

BLENDING LEARNING AND AUTONOMOUS LEARNING: THE OVERVIEW OF THE DIGITAL AGE OF LEARNING, LEARNER AND TEACHER INVOLVEMENT, AND DIGITAL SOURCES

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ABSTRACT: The primary objective of this study is to investigate the impact of blended learning on students' autonomous learning curriculum within the context of the digital era. The present investigation employed a descriptive methodology with a qualitative framework to collect and analyse data from a wide range of individuals. The study sample comprised educators from diverse educational tiers, pupils with variable scholastic backgrounds, and educational leaders possessing expertise in curriculum design and execution. The process of data analysis encompassed multiple iterative stages. The research findings indicate a robust correlation between blended learning and the enhancement of students' autonomous learning abilities. Difficulties were found in successfully integrating an autonomous learning curriculum into the blended learning setting. The research emphasised the significance of assistance from teachers, possibilities for collaboration, and availability of resources and technology in augmenting the efficacy of blended learning and autonomous learning methodologies.

Keywords: Blended Learning, Online Learning, Digital Sources.

1. INTRODUCTION

Blended learning, or hybrid learning, is a method of education that combines traditional classroom teaching with digital resources to create a cohesive educational experience[1]. It allows students to explore and engage with electronic materials at their own pace, regardless of time, place, or pace[2]. Blended learning encourages self-directed investigation and mastery of subject matter by providing access to a variety of digital resources. Students are encouraged to take charge of their own education and participate in various self-paced educational endeavors within the context of an independent study curriculum and in online setting. This type of curriculum helps students develop cognitive abilities, self-management, and independence as students. The goal of a self-paced educational program is to help students think critically, use knowledge effectively, and learn on one's own outside of a traditional classroom context.

Research has shown that blended education helps students become more self-reliant learners. Blended learning students outperformed conventional classrooms in terms of autonomy, self-assurance, and self-directed education[3]. However, blended learning has its limitations when integrating an independent learning curriculum. Chiu [4]found that certain learners need additional self-regulation abilities and struggle with managing their time well in a mixed-mode classroom.

Rasheed, Kamsin [5]also reported challenges for teachers when trying to use blended learning with an independent learning curriculum. They faced difficulties in creating curriculum-aligned, practically-oriented individual learning activities and keeping students engaged. Overall, blended learning has the potential to greatly improve students' capacity for self-

directed learning by providing more control over their learning, access to relevant materials, and opportunities to work together on projects.

2. LITERATURE REVIEW

Because of technological advancements, the way information is stored, retrieved, and disseminated has changed dramatically in the modern day [6]. As technology has progressed at a rapid pace, a new method of teaching and learning known as digital-age education has evolved. According to Khalil, Abdel Meguid [7], this method involves making better use of technological resources in the classroom in order to boost student participation, teamwork, and individualization of instruction. The use of digital technologies, such as computers, tablets, and online platforms, has grown substantially in educational environments. Learners are given unmatched access to a wealth of data and materials through these technologies, which allow them to delve into many subjects and participate in interactive exercises that cultivate abilities in problem-solving as well as critical thinking [8].

Online database servers, electronic books, and instructional websites allow students to conduct research, obtain current material, and enhance their grasp of different disciplines[9].The opportunities for interaction and cooperation in the field of education have also grown as a result of technological advancements. Discussion boards, video conferencing, and interactive document-sharing portals are all examples of tools for interaction that students actively participate in and work together on in the modern digital age [10, 11]. Students are able to cooperate on tasks, communicate thoughts, and have meaningful conversations with their classmates irrespective of

where they are located thanks to these tools that make communication easy.

Modern schooling has also improved the quality of personalised learning. Smart mentoring systems and adaptable instructional systems allow students to tailor their educational experiences to their specific requirements, interests, and preferred methods of learning [12]. Students are able to work at their own speed and concentrate on weak spots in these individualised learning settings because they receive content, instructional resources, and assessments that are specifically designed for them. In addition, in contemporary information-driven society, digitally literate skills are essential, and digital-age instruction encourages their growth. According to Chen [13] students need to have strong skills in essential data analysis, effective navigation of online resources, and the use of digital tools. Teachers may help learners become informed, engaged, and productive members of society in the age of digital media by using technology into their lessons.

Students in today's digital world must learn to learn independently so they can take charge of their own education and acquire the skills necessary for continuous learning. Students must be encouraged to learn independently in order to succeed in this digital age of constant knowledge influx and fast changes [14]. Students need to be able to self-regulate, figure out solutions, be information literate, and adapt to the ever-changing digital world; these abilities are fostered through self-directed learning. One of the most popular methods of education in the modern day is blended learning, which mixes traditional classroom instruction with internet resources.

