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AN INVESTIGATION OF BLACKBOARD USE IN CURRICULUM DEVELOPMENT WITHIN EXTENDED CURRICULUM PROGRAMME: A NEXUS BETWEEN ECP LECTURERS AND STUDENTS

UMA INVESTIGAÇÃO SOBRE O USO DO BLACKBOARD NO DESENVOLVIMENTO CURRICULAR NO ÂMBITO DO PROGRAMA DE CURRÍCULO ALARGADO: UMA RELAÇÃO ENTRE OS DOCENTES E OS ALUNOS DO ECP

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Abstract
Extended Curriculum Programmes (ECPs) play a critical role in widening access and supporting epistemic success for underprepared students in South African higher education. While Learning Management Systems (LMSs) such as Blackboard are widely implemented, their potential to support systematic and collaborative curriculum development within ECPs remains underexplored. This study investigates the use of Blackboard for curriculum development in ECP contexts using a Design Science Research (DSR) methodology. The aim of this study is to design, implement, and evaluate Blackboard-supported curriculum development practices within Extended Curriculum Programmes (ECPs), by examining the interaction (nexus) between lecturers and students, in order to enhance curriculum coherence, engagement, and inclusive learning through a Design Science Research approach. This research leverages on qualitative method as the adopted methodology, using design science research framework approaches in having the opinion of Extended Curriculum program (ECP) lecturers and ECP students on the use of blackboard technology as a tool for curriculum development. Therefore, the data collected is analyzed using thematic NVivo Software to analyze the findings of the results. The study results obtained indicate responsiveness and user specific learning as the main theme. In conclusion, this study indicates a relationship between lecturers and students in the use of Blackboard technology for curriculum development. It is also important to highlight the continued evolution and integration of Blackboard within the curriculum development process, suggesting it has become a valuable tool in shaping the future of higher education.

Resumo
Os Programas de Currículo Estendido (ECPs) desempenham um papel fundamental na ampliação do acesso e no apoio ao sucesso epistêmico de alunos menos preparados no ensino superior sul-africano. Embora os Sistemas de Gestão de Aprendizagem (LMSs), como o Blackboard, sejam amplamente implementados, seu potencial para apoiar o desenvolvimento curricular sistemático e colaborativo dentro dos ECPs continua pouco explorado. Este estudo investiga o uso do Blackboard para o desenvolvimento curricular em contextos de ECPs utilizando uma metodologia de Pesquisa em Ciência do Design (DSR). O objetivo deste estudo é projetar, implementar e avaliar práticas de desenvolvimento curricular apoiadas pelo Blackboard dentro dos Programas de Currículo Estendido (ECPs), examinando a interação (nexo) entre professores e alunos, a fim de aprimorar a coerência curricular, o engajamento e a aprendizagem inclusiva por meio de uma abordagem de Pesquisa em Ciência do Design. Esta pesquisa utiliza o método qualitativo como metodologia adotada, empregando abordagens da estrutura de pesquisa em ciência do design para obter a opinião de professores e alunos de Programas de Currículo Estendido (ECP) sobre o uso da tecnologia Blackboard como ferramenta para o desenvolvimento curricular. Portanto, os dados coletados são analisados utilizando o software temático NVivo para analisar as conclusões dos resultados. Os resultados do estudo obtidos indicam a capacidade de resposta e a aprendizagem específica do usuário como o tema principal. Em conclusão, este estudo indica uma relação entre professores e alunos no uso

Practically, it offers evidence-based design principles for leveraging Blackboard analytics to support inclusive, systematic curriculum development in ECP contexts. The findings underscore the importance of aligning technological design, lecturer capacity development, and institutional support to realise the full curriculum development potential of LMSs.

Keywords: Blended Learning. Nexus. Extended Curriculum Program. Learning Management System. Blackboard.

da tecnologia Blackboard para o desenvolvimento curricular. É também importante destacar a evolução contínua e a integração do Blackboard no processo de desenvolvimento curricular, sugerindo que se tornou uma ferramenta valiosa na definição do futuro do ensino superior. Na prática, ele oferece princípios de design baseados em evidências para aproveitar a análise do Blackboard a fim de apoiar o desenvolvimento curricular inclusivo e sistemático em contextos de ECP. As descobertas ressaltam a importância de alinhar o design tecnológico, o desenvolvimento da capacidade dos professores e o apoio institucional para realizar todo o potencial de desenvolvimento curricular dos LMSs.

