



GSJ: Volume 12, Issue 1, January 2024, Online: ISSN 2320-9186
www.globalscientificjournal.com

EFFECT OF BLENDED LEARNING AND TEACHING APPROACH ON THE ACADEMIC PERFORMANCE OF 3RD YEAR EARLY CHILDHOOD EDUCATION STUDENTS IN SELECTED UNIVERSITIES (2019 - 2022)

GASANA Jean Claude¹,

Professor Abdulrazaq Olayika ONIYE²

¹ University of Kigali; Kigali, Rwanda

² Master of Education Management and Administration of University of Kigali

Abstract

The purpose of this study was to assess the effect of blended learning and teaching approach on the academic performance of 3rd year Early Childhood Education students in selected Universities. The specific objectives : to find out the effect of blended learning strategies on the academic performance of 3rd year early childhood education students; to establish the indices of blended learning approaches as expressed by 3rd year Early Childhood students in UR and UoK and to determine the indices of academic performance among ECDE students in UR and UoK. This study was descriptive research design. All the respondents from the population of UR and UoK to respond to research questionnaires. The researcher used questionnaires to collect data. As far as this study is concerned, the population was comprised of employees of UR and UoK targeting 308 employees. To describe target population of a study as the point of focus from which a generalization was made regarding the research findings. Thus, sample sizes of 174 respondents. Researcher used primary and secondary data to get all information needed in this study, the quantitative data was analyzed using descriptive and inferential statistics. Results of regression analysis for the effects of blended learning and teaching approach on the academic performance of 3rd year early childhood education students in selected Universities. The general objective seeks to assess the effect of blended learning and teaching approach on the academic performance of 3rd year Early Childhood Education students in selected

Universities. It was found that the address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources” where the respondents are strongly agreed with a mean of 3.86 and standard deviation of 1.100. This indicated that the respondents are strongly agreed with the statement as indicated by the strong mean and heterogeneity of answers as indicated by the standard deviation where the respondents had different opinions of the statement. The purpose of this behavioral study was to test the effectiveness of the intervention. Studying teaching methodology and measuring UR and UoK ECDE students' perspectives on academic performance depending on the method. Quantitative and qualitative data were collected through pre- and post-tests. A journal of student and researcher perception surveys. Paired sample t-test was performed. Studying the effect of using blended learning in teaching within other teaching results and variables. It is necessary to introduce new teaching methods into the curriculum to introduce technological advances that improve students' acquisition of geographic skills. Regarding the limitations of this study, future research should examine the impact of blended learning instructional models in secondary education contexts on other programs such as science, mathematics, and English.

Keywords: blended learning and teaching approach, academic performance of 3rd year early childhood education.

Introduction

Worldwide, blended learning is a mix of traditional face-to-face and online learning. It takes place in the classroom and online, and the online component

becomes natural an extension of traditional classroom learning. Blended learning refers to “mixing different learning approaches”. Blended

learning is the effective combination of multiple learning styles techniques, techniques and delivery methods to meet specific communication, knowledge sharing and information needs (Finn & Bucci, 2016). It is suitable for all levels of education. Blended learning is online learning materials and Opportunities to interact online using traditional location-based classroom methods. It requires the presence of both the teacher and the student, and the student can control the time, place, path, or pace.

In United States of America, blended/hybrid learning with the advent of media technologies, the learning culture has experienced rapid transformations. Blended learning includes terms like virtual learning, online learning, mobile learning, etc. Blended learning is defined as a combination of face-to-face and online instruction. It combines advanced online technology with face-to-face training. It combines synchronous (direct interaction) and asynchronous (online learning activities in a learning management system). Synchronous learning takes place in real time between students and teachers. While asynchronous activity takes place anytime and anywhere between students and teachers, such as videos, presentations, articles, websites, assignments, activities in online mode (Poon, 2014). The hybrid/hybrid model reflects flexibility in which teachers act as mentors, facilitators, advisors, rather than passive educators during the COVID-19 pandemic and blended learning. Culture has changed from teachers -oriented Poon (2014) and pointed out that the digital age provides opportunities to learn and interacts outside the classroom. This allows students to independently study out of class and learn more material online. This is one of the most important events This has led the US to reinvent its approach to education, focusing on more applicable subjects and learning methods to strengthen your position in global competition (John Ninnmeier, 2010). Early progressive ideas have begun to take root. The 20th century passed by the works of John Dewey (1859-1952), but Sputnik was a wake-up call wider acceptance of the idea of helping educate students in ways that move away from self-directed learning. In the same movement as progressivism as education. United States, focusing on students rather than disciplines or courses subject matter. Focus on the student's strengths or what the student is already using helps them educate in the classroom. The famous quote from Shakespeare is aptly applied here: "What is the past is the prologue" (Shakespeare et al., 2017). Standardized testing and the need for innovation. Blended

learning is technologies that is gaining more and more space in education society in recent years and has shown promise to effectively achieve the set goals. Educate students in a way that suits their learning style. It varies depending on how the individual therapist describes it in the way that works best for them in class. Blended Learning, Russell T. Osguthorpe and Charles R. Graham (2018). Blended learning combines face-to-face and distance delivery systems include the internet, but it does more than just display website pages class screen. It all comes back to teaching methods pedagogy that adapts to the unique needs of students those who use blended learning environments seek to maximize the benefits of face-to-face learning in-person and online methods, use what works best on the internet and use the class's time.

In African countries like Nigeria, South Africa and Senegal, there are several studies that show the effectiveness of blended learning environments, French (2015) "Teaching Blended Learning Environments is a well-structured that will appeal to many readers change and rethink the teaching tools and practices to be used in teaching university students" (French, 2015). Students' perceptions of a blended learning environment should be taken into account. This should also be taken into account when planning such studies. In their study, Gyamfi & Gyaase (2015) found that when considering "content quality, learning, level of communication and participation" (Gyamfi & Gyaase, 2015), students' perceptions of the blended learning environment are positive for academic performance of 3rd year early childhood education students. Although their research is positive that blended learning improves student learning environment, the researchers caution that more research should be done in the arena. "Regardless of how teachers and developers compare, these studies Blended learning has agreed student satisfaction is successful implementation within academic performance of 3rd year early childhood education students. The student satisfaction is designed to measure satisfaction with teaching methods and learning outcomes in classrooms using blended learning environments.