To facilitate self-directed study, blended education offers a flexible framework. Blended learning, as stated by [15], combines resources on the internet, collaborative tasks, and possibilities for learning at their own pace. This combination enables learners to explore and master topics independently. Students can participate in autonomous education through the use of a variety of digital tools and materials made available to them through blended learning. Blended learning settings allow students more freedom in terms of when, how, and what they study, which can greatly improve their capacity for autonomous learning [16]. Blended learning's online components—including presentations with multimedia, dynamic simulations, and virtual discussions—provide students with opportunities for independent study, investigation, and evaluation [17].

Blended learning also has the potential to include tactics that encourage and support self-directed study. Students can have access to tailored resources, self-evaluation tools, and personalised educational paths through the integration of learning management systems (LMS) [18]. Teachers can help students become more self-reliant and effective learners by creating and implementing blended educational environments that provide both organised and unstructured learning opportunities. So, to succeed and

adapt in today's fast-paced environment, children must learn independently in the digital age. According to [19], blended learning has the potential to encourage self-directed investigation and mastery of subject matter by giving students access to a variety of digital resources. Blended learning and autonomous learning curricula have the ability to complement one another, allowing teachers to better prepare their students for success in the modern digital world.

Blended learning, often called hybrid learning, is a method of education that mixes traditional classroom teaching with digital resources [20]. It includes a wide variety of concepts and practices that combine various forms of technology with various forms of instruction to produce a cohesive educational experience [21]. According to Garrison and Vaughan (2008), blended learning is "the deliberate combination of traditional in-person classroom instruction with digital resources." Learning management systems (LMS), multimedia materials, discussion boards, and models are some of the online tools and resources commonly used in blended learning contexts [22]. Learners are given the opportunity to explore and engage with electronic materials at their own pace, regardless of time, place, or pace, thanks to this integration [23, 24].

Students are encouraged to take charge of their own education and participate in a variety of self-paced educational endeavours within the context of a curriculum for independent study [20]. A learner can use it to chart their own course of study, identify areas for improvement, and assess their own success [25]. Learners exhibit characteristics of a course of study such as developing cognitive abilities, self-management, and independence as students [26, 27]. The goal of this type of curriculum is to have students take an active role in their own education by helping them to determine what they need to know, where to find it, and how to apply it [28]. The capacity to think critically, use knowledge effectively, and learn on one's own outside of a traditional classroom context are all goals of a self-paced educational programme [29, 30].

Students have more time to think about and evaluate their own progress in an independent learning programme [31, 32]. Their goal should be to track their development, pinpoint where they can make changes, and reach out for help when they need it. Finally, an independent learning curriculum emphasises the development of learner flexibility and self-directed education, whereas blended learning integrates online and in-person learning aspects. A curriculum that encourages students to work independently teaches them how to manage their own learning and how to continue learning throughout their lives, while blended learning spaces use digital technology to increase adaptability and student engagement. By combining the two methods, educators may give students more control over their education by letting them learn at their own speed and in a way that is uniquely suited to them.

Several research have shown that blended education helps students become more self-reliant learners. To

begin, [33]investigated how blended learning affected students' ability to self-regulate their own learning in an academic setting. Students' levels of self-regulation were shown to be greater in the blended learning group compared to those in the traditional face-to-face instruction group. Because of the chances for self-paced learning, interactive activities, and access to online resources that blended learning presented, students exhibited more autonomy and self-directed learning behaviours.

Similarly, [34]looked at how blended instruction affected secondary school students' ability to learn independently. Blended learning students outperformed the conventional classrooms counterparts in terms of autonomy, self-assurance, and self-directed education, according to the results. Students were able to take an active role in their education, do their own research online, and work together with their classmates through blended learning, all of which promoted more autonomous study habits. Secondly, the research shows that blended education has its restrictions when it comes to integrating an independent learning curriculum. Blended learning has possibilities for fostering self-directed learning, but it is not without its share of difficulties and restrictions. [35]investigated the difficulties students have when trying to use self-regulation techniques in a mixed-mode classroom. The results showed that in order to handle the online parts of blended instruction, certain learners need additional self-regulation abilities and had trouble managing their time well. The necessity for clear guidance and assistance in cultivating abilities that allow one to manage one's learning process in a mixed learning setting was brought to light by these obstacles.

