to complete tasks in an easy and effective way.

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