In Kenya as one of the East Africa countries, blended learning is one of the most modern learning methods that help solve knowledge problems explosive problems, increasing educational needs and overcrowding when used in classrooms distance learning, expanding access to education by providing training, education and rehabilitate workers without leaving their jobs and educate housewives to help increase literacy assess and

prevent illiteracy; blended learning has significantly improved learning efficiency and reduced the time environment required for training reduces the cost of education, allows students to study in a place of their choice. A time and place that provides live interviews and online discussions, providing up-to-date information as needed. The student needs and is provided with simulations, animations, practical events and exercises, as well as practical applications (Al-Shunnaq and Bani Domi, 2018). Blended learning is one of the modern educational trends and also one of the new trends in education. A teacher in the twenty-first century; it can be described as a pedagogical method where there are several means Used to transfer knowledge and experience to students to achieve optimal learning outcomes (Freihat, 2004), and thus the model combines the advantages of e-learning with the advantages of classroom learning; This education is based on the integration of traditional and e-learning (Al-Rimawi, 2016).

There are different definitions of blended learning (Ismail, 2019) defines it as employment technological innovations that integrate face-to-face and distance education provides face-to-face interaction between the trainer as a teacher or mentor and the learner there are no special electronic tools or special quality with these upgrades availability of learning resources related to content and learning activities. Hassan (2016) argues that it is a learning designed to help learners achieve targeted learning outcomes traditional forms of education and e-learning and their types in and out of the classroom. (Salamah, 2015) pointed out some features and characteristics of blended learning.

In Rwanda, there is direct communication to increase interaction between students and teachers, (Teachers) and students, between students, students and content, reducing teaching costs strengthen humanitarian aspects and social relations by increasing the share of tuition costs between the student and the teacher, meeting the needs of each student according to the abilities of each student, integrating the structure and the final evaluation system, moving from the collective learning model to learning. Focus on students and make optimal use of physical and virtual materials. also blended learning promote the use of technological achievements in design, implementation and use, support traditional teaching methods used by faculty and staff in appropriate interactive instruction that provides training participants win by using minimal effort and resources in the work or learning environment

maximum results and ultimately the opportunity for an individual to continuously apply skills become a habit with practice (Wallet & Kimenyi, 2019).

According to Wallet and Kimenyi (2019), there are several models of blended learning, which are: self-learning through e-mails, forums and face-to-face meetings; integral this type of therapy is like a chemical reaction where the interaction with the teacher is the driving force to achieve the desired response to learning. Incorporating multiple events and means to encourage specific behaviors, this trend-setting learning model requires interaction between students and a risk-free environment. An efficiency-oriented learning model that combines performance-enhancing tools with knowledge management and consulting sources to develop specific capabilities to acquire and transferring tacit knowledge requires students to work with specialized experts and implementing blended learning, a set of basic rules was taken into account (Al-Rimawi, 2014).

Rwandan universities have established a Teacher Management Information System (TMIS) to improve teacher management, properly validate and control teacher information, and promote capacity development. However, the system faces some problems. Although teacher management information systems are designed to be accessible to all educational stakeholders, the reality is quite different. Blended learning is best defined as the “combination of face-to-face instruction as well as distance learning” (Kazu & Demirkol, 2014). It's a way of implementing this delivery method in the classroom For teachers with comfortable technology, they are relatively simple to perform in practice A knowledgeable person. Educational Manager and The policies set around education have joined students and teachers. Find the way Give both groups opportunities to learn and succeed, whatever that success may be Education may seem like an integral part of quality education. Blended learning in social studies Classes should be defined individually and identified for different teachers Tailored to their learning style, giving them ongoing opportunities ask and discover everywhere; student engagement and success should be tracked in this way. Based on the aforementioned, the researcher thought about looking into the academic performance of third-year early childhood education students, especially with interest in various modules using blended learning approach (BLA) at Universities of Rwanda and Kigali.

Many teachers do not have access to teacher management information systems due to limited internet connectivity, lack of access to ICT devices

and lack of ICT skills (Ndayambaje & Ngendahayo, 2014). Improving the digital skills of teachers is part of the University of Rwanda's ambitious plan to become a middle-income, knowledge-based economy. However, reports indicate that there is a severe shortage of teachers trained to use ICT in the teaching process. Many teachers are unaware of the opportunities for their professional development using existing digital materials and technologies. In Rwandan universities, including universities, technical and vocational education institutions, teachers do not have appropriate digital content for classrooms. Rwanda needs to increase investment in the planning and delivery of continuing professional development (CPD) and increase access to technology and digital content for teaching and learning in order for students to succeed. Continuous professional development will help to expand good practice in digital skills and support teachers' professional development (Ndayambaje & Ngendahayo, 2014).

Statement of the Problem

Blended learning is one of the trends in modern education and one of the new trends teacher are used during their teaching program in the twenty-first century; it can be described as a pedagogical method where there is more than one means used to transfer knowledge and experience to students to achieve the best learning outcomes (Freihat, 2014); therefore, this model combines the advantages of e-learning with the advantages of classroom learning; this education is based on the integration of traditional learning and e-learning (Al-Rimawi, 2014). In my experience, teacher-centered classrooms have a very clear hierarchy of order and a step-by-step approach to learning, which is a result of Bagley's beliefs. The instructors of such courses usually have many years of teaching experience and are used to traditional teaching methods. In discussions with students assigned to these courses and based on observations of these courses, it is clear that students can perform well in these courses, but some students indicated that they found them boring and did not achieve what they thought they would have if given. These courses achievable level options. Creativity is sometimes stifled, there is a lack of student engagement, students do not gain a depth of knowledge that they would not have if they had the opportunity to participate in the learning themselves. Some teachers try to change their aggressive teaching style because they know that their students respond well to their lessons. Rwanda is striving to build a knowledge-based economy, with particular emphasis on science and

technology as an engine of development. One of the national priorities in the education system in Rwanda is to ensure that education quality continues to improve through closer integration of curriculum development, quality assurance and assessment, improved supply of learning materials, particularly text books, and improved teaching and learning strategies. There is a need for an alternative instructional strategy that will promote meaningful learning this research will contribute in light of the third-year early childhood education students' subpar academic performance. According to the MINEDUC and UNICEF Rwanda (2019) school dropout report, 13.4% of 12-year-old boys dropped out of school at least once during their schooling, compared to 5.2% of 12-year-old girls. Knowledge should derive from "a focus on basic skills and academic subjects, mastery concepts and principles of the subject" (Schramm-Pate, 2014). John Dewey's views and progressive educational methods, essentialist theory, efforts to place teachers at the center of the educational environment and purposeful learning about blended learning and teaching methods to help students learn essential skills. It is observed that there are poor blended learning strategies and blended learning approaches in teaching program affect negatively academic performance of 3rd year early childhood education. There is a way to effectively plan lessons using technology, carefully engage teachers as an integral part of instruction, and help students succeed in academic achievement. The impact was looked into as the primary goal of this study with investigating the effects of blended learning and teaching approach on the academic performance of 3rd year early childhood education students in Rwanda and Universities of Rwanda and Kigali was used as reference.