Palavras-chave: *Aprendizagem Combinada. Nexus. Programa de Currículo Estendido. Sistema de Gestão de Aprendizagem. Blackboard.*

1 INTRODUCTION

The integration of Blackboard technology in curriculum development has significantly impacted the relationship between lecturers and students. Blackboard, a leading learning management system (LMS), has become a vital tool for both lecturers and students in higher education institutions [5]. In educational institutions, a plethora of high-tech tools and programs are being employed to design and support instructional strategies. These high-tech establishments have the capacity to convert traditional teaching methods in the education sector to digital ones. This encouraged innovation and creativity in the educational system, which is beneficial for raising educational standards and achieving them [9, 20]. Hence, the use of technology in education has grown in popularity in the current digital era, with learning management systems (LMS) like Blackboard being essential to the facilitation of teaching and learning activities [2]. A variety of tools services like course content management, communication tools, assessment tools, engagement analytics, and content creation tools are available on Blackboard. Blackboard is a platform that is widely used in educational institutions

across the globe to improve collaboration, facilitate student participation, and expedite course delivery.

As reported by [10], Blackboard can completely transform education, its usefulness ultimately depends on how lecturers and students use and perceive the platform. Therefore, with learning management systems (LMS) like Blackboard being crucial to the facilitation of teaching and learning activities, the use of technology in education has become more and more common in the contemporary digital era [8, 18]. There is a growing use of online learning driven by COVID-19 which resulted in emergency remote teaching [10] and/or increase in technology use in higher education [1, 17]. The main online platform behind this surge in online learning is Blackboard [1]. This platform is used across 90 countries by approximately 100 million users [10]. What we observe is that there are few studies, and these few studies lack consensus as to perceptions on Blackboard as tools for curriculum development in higher institutions.

According to Caga [5, 19], who reported on lecturer's perspective on the use of Blackboard as a learning support tool. In this study some of the challenges faced by using blackboard for teaching and learning which are reliability issues around glitches, bugs and outages. All these challenges can disrupt the learning process and have a negative impact on the user experience. Another challenge that was raised by [10, 16], was the integration of blackboard with other tools can be challenging. This can create additional complexity and reduce the overall effectiveness of the blackboard platform for curriculum development. There is also a lack of studies which focus on extended studies students and/or lecturers. Therefore, this study also focuses on understanding the dynamics between educators and students within these foundational programs designed to support underprepared learners in higher education. This is a vital study amid increasing technology for curriculum development for teaching and learning to take place. Hence, the fact that extended studies are different from other programs which support students who may not meet the standard admission requirements for higher education but have the potential to succeed with additional academic support [10]. ECPs aim to provide a more inclusive educational pathway, particularly for students from disadvantaged backgrounds, by integrating foundational skills development with regular academic coursework.

South Africa universities may present different dynamics than other countries' universities.

1.1 Literature review overview

According to [7] argue that lectures expect technology to be reliable and user-friendly, especially when it comes to handling complex teaching tasks. Achieving desired instructional outcomes hinges on the simplicity and effectiveness of technology tools in meeting instructors' pedagogical needs. However, the adoption of online teaching tools and the transformation of instructional practices face challenges due to varying levels of instructor acceptance [14]. Factors such as the introduction of new technologies, the choice of instructional medium, course design, and organizational policies often pose challenges to implementing effective instructional strategies [7].

A qualitative study by [10], used a phenomenological design to analyze the perceptions of 10 teachers and 25 students in their final year at university, on the impact and challenges of the use of Blackboard Collaborate as a teaching-learning tool in the framework of education in line in the pandemic context. Qualitative data was collected and analyzed. Two instruments were implemented, semi-structured interviews were used with teachers and an online survey with students. It was found that the use of the Blackboard Collaborate is perceived by both study groups as a tool that facilitates the teaching - learning process. It allows interaction, the development of general competences and to monitor the progress of students' activities during the synchronous sessions. However, this is not considered by the participants as a tool that facilitates bonding during class because it might be affected by technical and connectivity difficulties.