In addition, [36]looked at the challenges that teachers have when trying to use blended learning with an independent learning curriculum. Teachers had a hard time coming up with curriculum-aligned, practically-oriented individual learning activities and keeping their students engaged, according to the report. Additionally, educators voiced worries regarding the necessity of continuous monitoring and assistance to guarantee pupils' comprehension and advancement in autonomous learning assignments. Finally, by allowing students more control over their learning, more access to relevant materials, and more chances to work together on projects, blended learning has the potential to greatly improve students' capacity for self-directed learning. A number of obstacles do exist, though, including students' struggles with self-regulation and the fact that blended learning environments necessitate teachers' assistance and direction in the development of realistic autonomous learning tasks. Integrated educational environments that encourage and facilitate students' capacity for independent learning can only be designed with a firm grasp of these phenomena in mind [23].Examining the connection between integrated learning and modern students' self-directed study plans is the overarching goal of this research

3. METHODOLOGY

This study utilized a descriptive method with a qualitative approach to investigate students' views, feelings, and actions in relation to independent and blended learning. Data collection procedures included semi-structured interviews with educators, students, and administrators who have worked with blended and independent learning curricula. Interviews and document analysis were conducted, and relevant documents such as student artifacts, instructional plans, and curriculum materials were reviewed. Strategic sampling was used to gather diverse perspectives on the subject. Thematic analysis was used to organize the data collected from interviews and documents, resulting in a set of themes related to blended learning and self-directed learning. Data reduction and synthesis were performed to reduce the data set and identify important themes and subthemes.

Theoretical frameworks were reviewed to explore the significance of blended learning and students' digitally independent learning curricula. These frameworks include factors like blended learning, the structure of the independent learning curriculum, student engagement, academic performance, self-regulation of learning, technological competence, teacher role and support, learning styles and preferences, opportunities for collaborative learning, access to technology and resources, factors that motivate and engage students, and measures for assessment and feedback.Using these factors as a starting point, the study can examine how blended learning and independent learning curricula affect students' academic performance.

The research encompassed a wide range of participants, comprising educators, learners, and educational stakeholders. The semi-structured interviews were conducted with a sample size of 28 participants, consisting of 9 instructors, 16 learners, and 3 heads of schools. The educators encompassed a range of educational tiers, encompassing primary, secondary, and tertiary levels. The student body consisted of individuals with diverse educational backgrounds and varying grade levels. The educational administrators possessed expertise in the creation and execution of curricula. The participants were purposefully chosen in order to encompass a diverse array of viewpoints and real-life encounters pertaining to hybrid learning and a self-directed curriculum within the context of the digital era Table 1.

Table 1: Participants of the study

Respondents	Number	Qualification Level		
		PhD	Master	BS
Instructors	9			
Students	17	2	6	1
		Undergraduate		Graduate
Head of the institution	3	9		8

4 RESULTS AND DISCUSSION

Upon performing an analysis of the data obtained from the individuals who were part of the study, a number of significant conclusions were identified. To begin with, it was apparent that the participants acknowledged the significance of blended instruction in cultivating autonomous learning abilities in the era of digital technology. According to the educators, the integration of digital technologies and online tools into their instructional methods facilitated students' ability to access data, fostered independent learning, and cultivated their analytical skills. Likewise, learners exhibited a favourable disposition towards hybrid education, highlighting its capacity to augment their independence, time allocation, and self-control abilities. Nevertheless, the results also illuminate the difficulties and constraints associated with incorporating an autonomous educational programme into the blended educational methodology.

Several educators have expressed challenges in effectively managing the integration of technology and conventional teaching approaches, encountering difficulty in seamlessly incorporating both online and traditional educational activities. Furthermore, the students emphasised the necessity of well-defined instructions and assistance in order to efficiently navigate the extensive online resources and proficiently handle their autonomous learning responsibilities.

The results of this study emphasise the necessity of implementing practical education and professional growth initiatives for educators in order to improve their pedagogical approaches and technology competencies in the context of blended learning. In addition, it is imperative to offer students clear and direct teaching and advice regarding independent learning practices in order to enable them to fully capitalise on the advantages offered by blended learning. Hence, the study results emphasise the possibilities and difficulties of integrating an autonomous learning curriculum within the blended learning structure. By effectively tackling these obstacles and capitalising on the advantages, it is possible to provide an optimal educational setting that enables students to develop self-reliance and cultivate a lifetime commitment to learning in the era of digital technology.

3.1 Advantages of Autonomous Learning Syllabus VS Blended Learning

Figure 1 shows the participants in a semi-structured interview deliberated on the advantages of integrating an autonomous learning curriculum into blended learning. The benefits of this method were highlighted, including empowering students to assume responsibility for their learning process, enabling them to delve into subjects at their preferred speed, and fostering the growth of critical thinking and problem-solving abilities. Educators also saw the notable advantages of this methodology, including the cultivation of autonomy and accountability, the facilitation of self-directed learning, and the provision

of opportunities for students to use their acquired knowledge in practical situations.

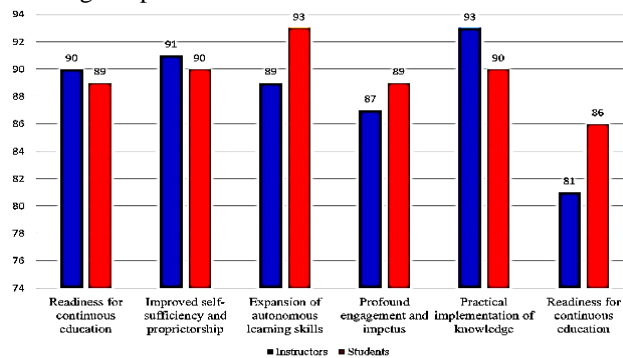


Figure 1: Autonomous Learning Syllabus VS Blended Learning.