Research objectives

The objective of the study was categorized as general and specific objectives as shown below:

General objective

The general objective of this study is to assess the effects of blended learning and teaching approach and academic performance of 3rd year early childhood education students in Rwanda.

Specific objectives

- i. To find out the effect of blended learning strategies on the academic performance of 3rd year early childhood education students;
- ii. To establish the indices of blended learning approaches as expressed by 3rd year Early Childhood students in UR and UoK;
- iii. To determine the indices of academic performance among ECDE students in UR and UoK.

Research hypotheses

H0 : There is no significant effect of blended learning strategies on academic performance of 3rd year early childhood education students.

H1 : Blended learning approaches has not effect on academic performance of 3rd year early childhood education students.

H1 : Indices of academic performance affects academic performance of 3rd year early childhood education students.

Review of Literature

Conceptual Review

Blended learning strategies

Although mixed-style discussions typically use a pedagogical approach, students learn from everything Electronic and online media as well as traditional face-to-face teaching. It can also be called blended learning, mixed mode learning. "Blended learning is a new type of education prepared for a specific group by combining the positive aspects of different teaching methods" (Kazu & Demirkol, 2014). Combine different aspects of the ideology of the course and put into practice the most valuable parts of each ideology. Although with different methods and different goals, each ideology has its roots in the education of children, so different methods can be used in the education of children. Blended learning is one such approach. "The lack of an accepted definition of the concept of blended learning has troubled teachers Understand blended learning differently, then design courses based on your own understanding of the concepts" (Allammary et al., 2014). Because the curriculum does not always have a universally accepted definition of blended learning, teachers have a unique opportunity to choose their role and design their curriculum in a way that they believe will best educate the children they teach.

This word means different things to different people; however, many researchers believe that the lack of a universal definition may actually be part of the concept's strength" (Allammary et al., 2014). Regardless of the prescribed roles discussed in the shared ideology, teachers, their schools or school systems have a great deal of discretion to make blended learning what they want it to be. "It is clear that the concept of blended learning is defined either in foreign ways that include broad learning models, or in very specific ways that can limit the enormous potential of the concept" (Allammary et al., 2014), p. However, any definition of blended learning seems to have "a common core component which is the integration of different pedagogical approaches" (Allammary et al., 2014) in a blended learning environment, the teacher's role may or may not be a combination of the four ideologies. Teachers can impart knowledge and at the same time empower students to create and shape their own experiences within the course.

Teachers can be evaluators and at the same time serve as role models for students to become more socially aware individuals. Progressivism and essentialism can thrive in a blended learning environment for the following purposes. In this study, Kazu and Demirkol (2014) describe blended learning as "a combination of face-to-face and distance learning. Since this term can also be called "blended learning and blended learning" (Kazu & Demirkol, 2014), clarity is important when describing blended learning in this context. Since this is a very simple definition, it can be shaped by the level of blended learning or interaction that teachers implement in their classrooms. The rationale for using this approach will be discussed in a later article, but blended learning has grown in demand and popularity over the past decade and has become a widespread educational phenomenon. It is becoming increasingly clear that blended learning can overcome the various limitations associated with online learning and face-to-face teaching.

According to Wang (2017) interaction in online learning occurs when students interact with course content as well as with teachers and peers. Well-designed interactive learning tasks facilitate student interaction with teachers and peers and increase student engagement in course content. Students benefit from giving explanations rather than receiving them. In this form of interaction, students are encouraged to ask a question about a problem in order to find an explanation for their question. "Compared to passive learning, this type of active learning allows students to think at a higher level" (Wang, 2017). In addition, Wang noted that assessment, including assessment of cooperative learning tasks, was positively correlated with student learning. Additionally, Jackson, Jones, and Rodriguez (2013) found that teacher responsiveness, clear expectations, and content availability are important factors in improving student learning and satisfaction. In general, Carr (2018); Jung, Choi, Lim, and Leem (2018) agree that students' interactions with teachers and peers play an important role in students' academic success and plays the main role.

The authors emphasize the importance of the level and quality of student engagement and collaboration with peers and teachers. Interactive

webinars have been discussed as an effective way to engage students in course content. However, online-only lecture slides are useful in traditional classrooms, but discourage participation and interaction (Grosso, Teresa, & Grosso, 2012). To help students engage with online lectures, instructors need to be both content experts who guide students in their learning and facilitators of the learning process. Reisseter, Lorelee, and Korsuka (2017) note that online participant's value "expert voices" (p. 13). Some online learners believe that a knowledgeable instructor is particularly effective "because it brings focused content that may be lacking in traditional settings" (p. 13). 65. Successful promotion included the inclusion of questions in online lectures, which proved to be an effective way to make the lectures interactive and increase student engagement with the course content. "Since the importance of asking questions in the classroom is well documented, this should also apply to online courses" (Grosso, Teresa, & Grosso, 2012).

Along with interactive lectures, online discussions and various assessment methods used to ensure the quality of the learning process, group work has been recognized as one of the most important pedagogical tools in the online environment Roberts & McKinna Ni, (2017). Morgan, Bruce, and Williams (2014) discuss the benefits and challenges of group projects in online courses and emphasize that teachers help by "setting ground rules, providing information about group work skills and roles, supporting effective communication, and promoting social development. Carefully considered and implemented recommendations by the authors can be a valuable solution to the challenges of group work in an online learning environment. In order for online group work to be productive, it is also important to recognize the importance of professional development for teachers who implement such instructional strategies in their teaching. Teachers can benefit from training opportunities that focus not only on the technical components of online learning (Glowa, 2019), but also on effective content development and skill development that help manage the "unique social context of the online classroom environment" (Kanuka, Heller & Jagdev, 2018).