According to [4], study, students prefer online learning because it enables them to juggle their duties in life with their academic obligations. Two hundred and seventeen students responded to the survey that the researchers used to find out why students were interested in distant learning. Because the courses required to finish their degrees were offered more often in the world of online education than they were before, twenty percent of the participants opted for distant learning [13].

Advancements in technology, as noted by Alhumsi & Alshaye [1] cited in Mohammed [7], have the potential to modernize teaching methods and enrich learning

experiences for students. Caga [5] argues that Blackboard LMSs offer an interactive platform that caters to diverse student needs. However, Mendoza et al [10] presents a contrasting view, suggesting that while the system enhances learning, it can also impact the development and utilization of online resources and modify traditional teaching approaches, introducing new complexities to program management.

Al-Mubireek et al. [3,13] used a survey to collect the perceptions of the 63 English as a foreign language EFL instructors about using Blackboard in teaching English as a foreign language (TEFL) teaching. A mixed-methods sequential explanatory design was used for collating, analyzing, and consecutively integrating data. The findings revealed that the attitudes of teachers towards using Blackboard were significantly positive. Nevertheless, they disclosed that several effective Blackboard features are not explored for the benefit of teachers such as the electronic library, the evaluation system, the teachers' forum, and the group conferencing [15].

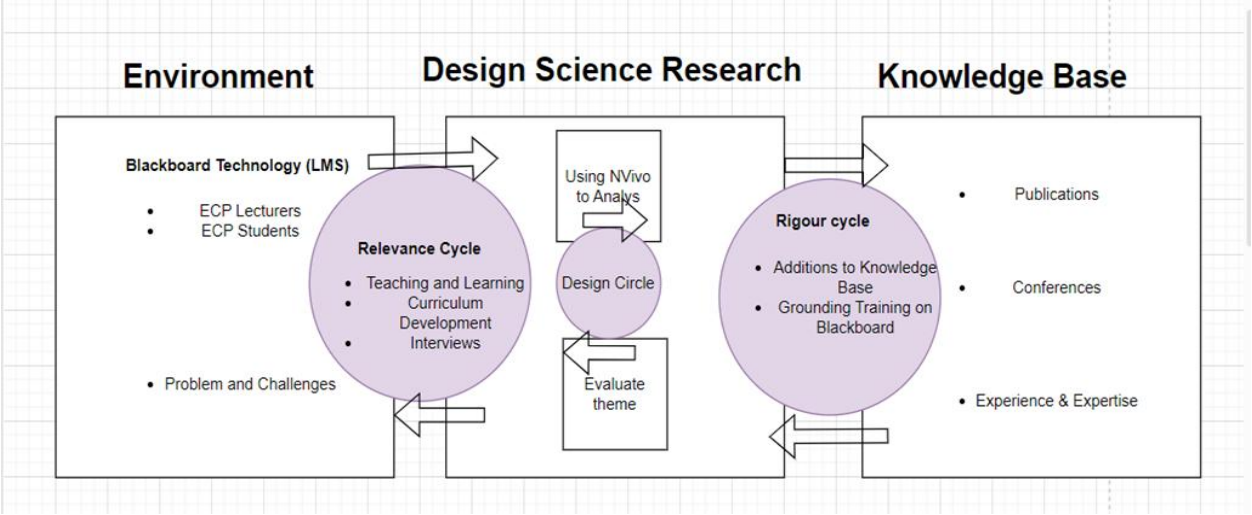
1.2 Research methodology

This research leverages on qualitative method as the adopted methodology, using design science research framework approaches in having the opinion of ECP lecturers and ECP students on the use of blackboard technology as a tool for curriculum development. Qualitative approach technique is used to have the sense of feelings, experiences and opinions of a phenomenon of a situation in the real world [11]. The use of qualitative methods is essential for this research for exploring complex phenomena that cannot be easily quantified. It also enriches our understanding of the ECP lecturers and ECP students with Blackboard usage and issues around it. On the other hand, the choice for design science research is to emphasize the development of practical solutions to real-world problems through a method or system. In this context Blackboard as LMS system needs to be effectively evaluate on the usage by both ECP lecturers and ECP students in bridging gap between theory and practice in teaching and learning. In carrying out this research, we seek to have the views ECP lecturers and students in connection with curriculum development using a blackboard. Data was collected using 12 ECP lecturers and 12 ECP students across the faculty with structured interviews questions. The data was collected individually and transcribed into NVivo software. The transcribed document

was analyzed using NVivo to generate detailed demographic information and generate a theme for this study. The adopted framework that guided this paper is the design science research process as shown in Figure 1 below. DSR involves exploring how artifacts (Blackboard) are created, evaluated, and refined through iterative cycles. This exploration generates rich, contextual insights about the design activities and decisions made during the process.

Figure 1

Design Science Research Iteration Framework for this study.



From Figure 1, above, the DSR iteration process for this study has shown 3 levels of iteration involved which are the environment, design science research and knowledge base. Also, the DSR framework has 3 cycles. The first cycle is the relevance cycle which focuses on the contextual environment of Blackboard technology users for teaching and learning. The environment consists of ECP lecturers, ECP students and problem opportunities as highlighted above. The second phase is the design circle bridges between the Using NVivo to analysis and theme evaluation is simply the heart of the design science research lifecycles. While the rigour cycle connects to the design cycle with publications, conferences and expertise experiences. In this study these three processes are clearly defined and identified as the framework that guides the blackboard technology as a learning management system for curriculum development. Therefore, the alignment of Design Science Research with qualitative methods is significant in enhancing our