The good influence of this strategy on the learning of pupils was also acknowledged by instructors. The students exhibited heightened self-motivation and a sincere passion for learning, as they became more actively involved and committed to their education. This technique has equipped pupils with the necessary skills for future academic endeavours, where the ability to learn independently is much esteemed.

The need of adequately educating pupils for the demands of the digital era was underscored by educators, who emphasised the need to acquire lifelong learning, adaptability, and self-reliance abilities. The researchers saw enhanced student achievements, such as heightened motivation, elevated levels of involvement, and the cultivation of crucial 21st-century competencies. The adaptability of blended learning facilitates individualized instruction and accommodates the varying needs of learners, hence promoting the academic success of each student. The integration of an independent learning curriculum inside a blended learning approach yields substantial advantages, including the potential to greatly augment student motivation, engagement, autonomy, and skill acquisition.

3.2 Challenges in Technology Integration in Blended and Online Learning

The graph in Figure 2 provides a concise overview of the difficulties and obstacles encountered while introducing an autonomous educational programme in

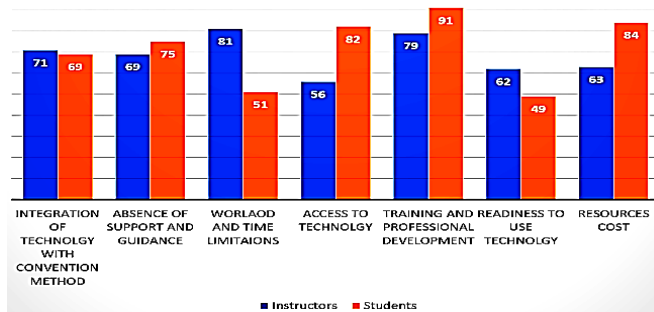


Figure 2: Autonomous Educational Program VS Blended Learning Settings.

a blended learning setting. It presents the perspectives of participants and the accompanying study findings that substantiate those perspectives. Through the integration of feedback from participants alongside study findings, the discussion offers a full comprehension of the obstacles and barriers that have been discovered.

The difficulties and hindrances associated with establishing an autonomous learning curriculum in a blended learning environment, perspectives as they articulate their opinions on these impediments: Participant 1 (The instructor): "A significant obstacle I encounter is achieving an optimal equilibrium between Technology and conventional teaching approaches." The successful implementation of an autonomous learning curriculum necessitates a careful integration of digital resources, while also safeguarding the integrity of crucial face-to-face interactions and teaching practices. Participant 2 (Student): "Occasionally, online resources can be daunting in the absence of explicit instructions and assistance".

The provision of structured instructions and support is crucial for the optimal utilisation of online resources and the successful engagement in self-directed learning endeavours. Participant 3, who is a teacher, expressed that the implementation of an independent learning curriculum can be a laborious and challenging process. It necessitates supplementary strategizing, arrangement, and evaluation, which can prove arduous considering the current workload and restricted timeframe. Participant 9, acting as the instructor, acknowledges the existence of unequal access to technology and online resources among pupils.

The presence of this inequality presents a substantial obstacle to the successful implementation of an autonomous learning curriculum since certain students may encounter limitations in their ability to actively participate in blended learning activities. Participant 5 (Student): "To effectively implement an independent learning curriculum, teachers must receive adequate training and support." Educators must possess the requisite pedagogical strategies and technical competencies to effectively manage the intricate nature of blended learning settings. The perspectives expressed by the participants shed insight into the difficulties and obstacles encountered while incorporating an autonomous learning curriculum into the blended learning methodology.

4. CONCLUSION AND RECOMMENDATION

In a nutshell the results of this study demonstrate a robust correlation between blended learning and the enhancement of students' autonomous learning abilities. Difficulties were found in successfully integrating an autonomous learning curriculum into the blended learning setting. The research emphasised the significance of assistance from teachers, possibilities for collaboration, and availability of resources and technologies in augmenting the efficacy of blended learning and autonomous learning methodologies.

These findings enhance the current conversation on education in the digital age and offer valuable guidance for educators and policymakers in developing effective teaching methods that foster students' self-directed learning abilities in the digital age. There is an aspiration for educators seeking to enhance the advantages of blended learning through the implementation of a course of study that allows students to adopt a more comprehensive perspective. These findings enhance the current conversation on education in the digital age and offer valuable guidance for teachers and administrators in developing effective teaching methods that foster students' self-directed learning abilities in the age of digital technology.

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