Face-to-face instruction/learning

Most teachers prefer face-to-face teaching in higher education institutions. This has been a 'tried and true' teaching method for decades and they feel comfortable and confident with this 'teaching method'. Typically, a face-to-face approach for large groups of students consists of a 1- to 2-hour lecture followed by a 1-hour small group session. In some

cases, two to three hours of face-to-face instruction is possible when the student population is small. Teaching reading was one of those lessons, the classes, which typically consist of 10 to 15 students, are designed and developed by a senior scholar (for the purposes of this chapter, we will call him Dr. Brock) and aim to explore a variety of theories and practices related to the teaching of reading.

The group of students, mostly made up of experienced teachers, met "at the same time, in the same place" for three hours each week for 13 weeks (Redmond 2018). Students in the class received high scores every semester for five years. Course of approximately 3 hours: fixed weekly lectures and discussion of the topics in three groups New introduction in the form of "mini" lectures by the teacher Joint workshops in small groups focused on the discussion and application of new ideas shared with the whole group. "Combining" ideas, results and assignments, revising next week's assignments, clarifying assessments (if necessary) and solving other problems. Essential to the effectiveness of the class were the 13 weeks of cumulative assessment experiences/assignments. Each week, students were required to read and evaluate prescribed articles (intersession readings) and attempt and evaluate specific learning experiences (intersession assignments). They were asked to summarize each in a one-page format, relating their current and future professional experiences. Students always used reflection pages during the weekly exchanges and discussions that started the course. They submitted weekly responses for review every few weeks. Points are added to the final score for Assessments 1 and 2, respectively. The summative assessment requires students to review all responses to both tasks, reread them if necessary, and write a rationale and lesson plan for effective learning topics.

Overall, students and teachers rated this topic as very effective for further changes in teaching and learning pedagogy. The students learned a lot from each other and from their teachers. They can discuss current issues as they arise and inform each other about new research and learning experiences. Teachers can insert important media articles and newly published articles. As the weeks passed, the students became a "community of learners" (Barth, 2010), sharing their experiences of teaching and learning in the classroom, as well as personal experiences from home and family life.

Each class had a variety of learning situations and experiences. For example, one classroom had three teachers with many years of experience teaching children in grades one through six, two high school science teachers, two English specialist teachers,

and one third-year teacher. I have been a first grade teacher, local prison teacher and taught vocational education (facilities). These diverse experiences led to rich discussions and many events. When this small but successful class of in-person graduates had to go "online" using mobile technology, it created great fear and uncertainty for Dr. George Badger. There were two main reasons for this decision. First of all, doctor. Brock said the college can no longer maintain even a dozen classes, and secondly, he hopes the online format will attract domestic and international graduate students who want to enroll in asynchronous courses. In particular, a small private university in Minnesota, USA, has shown great interest in offering an online version of this course for its newly developed PhD program.

This is the beginning of this teacher test, how to transition a 13-week, 3-hour face-to-face class to an online format without losing opportunities for teaching and learning: interaction, reflection, sharing, and most importantly, collaboration. There was no shortage of research to guide that movement back then, and no shortage of advanced learning platforms today. But I just finished researching what effective professional development looks like for teachers. This research has developed a foundational theory of pedagogy that leads to active and deep professional learning. He believed that this theory could be used as a framework to guide and support the transition of face-to-face courses to online spaces. Below is a detailed explanation of this grounded theory and how it "works". Additionally, the principles of this theory are explained by Dr. D. Brock transformed a synchronous face-to-face classroom into an effective asynchronous online learning experience. Current research is juxtaposed with commentary to answer many of the questions that have arisen during this process of change. Finally, key principles that provide a sound pedagogical perspective for the development of online and mobile learning are highlighted.

Digital or online instruction/learning

Online classes offer an exciting opportunity to expand the learning environment for different student groups. As the demand for online teaching increases, university professors may be asked to consider online delivery. Online teaching shares many similarities with face-to-face teaching, but it also has a unique set of skills and requirements. Both approaches are similar in content except for pace and delivery (Gudivada, 2019).. Professors must use only Course Management System (CMS) software to prepare and deliver their courses. With the software, teachers can be trained right from the start. For online learning to be successful, teachers are advised to adhere to the following seven

principles: encourage student participation, encourage student collaboration, encourage active learning, provide timely feedback, emphasize on-task time, communicate with high expectations, respect diverse talents and ways of to learn. Seven principles could be added to these principles, which address individual differences, motivate students, avoid information overload, create real situations, promote social interaction, provide practical activities and stimulate students' reflections (Gudivada, 2019).

The learning process is complex and involves hearing, sight and touch. The traditional way of studying on campus is not for everyone. On line learning is available for those who want to earn a degree while working or other commitments. Online learning is known as a form of distance learning, along with web-based learning, e-learning, and digital learning. It is delivered via the Internet and uses web-based materials and activities. Students need to be technologically savvy to use the technological tools they need. In the digital age, students seem to be more independent, disciplined, and proficient, which is perfect for the online environment. Studying online at your own pace contributes to a high-quality college degree. Whether offered on campus or online, each course must meet the same rigorous standards and rigorous academic standards. The only difference is the way the courses are delivered. Generally, students must have access to a computer system with a high-speed Internet connection. They may also need electronic academic support services such as registration, financial aid, library, tutoring and advising (Bollger and Wasilik, 2018).

Academic performance

Performance is defined as an observable or measurable behavior of a person or animal in a specific (usually experimental) setting (Simpson and Weiner, 2019). This means that performance measures aspects of behavior that can be observed at a given point in time. Performance tests are run to determine performance. Singer (2019) defined performance testing as a type of mental testing in which subjects are asked to do something instead of saying something. A skill test is a type of test that examines the ability to handle things rather than symbols (Drever, 2018). From an educational research perspective, a student's academic performance can be viewed as the observable and measurable behavior of a student in a given situation. For example, a student's academic performance in the social sciences includes observable and measurable behavior of the student at any point during the course. In the social

sciences, a student's academic performance consists of scores at specific points in time on tests prepared by the teacher. Academic performance can thus be equated with observed behavior, or the expectation of achieving a particular statement in research or a statement of educational intent. A student's academic performance is made up of teacher-written tests, first semester exams, and midterm exam results.