understanding of the design process, improving artifact (Blackboard) development, and ensuring that solutions are grounded in real-world contexts and user experiences [11]. By leveraging qualitative techniques, researchers can gain valuable insights that inform both practice and theory in design science.

1.3 Research design

According to [11] who described Design Science Research as a generate prescriptive knowledge about the design of artifacts, which can include software, methods, models, or concepts. The primary objective is to create new purposeful artifacts that address generalized types of problems and evaluate their utility in solving those problems effectively. Design Science Research (DSR) contributes to research by systematically evaluating the planning and development processes to demonstrate the results to the readers [11]. Design science research is distinct from but complementary to other research paradigms like natural science and social science. By integrating DSR with other resource approaches, researchers can leverage the strengths of each to produce more comprehensive and impactful research outcomes [11]. Qualitative research design is used in case study for this research to have opinion of ECP lectures and ECP students on the use of Blackboard for curriculum development.

1.3.1 Participants and sampling procedure

Participants for this study are 12 ECP lecturers and 12 ECP students in a university in Eastern Cape province, South Africa. The ECP lecturers and students are from 4 different department from Information system, Business management, Economics and Industrial psychology from the faculty of management and commerce. The ECP lecturers are from different departments and the ECP students are black South Africa students from different disadvantaged groups. The study makes use of purposive sampling through structure interviews from the faculty of management and commerce for both ECP lecturers and ECP students across different departments. Purposive sampling is a technique where researchers select individuals or cases that are deemed the

most informative for the study. Purposive sampling offers rich insights and efficient data collection.

1.3.2 Demographic information

The study comprised twelve (n = 12) interview participants which comprises of ECP lecturers and students drawn from four departments, with each department contributing three participants. This balanced distribution ensured comparative depth across cases while maintaining consistency in participant representation. In terms of case study allocation, Case Study 1 included Participants P1–P3, Case Study 2 comprised Participants P4–P6, Case Study 3 involved Participants P7–P9, and Case Study 4 included Participants P10–P12. This equal representation across cases strengthens the credibility of cross-case thematic analysis by minimizing case dominance. Regarding departmental representation, participants were evenly distributed across four academic departments, namely Information Systems, Business Management, Economics, and Industrial Psychology. Each department contributed three participants (25%), reflecting a deliberately balanced, multidisciplinary sample. This diversity enhances the richness of perspectives and supports the exploration of phenomena across varied disciplinary contexts. The use of unique participant codes (P1–P12) ensured anonymity and ethical compliance while enabling systematic data analysis and traceability during coding and interpretation. Overall, the demographic composition demonstrates a well-structured and methodologically sound sampling approach, supporting the study's aim of capturing diverse yet comparable insights across departments and case studies. See the below demographic information table.

Table 1

Anonymous Codes for Interviewees for Departmental Case Study, 1,2,3,4

Interviewee Participant	Case study	Use Code	Department
Participant 1	1	P1	Information System
Participant 2	1	P2	Information System
Participant 3	1	P3	Information System
Participant 4	2	P4	Business Management
Participant 5	2	P5	Business Management
Participant 6	2	P6	Business Management
Participant 7	3	P7	Economics
Participant 8	3	P8	Economics
Participant 9	3	P9	Economics
Participant 10	4	P10	Industrial Psychology
Participant 11	4	P11	Industrial Psychology
Participant 12	4	P12	Industrial Psychology

1.3.3 Ethical consideration

Ethical clearance was obtained from University of Fort Hare Inter-Faculty Human Research Ethics Committee (IFHREC) with ethics clearance reference number **FUN002-24 (Project).** A written informed consent form was obtained. The participants ECP Lecturers and ECP students gave their consent after being informed about the study. Participants were well informed that their involvement in the study was non-compulsory.

1.4 Findings and analysis

Two thematic themes are generated as the findings for this study in finding the nexus between extended curriculum program lecturers and students on the use of Blackboard in curriculum development. The themes were identified based on the data

collected, transcribed and imported to NVivo for file classification, creation of code as the generated themes analysis using NVivo. The two generated themes are: responsiveness and user specific learning.

2 THEME 1: RESPONSIVENESS

Responsiveness on Blackboard refers to the ability of users to access and interact with course materials, tools and features in a way that suits needs and schedules [6]. This responsivenes is achieved through various features and tools available on Blackboard to access course materials, mobile applications accessibility tools, and interactive tools and customization. responsiveness on Blackboard enhances the learning experience by providing lecturers interact with students anytime, anywhere while the students learn at their own pace, interact with the peers ubiquitously [10]. In line with the submission of [6] and [10] this theme talks to the scholarly work reported, from the responses received from the ECP lecturers and ECP students on their views on the Blackboard as a tool for curriculum development. See the responses from the participants for this generated theme.

2.1 ECP lecturers participants responses

<Files\\ECP_Lecturers>

"It is manageable, but a step-by-step manual for navigating as the system is updated should always be provided. One has to do trial and error until you figure out which is which, and this consumes time." (P1). "Creating and organizing course content has been easy because with bb you are able to create folders for each topic. Then one can collect and add all those materials within those folders. I have been able to do so with no problems." (P4). "Creating and uploading course content on blackboard is straightforward, however it can be time consuming depending on the type of test/ assessment you are creating. For example, when creating a MCQ test it take time" (P8). "Myself I have not created discussions on blackboard but for videos and documents it's well organized. Yes, it is easy to create any course content on Blackboard, as long as they have stable internet connectivity. Very easy especially if you went through the training.

The university needs to ensure that training is for both full and part time lecturers." (P2) "The layout and structure are fine, but it lacks detail again. With each option, a clear step by step guide should be provided, as one gets to explore different areas with each module or depending on assessment." (P3). "I would appreciate bringing back the previous bb site that was more conducive to navigate. With this one it took some time and some options do get forgotten. Instructors can customize the layout and structure of their Blackboard course to meet their specific teaching needs."(P9). "Blackboard allows lecturers to customize layout to suit the needs of the lecturers, so this is a tool that also allows lecturers creativity. Blackboard permits instructors to organize their course material in a way that will be easily understood by students." (P10) "Blackboard does give that flexibility of putting or changing the layout as you wish. Yes, lecturers have the ability to create those platforms in order to manage their teaching and learning processes." (P5) "Yes, the instructor can create and manage peer review and other collaborative assignment, however, I believe you need to notify the groups before creating group work. For the period I have joined teaching we have not done collaborative assessments, all our assessments are individual, so I have not been exposed to this." (P11). "Yes, blackboard allows instructors to create assignment groups, where students will be allocated to certain groups and submit the assignments. However, it would be great if the system can provide an option where only one student per group can be allowed to submit the assignment". (P6). "Yes, I can. Creating groups is very easy. When I break them into groups during the class to do a small task, I can visit most of the groups to see how they are working. However, this is not easy for big classes." (P11). "Peer Review works quite well with smaller classes and can easily be done on the blackboard. This is all easy but for bigger classes, they need time and more resources to manage it." (P7).