The impact of online learning on student performance also varies from university to university. Emphasizing that the shift to online platforms, which require a more hands-on approach, is expected to have less impact on social sciences and humanities courses than on university courses in engineering, science and medicine, and pointed out that virtual laboratories are essential in the STEM field. Online learning environment the curriculum does not adequately prepare students for the correct use of the tool. One of the biggest problems with online education is access to online lectures (Drever, 2018).

The success of an academic institution's online learning program depends on the availability of appropriate hardware, such as a personal computer or smartphone, and an active Internet connection. In developed countries, such as the USA, Georgia, 79.3% of households have an active Internet connection. According to a survey of universities using Google Suite Education and eLearning management systems to deliver online courses. In developing countries such as India, a significant proportion of students accessing online courses use smartphones. However, students have had problems trying to access online lectures from remote locations where connectivity issues are still common. In India, many platforms are used for online learning, such as YouTube, Zoom and Google Meet, facilitated through messaging applications such as WhatsApp, Skype, e-Learning Management System and Google Classroom. But online learning offers some options in formats that are more flexible, interactive and allow students to learn at their own pace. The best chance, however, is that these students still have the opportunity to continue their studies. Educational institutions may choose to offer students opportunities that at least partially allow them to fulfill continuing education obligations. Greater investment in online learning also provides more opportunities for academic institutions (Drever, 2018).

Theoretical Review

Learning and performance theories

Social cognitive theory distinguishes between new learning and the performance of previously learned

behavior. Unlike conditioning theory, which posits that learning involves responding to stimuli or associating responses with consequences, social cognitive theory posits that learning and performance are separate processes. While a lot of learning happens by doing, we also learn a lot by observing. Whether we implement what we learn depends on factors such as our motivation, interest, motivation to perform, perceived needs, physical condition, social pressure, and the type of competitive activity. Reinforcement or the belief that reinforcement is coming, affects performance, not learning. Years ago, Tolman and Honzik (2010) experimentally demonstrated differences in academic achievement. These researchers studied latent learning, that is, observational learning in the absence of goals or reinforcement. Two groups of rats were allowed to walk the maze for 10 trials. One group always ate in the maze and the other never ate.

The mice that were fed the maze quickly reduced their maze time and number of errors, while the other group's time and errors remained high. From trial 11, some rats in the nonreinforced group received the maze challenge. Their error time and number quickly dropped to the level of the fed group all the time; operation times and error rates of unreinforced rats did not change. Rats in the unreinforced group learned the features of the maze by walking around it without reinforcement. When food is introduced, potential learning quickly becomes apparent. Some school activities (revision sessions) involve practicing previously learned skills, but a lot of time is spent studying. By observing role models from teachers and peers, students gain knowledge that they may not be able to demonstrate in class. For example, students may learn in school that skimming is a useful procedure for getting the gist of a written text, and they may learn strategies for skimming, but may not use this knowledge to improve their learning until they have read the text at home.

Pavlov & Skinner's Conditioning Theories

The behaviorist approach is based on the basic idea that reinforced behavior can continue, while punishing behavior can end at some point (Rostami & Khadjooi, 2010). Although this approach was very popular at the beginning of the last century and has now been overshadowed by new theories, models and methods, it is still very useful in shaping student behavior in the classroom. Many competency-based courses consistently produce reasonable and repeatable results (Rostami & Khadjooi, 2010). Pavlov's classical conditioning and Skinner's operant conditioning strongly influenced educational psychology in programmed learning.

Pavlov discovered by experimenting with dogs, while Skinner experimented with pigeons to determine operant conditioning (Schunk, 2012). Operant conditioning can be easily implemented in the classroom by simply praising or not praising certain students after completing a specific task in order to improve performance in the upcoming activity. If students e.g. regularly attend classes, teachers can waive final exams, which will significantly improve student participation in classes. In contrast, classical constraints have little meaning in modern classroom practice.

It can be used in conjunction with operant conditioning. For example, if the teacher is highly interactive and encouraging to the students, the students will associate this pleasant and comfortable environment with that particular classroom and will be more likely to attend that particular lesson. Cognitivism is a psychology that aims to "learn to learn" (Anderson, 2004).

Unlike behaviorism, learning focuses on the cognitive skills of the human mind rather than the environment.

The goal is to understand the structure and process of self-learning. Osbel believes that meaningful knowledge is the product of the integration of new information and old information. Learning depends on inherent concepts rather than environmental influences (Torre et al., 2016). Critical thinking through reflection plays a central role in the cognitive approach. Concept mapping is one of the most common practical applications of cognitivism.

The Learning Theory Concept Map in this article represents this task. Bandura's Social Learning Theory: Bandura's social learning theory is based on reflection on observed behavior and modeling (Bandura, 2017). The theory is derived from the components attention, retention, reproduction and motivation. According to the theory, learning occurs through a constant interaction between behavior, personal factors, and the environment. This contrasts with earlier views based on behaviorism, where cognition played no role in the learning process. Bandura also developed the concept of self-efficacy, which is a judgment of one's ability to perform tasks based on specific circumstances. The classic Bubo Doll experiment is the origin of this theory (Bandura & Schunk, 2011). Social modeling can be used effectively in medical schools. When students see positive consequences for certain actions or behaviors, they are more likely to repeat them. When students see negative consequences for a behavior or action, they are less likely to repeat that action. New concepts easily attract students' attention. For example, students are more likely to imitate successful surgeons or follow

popular trends. Students using this theory can improve self-efficacy through constructive feedback.

Technology Acceptance Theory

Davis, Bagozzi, and Warshaw (2019) propose blended learning and teaching approach to explain the conceptual model that users for academic performance' intention or acceptance degree towards information system or new technology that can be used in academic teaching program. Blended learning and teaching approach is constructed on the foundations of perceived usefulness and perceived ease for online and physical learning. Perceived usefulness refers to individual belief to improve the degree of academic performance through using particular new technology and information system. Perceived ease of use indicates how easy an individual learns how new technology or information system can impacted on academic performance (Gefen J. and T. Glaessner, 2013). The model places more emphasis on how perceived ease of use would positively affect academic performance. Exogenous variables such as environment are also the antecedent that induces perceived usefulness and perceived ease of use. Thus, blended learning and teaching approach is based on both important perceptive factors as perceived usefulness and perceived ease of use.

Blended learning and teaching approach is widely applied on the research of information technology. Liu and Arnett (2016) examined the significant variables to build a successful website based on blended learning and teaching approach. Gefen J. and T. Glaessner. (2013) combined blended learning and teaching approach and rust to propose an integrated model for explaining online teaching behavior. Pavlou (2015) proposes acceptance model of online teaching by separating and applying experiment designs and survey. Follow-up studies such as Horst, Kuttschreuter and Guttering (2017) discusses whether or not the government of Netherlands should teach the students with online platforms like other countries do. The study integrates blended learning and teaching approach factors, the experiences of the public school, perceived risk and faith. The empirical results show that the principle of e-learning is that people fully trust that model for academic performance and that they highly identify with information technology. As a result of the empirical study, scholars find that blended learning and teaching approach does not only apply to examine new information technology behavior in teaching program, but also ensures that blended learning and teaching approach is suitable for the academic performance.

Research Gaps

The purpose of this study is to review the literature. Discusses the implications, rationale, perspectives, and approaches of theory, historical perspective, diversity, and social justice for improving student achievement in courses where faculty implement new and innovative ways of delivering materials to students, namely: blended learning. The purpose of the research conducted in this action research was to understand the impact of blended learning on student achievement. Taylor and their work on essentialism, progressivism, student-centered ideology, social Efficiency thinking, reconstruction thinking, academic thinking of researchers. The discussion outlines the basics of the blended learning approach. The ideas generated by their work can help teachers and researchers find the best way and lay a solid foundation for practice and method in educating children. Blended learning environments are possible if they are properly implemented on their own terms. Discussions of social justice and diversity by individual researchers and writers are said to show that students come from different countries background and must be recognized when considering how best to solve the problem educate all students in the class. Several

Materials and Methods

The research was statistical survey; it is key role in statistics and data analysis. Descriptive and correlation, describes, compares, and measures data; it is also identify characteristics, frequencies, trends, and categories for effect of blended learning, teaching approach and academic performance of 3rd year early childhood education students in Rwanda. The study was statistical survey and was useful in obtaining information on the current status of the phenomena to describe what exists (Natasha, 2011). It is an efficient way of collecting information from a large number of respondents. Very large samples are possible. Statistical techniques can be used to determine validity, reliability and statistical significance. Surveys are flexible in the sense that a wide range of information can be collected by researcher.

Target Population and Sample size

Population was the students and lecturers of Universities of Rwanda and Kigali without forgetting different promoters that have education in their hands which was comprised by 308 respondents. Kakooza (2015) said that population is a group of people of organization, objects or events, about which the researcher wants to, draw a conclusion. Thus, the researcher met the total number of 308 respondents that he/she was addressed the

approaches to effective hybrid implementation have been highlighted in the current literature.

Katie and Shirley (2013) carried out a study called blended learning and teaching approach. The findings of Katie and Shirley's study contribute to the blended learning and teaching approach in terms of academic performance of 3rd year early childhood education students rather than indicating its contribution to the blended learning and teaching approach, their study also did not collect primary data to increase the accuracy of the study that is the evidence shows that previous scholars focused on the secondary data as source of information used. Even if, Sohail (2014) and Katie & Shirley (2013) carried out their studies related to blended learning and teaching approach, they did not establish the contribution of blended learning and teaching approach on academic performance of 3rd year early childhood education students. Hence, this study needs to bridge this gap using both primary and secondary data concerning contribution of blended learning and teaching approach on academic performance of 3rd year early childhood education students in Rwanda.

questionnaire where sample size was 174 respondents.

Data Collection Methods

Data collection is the systematic gathering of data using a specified scientific process (Cooper, Schindler, 2014). Poor selection of data collection methods affects the collected data. Research was used primary and secondary data.

Data Analysis

Data collected was analyzed using descriptive statistics because the data obtained in this study was quantitative. It uses correlations and regression analysis. According to Quang and Hong (2009), quantitative data are observations measured on a numerical scale. Results collect also was entered into the statistical analysis. This analysis indicated variations of the response in the sample, response to the various questions and variations among different groups. Presentation of the results and findings were in terms of tables and graphs.

Descriptive statistics

Descriptive statistics was used to describe the basic features of the data in the study in the tendencies and then replicated in tabular manner. It involved use of percentages, frequencies, mean and standard deviation.

Spearman (Pearson) correlation

Spearman (Pearson) correlation coefficient measures the extent to which, as one variable increases, the other variable tends to increase, without requiring that increase to be represented by a linear relationship. If, as the one variable increases, the other decreases, the rank correlation coefficients were negative. Statistical correlation is measured by what is called coefficient of correlation (r). Its numerical value ranges from +1.0 to -1.0. It indicates the strength of relationship. In general, $r > 0$ indicates positive relationship, $r < 0$ indicates negative relationship while $r = 0$ indicates no relationship (or that the variables are independent and not related). Here $r = +1.0$ describes a perfect positive correlation and $r = -1.0$ describes a perfect negative correlation.

Closer the coefficients are to +1.0 and -1.0, greater is the relationship strength between the variables. As a rule of thumb, the following guidelines on strength of relationship are often useful (though many experts would somewhat disagree on the choice of boundaries). It was employed Statistical

package for Social Sciences (SPSS) in processing and data examination of which informed the presentation of findings, examination and elucidation. The presentation was emphasized on the hypothesis. Statistical treatment depends upon the problem, especially the specificity of data gathered. Data analysis was done based on descriptive statistics particularly means and standard deviation. The coefficient of determination, R^2 , was used to analyze how differences in one variable can be explained by a difference in a second variable. For example, when a person gets pregnant has a direct relation to when they give birth. More specifically, R-squared gives you the percentage variation in y explained by x -variables. The range is 0 to 1 (i.e. 0% to 100% of the variation in y can be explained by the x -variables. The R^2 is similar to the coefficient correlation, R , how strong is a linear relationship for two variables. R Squared is the square of the correlation coefficient, r (hence the term r squared).