2.2 *ECP students participants responses*

<Files\\ECP_Students>

"Blackboard allowed us (students) to express our ideas, gather feedback, and refine our opinions and plans. For instance, we can post ideas for projects, share initial thoughts about a topic, or brainstorm ideas for collaborative projects"(P2). "It is a good medium for communication and exchanging of information. It is supper well in

collaborative learning activities among students in a way that you can access your courses materials and able to actives". (P4). "Blackboard offers built-in discussion boards that allow students to engage in online discussions with their peers and instructors. This feature encourages critical thinking, fosters teamwork, and promotes active participation in class discussions."(P1) "Blackboard is an effective tool for learning when it is used efficiently by both the lecturer and the learner. Blackboard is a great platform where information can be shared and received effectively. Online classes, however, are only effective and truly helpful to a certain degree, online classes should be a smaller percentage than contact classes."(P5) "The App has had the most extraordinary act of improving my communication skills. By boosting communication skills, it also allows the students to converse clearly, and promote a welcoming digital learning space. During the presentations the App works effectively, it displays slides clearly, provides high quality audibility, and camera. It is uncommon to cut-off or be lagging when you speak. For this, the App offers-up effective collaboration." (P3) "It provides a platform for students to be able to participate without having0 to worry about being discriminated. In terms of grading and feedback, the blackboard allowed us to see the status of each assessment, the number of attempts, and any feedback provided. In some instances, if our lecturer left us with feedback, I was able to select the speech bubble button to view it. Early view the status of your grading task and provide inline, multimedia feedback directly to students. (P8). "It is flexible, since you can be able to see or get notified whenever there is feedback on that assessment. It is quite flexible as it is easy to access marks as soon as they are made available. Marks are allocated immediately after the assessment has been submitted." (P6). "The App is most fair and reliable only when grading a quiz, reduces the chances that students could feel concerned about how their work was graded. It provides feedback the moment your answers are submitted, which is absolutely satisfying. It needs human assistance when students have to describe, define, and explain in their answer, especially on assignments, and case-studies. The App has SafeAssign that is accurate in tracking and providing similarity reports. If you are on medium risk or high risk, it tells you to re-examine your work and replace the authors` ideas with your own." (P10). "It is easy if the lecturer or facilitator organizes their course content logically, using folders and clear labeling, we as students can more easily find documents, videos, discussion forums, and other resources. Moreover, blackboard

includes search features that help us to find specific documents or topics within a course." (P12) "Lessons, slides, reading, videos and other key course material are typically stored within the course document link. It is easy to access and navigate those various types in Blackboard because we're being educated about how to use blackboard in all areas of it." (P9). "Yes, students can seamlessly transition between accessing Blackboard on desktop and mobile devices without disruption. The platform is designed to be responsive and user-friendly across different devices, ensuring that all features and functionalities are available whether you're on a computer, tablet, or smartphone."(P11). "Blackboard's mobile application and responsive design provide a seamless and intuitive user experience that allows students to access course materials and participate in online discussions on the go. By supporting offline access and push notifications, Blackboard helps to ensure that students can continue learning and staying engaged with their coursework, even when they are not in a traditional classroom setting."(P7)

3 THEME 2: USER- SPECIFIC

User Specific on Blackboard refers to the ability of the platform to adapt and tailor the learning experience to the individual needs, preferences and performance of each student [6]. In achieving these user specific features, instructors can create a more engaging, relevant and effective learning environment that caters to the unique needs and goals of students. Based on the research views as reported above, the findings from the ECP lecturers and ECP students produced the generated theme which is in support of the [6] on the user specific learning with Blackboard use for curriculum and development as stated below.

3.1 ECP lecturers participants responses

<Files\\ECP_Lecturers>

"Blackboard sufficiently integrates well with other tools and platforms, it is diverse, offers a number of options. Just the lack of execution and making it easier for users to navigate around the resources in layman terms" (P1)."Blackboard allows videos, audio clips, and other multimedia content. Blackboard supports various media

types and integrates with platforms like YouTube. (you can paste a YouTube link for you students to watch)" (P4). "It blends well with other platforms because lecturers can copy and paste links from YouTube when they want to demonstrate some concepts for their students."(P5). "Blackboard is a very good tool that allows instructors to easily communicate with students. It also allows students to access course material anytime and also allows collaborations between lecturers and students." (P8). "Yes, it allows you to embed links to different software for content creation. Yes, blackboard allows for lecturers to navigate through bb to help assist students with their needs. It also enables the lecturer to improve on her own practice as well." (P2). "Yes, Blackboard allows the instructor to modify or adjust content, and allows the creation of course templates that can be reused and adapted for different semesters."(P3). "Yes, blackboard does allow instructors modify content to allow the current period. For example, lecturers can use previous questions for multiple choice and pick those ones that are needed and modify them to suit the current period and it helps to store information in case you lose your gadgets you can still have access to information." (P6). "There are different learning types and blackboards have tools to cater for these different learning types; therefore, you can personalize the learning path to cater for your different students." (P11). "There are various tools that instructors can use as availed by Blackboard, such as allowing for group work online interactions for those students who may struggle with expressing themselves in a whole class setup. It allows them to contribute to smaller units, as well as allowing the instructor to navigate among the different groups during class. This also fosters independent learning, allowing students to be actively engaged in their learning in a virtual setup. It helps overcome the challenges of" (P12). "There are course rooms, discussion rooms, and platforms for grouping students. These help the lecturer to group and focus only on those students with difficulties without making them feel little."(P7). "Instructors can use these tools such as peer-to-peer interaction, messages to foster engagement and deeper understanding for the students. You are able to create different platforms to engage students based on their needs and what needs to be achieved and allows students to discuss. Blackboard enhances the teaching and learning by not only allowing the instructor to conduct lectures, post module material and assessing students online without having to travel. It also allows instructors to have individual consultations with students and also permits instructors to post questions and see students'

discussion." (P10). "There are discussion boards that can allow students to put their views on a particular topic. Which means those who cannot speak in class, get to also write their views. Students are different, some prefer writing to talking, blackboard allows that. It caters for visual learners; those learners that learn better by seeing. There is just a need for continuous training for all lecturers because technology may be new to other people, and it changes all the time."(P9).

3.2 ECP students participants responses

<Files\\ECP_Students>

"Gamification features provided immediate feedback, helping us as students to understand our performance and make necessary adjustments. Also allows collaborative work and submission of activities as a group" (P4). "The slides come in colors which make It easy for me to give my full attention" (P6). "Gamification allows you to supercharge your e-learning experiences, it boosts engagement" (P2). "Blackboard allows instructors to award badges and points to students for completing various course activities, such as completing assignments, participating in discussions, or achieving specific learning objectives. These badges and points can be displayed on a leaderboard, encouraging friendly competition and fostering a sense of accomplishment among students"(P8). "The features are stimulating and evoke an excitement/engaging attitude towards Blackboard" (P9). "The grade`s background color is black, and it does not align with my preferences. I loved it more, when the background colors were different, representing one`s achievement level. I am satisfied with the App`s gamification features. For example, the App identifies or reflects one`s network stability next to their names, it detects network issues in one`s space, allowing one to see when there is a need to change places." (P11). "I haven't seen any "gamified" features that would make learning more interesting."(P12). "Students can customize their dashboard by adding, removing, or rearranging modules to prioritize the information and tools they use most frequently. Also, Students can personalize their notification settings to control how and when they receive updates about course activities, due dates, grades, and other important information"(P3). "Student just have to know how to use blackboard otherwise the rest is done by lecturers"(P1)."Based on my knowledge, students can only mark modules as