4. Results

4.1 Descriptive Statistics on blended learning strategies

	N	Mean	Std. Deviation
Allowing students to control their pace in learning	174	4.07	1.051
Elevates students' adaptability to the world's dynamicity.	174	3.93	1.214
Promotes holistic and comprehensive learning.	174	4.18	.942
Supports students in research and learning	174	4.21	.901
Valid N (listwise)	174		

Source: Primary Data (2024)

From the finding in table 1 shows that in first statement said that " Blended learning strategies allowing students to control the pace, place, path, and/or time of their learning" with the mean of 4.07 and 1.051 standard deviation. This implies that the respondents are strongly agreed with the statement as indicated by above mean and heterogeneous answers as a sign of different opinions from respondents and lead to the same answer.

Second statement shows that "Elevates students' adaptability to the world's dynamicity" the

respondents strongly agreed with a mean of 3.93 and standard deviation of 1.214 with the statement. This indicated that the respondents agreed with the statement as indicated by the mean and heterogeneity of answers as indicated by the standard deviation where the respondents had same opinions of the statement. The third statement shows that "Promotes holistic and comprehensive learning " where the respondents strongly agreed with a mean of 4.18 and standard deviation of .942. This indicated that the

respondents are strongly agree with the statement as indicated by the strong mean and heterogeneity of answers as indicated by the standard deviation where the respondents had different opinions of the statement lead to the same answers.

Forth statement shows that “Supports students in research and learning” where the respondents are

strongly agreed with a mean of 4.21 and standard deviation of .901. This indicated that the respondents are strongly agreed with the statement as indicated by the strong mean and heterogeneity of answers as indicated by the standard deviation where the respondents had different opinions of the statement.

Table 1: Descriptive Statistics on indices of blended learning approaches

	N	Mean	Std. Deviation
Allowing students to control the pace in learning	174	4.19	.933
Elevates students ‘adaptability to the world’s dynamicity	174	4.19	.933
Promotes holistic and comprehensive learning	174	4.18	.944
Valid N (listwise)	174		

Source: Primary Data (2024)

From the finding in table 2 shows that in first statement said that “Allowing students to control the pace in learning” with the mean of 4.19 and .933 standard deviation. This implies that the respondents are strongly agreed with the statement as indicated by above mean and heterogeneous answers as a sign of different opinions from respondents and lead to the same answer.

Second statement shows that “Elevates students ‘adaptability to the world’s dynamicity” the respondents strongly agreed with a mean of 4.19 and standard deviation of .933 with the statement. This indicated that the respondents agreed with the

statement as indicated by the mean and heterogeneity of answers as indicated by the standard deviation where the respondents had same opinions of the statement. The third statement shows that “Promotes holistic and comprehensive learning ” where the respondents strongly agreed with a mean of 4.18 and standard deviation of .944. This indicated that the respondents are strongly agree with the statement as indicated by the strong mean and heterogeneity of answers as indicated by the standard deviation where the respondents had different opinions of the statement lead to the same answers.

Table 3. Descriptive Statistics on indices of academic performance among ECDE students in UR and UoK

	N	Mean	Std. Deviation
Create the awareness of ethical use and respect of digital information	174	3.90	1.173
Adequate ability to evaluate and reflect on research and professional practices	174	4.01	1.183
Participate in local and global learning communities	174	3.92	1.104
Address the diverse needs of all learners	174	3.86	1.100

Source: Primary Data, 2024

From the finding in table 3 shows that in first statement said that "Create the awareness of ethical use and respect of digital information " with the mean of 3.90 and 1.173 standard deviation. This implies that the respondents are strongly agreed with the statement as indicated by above mean and heterogeneous answers as a sign of different opinions from respondents and lead to the same answer.

Second statement shows that "Adequate ability to evaluate and reflect on research and professional practices " the respondents strongly agreed with a mean of 4.01 and standard deviation of 1.183 with the statement. This indicated that the respondents strongly agreed with the statement as indicated by the mean and heterogeneity of answers as indicated by the standard deviation where the respondents had same opinions of the statement. The third statement shows that "Participate in local and global learning communities " where the respondents strongly agreed with a mean of 3.92 and standard deviation of 1.104. This indicated that the respondents are strongly agree with the statement as indicated by the strong mean and heterogeneity of answers as indicated by the standard deviation where the respondents had different opinions of the statement lead to the same answers.

Forth statement shows that "Address the diverse needs of all learners" where the respondents are strongly agreed with a mean of 3.86 and standard deviation of 1.100. This indicated that the respondents are strongly agreed with the statement as indicated by the strong mean and heterogeneity of answers as indicated by the standard deviation

Acknowledgments

I wish to acknowledge **Professor Abdulrazaq Olayika ONIYE** for his contribution to this work from the beginning up to its completion. I also wish to extend my acknowledgement to the University of Kigali

References

Al- Rimavi, (2014). Evaluating student satisfaction with blended learning in a gender- segregated environment. *Journal Of Information Technology Education*, 185-200.
Al-Ajab, (2006). Blended learning in higher education: Three different design approaches. *Australasian Journal of Educational Technology*, 30(4), 440-454.

where the respondents had different opinions of the statement.

Conclusion

The purpose of this behavioral study was to test the effectiveness of the intervention. Studying teaching methodology and measuring UR and UoK ECDE students' perspectives on academic performance depending on the method. Quantitative and qualitative data were collected through pre- and post-tests. A journal of student and researcher perception surveys. Paired sample t-test was performed. It is used to compare a student's individual scores by analyzing pre- and post-test data. It is also taught class by class to understand the effectiveness of the methodology. The study concluded the use of the blended learning methodology in social research. These courses aim to improve the academic performance of ECDE students at UR and UoK and to foster positive student attitudes towards this learning method.

Recommandation

In light of the findings of the study, the researcher recommends the following:

The need for training the teachers in different grades and encouraging them to learn using the blended learning in teaching;
Studying the effect of using blended learning in teaching within other teaching results and variables. It is necessary to introduce new teaching methods into the curriculum to introduce technological advances that improve students' acquisition of geographic skills. Regarding the limitations of this study, future research should examine the impact of blended learning instructional models in secondary education contexts on other programs such as science, mathematics, and English.

University of Kigali and university of Rwanda authorities for their support and collaboration during the data collection.

Al-Hasan, (2013). Towards a personalised, learning style based collaborative blended learning model with individual assessment. *Informatics In Education*, 11(1), 1-28.

Allamary *et al.*, (2014). A dynamic, systematic method for developing blended learning. *Education, Communication & Information*, 5(3), 221-232.

- Al-Rimawi, (2016). The role of collaborative action research in teachers' professional development. *Profile: Issues In Teachers' Professional Development*, 18(1), 39-54.
- Al-Shunnaq and Bani Domi, (2018). Is blended e-learning as measured by an achievement test and self-assessment better than traditional classroom learning for vocational high school students? *International Review Of Research In Open & Distance Learning*, 15(2), 213-231.
- Arslanilmaz and Sullin, (2013). Digital literacy: a prerequisite for effective learning in a blended learning environment?. *Electronic Journal of E-Learning*, 14(1), 54-65.
- Bollger and Wasilik, (2018). Evidence-based practice and teacher action-research: a reflection on the nature and direction of 'change'. *British Educational Research Journal*, 39(1), 126-147.
- Carr (2018). Transforming traditional lectures into problembased blended learning: challenges and experiences. *Open Learning*, 22(1), 29-42.
- Chavarría, et al, (2017). The challenges of blended learning using a media annotation tool. *Journal Of University Teaching And Learning Practice*, 11(2), 1-19.
- Davis, Bagozzi, and Warshaw (2019). Students' opinions on Facebook supported blended learning environment. *Turkish Online Journal Of Educational Technology TOJET*, 13(1), 199-206.
- Dewey, (2013). *The curriculum studies reader*. New York: Routledge.
- Drever, (2018). Understanding by Design, Moodle, and blended learning: A secondary school case study. *Journal Of Online Learning & Teaching*, 11(1), 103-111.
- Glowa, (2019). A more critical pedagogy: could it reduce non-completer rates of male Latino high school students? The student perspective. *Pedagogy, Culture & Society*, 22(2), 251-274.
- Grosso, Teresa, & Grosso, (2012). Students' perception of blended learning environment: a case study of the university of education, Winneba, Kumasi-Campus, Ghana. *International Journal Of Education And Development Using Information And Communication Technology*, 11(1), 80-100.
- Gudivada, (2019). *Readings for diversity and social justice: An anthology on racism, antisemitism, sexism, heterosexism, ableism, and classism* (3rd ed., pp. 45-52). New York: Routledge.
- Gyamfi and Gyaase (2015). Creative multimodal learning environments and blended interaction for problembased activity in HCI education. *Techtrends: Linking Research & Practice To Improve Learning*, 59(2), 47-56.
- Hassan (2016). Using blended learning. *British Journal Of Educational Technology*, 46(3), E9-E10.
- Hirsch (2018). Impact of trickster performances on the curriculum. In Schramm- Pate, S., & Jeffries, R. B. (2008). *Grappling with diversity: readings on civil rights pedagogy and critical multiculturalism* (pp. 135-145). Albany: State University of New York Press.
- Horst, Kuttschreuter and Guttering (2017). Effective blended learning environments. *College & University Media Review*, 17. 59-68.
- Ismail, (2019). Effect of blended learning environment model on high school students' academic achievement. *Turkish Online Journal Of Educational Technology - TOJET*, 13(1), 78-87.
- Jackson, Jones, and Rodriguez (2013). Adopting a blended learning approach: Challenges encountered and lessons learned in an action research study. *Journal Of Asynchronous Learning Networks*, 15(1), 45-57.
- John Dewey (2014). Students' and teacher's reflections on project-oriented learning: a critical pedagogy for Korean ELT. *English Teaching*, 70(3), 73-98.
- Jung, Choi, Lim, and Leem (2018). *Readings for diversity and social justice: An anthology on racism, antisemitism, sexism, heterosexism, ableism, and classism* (3rd ed., pp. 9-15). New York: Routledge.
- John Ninmeier, (2010). Jean Jacques Rousseau, modern developmental psychology, and education. *European Journal of Developmental Psychology*, 9 (sup1), 45-56.
- Kanuka, Heller & Jagdev, (2018). Design principles for the blend in blended learning: a collective case study. *Teaching In Higher Education*, 21(6), 716-729.
- Liu and Arnett (2016). Challenges for collaborative blended learning in undergraduate students. *Educational Research And Evaluation*, 20(7-8), 564-591.
- Maccoun, (2016). That entertainment called a discussion: The critical arts pedagogy of John Cage. *Action, Criticism & Theory for Music Education*, 8(1), 122-144.
- Mayer, (2015). Student's reflections on their learning and note-taking activities in a blended learning course. *Electronic Journal Of E-Learning*, 14(1), 43-53.
- MINEDUC Report (2018). Blended learning environments: definitions and directions. *Quarterly Review Of Distance Education*, 4(3), 227-33.
- Morgan, Bruce, and Williams (2014). Advancing the ideas of John Dewey: A look at the High Tech Schools. *Education & Culture*. 26(2), 52-64.

Ndayambaje & Ngendahayo, (2014). Curriculum history, schooling and the history of the present. *History Of Education*, 40(1), 1-19.

Osgulthorpe & Graham, (2013). *Grappling with diversity: readings on civil rights pedagogy and critical multiculturalism*. Albany: State University of New York Press.

Pavlou (2015). Teacher Autonomy in Times of Standardised Lesson Plans: The Case of a Primary School Language and Mathematics Intervention in South Africa. *Journal of Educational Change*, 19(2), 205–222.

Poon, (2014). Digital literacy: A prerequisite for effective learning in a blended learning environment?. *Electronic Journal Of E-Learning*, 14(1), 54-65.

Russell T. Osgulthorpe and Charles R. Graham (2018). Developing a democratic view of academic subject matters: John Dewey, William Chandler Bagley, and Boyd Henry Bode. *Philosophical Studies In Education*, 43, 162-170.

Salamah, (2015). Rousseau, the enlightenment and early American education. *European Journal of Developmental Psychology*, 9(sup1), 18-31

Schramm-Pate, (2014). E- Learning from Application to Professionalism. Cairo: Alam Al- Kutob (the world of books).

Shahin, (2018). The Effect of Blended Learning on the Achievement of the Third Graders in the Arabic Language and their Motivation to Learn Arabic, *Journal of Educational Science Studies* 38 (1), 176 to188.

William Bagley, Joseph Watras (2013). Blending Learning (Online) Available: [http:// www grayharriman.com](http://www.grayharriman.com).

Zapata and Chaves Castagno, (2017). The Effect of Using Blended Learning on the Achievement of Students and Information Retention of Fifth Graders in the Biology Course, *Faculty of Education Journal*, 22 (95) 209-240.