their favorite on the blackboard. Students can select their favorite modules for easy access or to prioritize the module."(P5). "To any extent or whenever they want, students can customize or personalize the way they view and interact with the course content on Blackboard."(P10) "I think it is the organization that is able to customize not only course contents but all the Blackboard gamification features. I have not seen any student modify the course content and make it appear in a way that suits him/herself. Blackboard does not have a doorway to that, for students". (7)

4 DISCUSSIONS OF THE FINDINGS

This study has analyzed the data collected through NVivo software and come up with the general discussion of findings. The discussion is guided by questions around Blackboard responsiveness and user specific learning for curriculum development.

5 RESPONSIVENESS

Responsiveness on Blackboard enhances the learning experience by providing lecturers interact with students anytime, anywhere while the students learn at their own pace, interact with the peers ubiquitously [10]. Therefore, questions around responsiveness on the use of Blackboard by both ECP lecturers and ECP students for teaching and learning were poised and the feedback received was analyzed. The participants on ECP lecturers are of the opinions that Blackboard has been helpful as learning management system (LMS) for instructors to plan and upload course contents, grading/ feedback and management of students group work. While the ECP students were also of the opinions that Blackboard is flexible with assessment, supporting interactive learning, and responsiveness on either desktop or mobile devices without disruption. The significance of responsiveness in curriculum development lies in its ability to create user-specific, responsive, and engaging learning environments that meet the diverse needs of students. By fostering autonomy, accommodating various backgrounds, enhancing engagement, adapting to change, and supporting teacher innovation, flexible curricula play a crucial role in preparing learners for success in an ever-evolving world.

6 USER-SPECIFIC

According to [6] User-specific Learning on Blackboard refers to the ability of the platform to adapt and tailor the learning experience to the individual needs, preferences and performance of each student. Questions around Blackboard user specific learning were asked from both ECP lecturers and ECP students on teaching and learning and the participants responses were analyzed. The participants on ECP lecturers are of the opinions that Blackboard allows lecturers as instructors to create individual student's needs, create user specific learning path for students at their own space and time. While ECP students are of the opinion that Blackboard allows students to interact with the course content, access course materials on a go. The significance of user specific learning in curriculum development lies in its ability to enhance student engagement, improve academic outcomes, develop essential life skills, provide responsiveness in learning approaches, and foster stronger teacher-student relationships. By tailoring educational experiences to meet individual needs, user specific learning creates a more effective and inclusive environment that prepares students for future challenges.

In conclusion, the implication for this research on the relationship between ECP lecturers and ECP students regarding the use of Blackboard highlights its role as a transformative tool in higher education. By enhancing engagement, improving communication, supporting diverse learning needs, and necessitating faculty development, Blackboard can significantly contribute to better educational outcomes. As educational institutions continue to adapt post-COVID-19, leveraging platforms like Blackboard will be critical in shaping future teaching and learning practices.

7 CONCLUSION, RECOMMENDATIONS AND FUTURE WORK

Based on the theme's findings, it can be deduced that the nexus between extended curriculum program lecturers and students generated 2 themes for this study which are responsiveness, and user specific learning. However, the aim of the study is to investigate ECP lecturers and ECP students on the use of the Blackboard in curriculum development for teaching and learning. Significantly, this research study findings revealed that there is connection between ECP lecturers and ECP students on the use of Blackboard for

curriculum development for teaching and learning. Most especially, it helps ECP lecturers and ECP students to be flexible in their teaching and learning and more so, it allows user specific learning for both ECP lecturers and ECP students as well on the use of Blackboard for curriculum development. In conclusion, the design science research framework also plays an important role in guiding this study from the environment phase to design science phase to knowledge base phase all these are in iteration process stages. In other words, the nexus between the ECP lecturers and ECP students gives us an in-depth view on the perception of using Blackboard for curriculum development. In addition, this study indicates a positive nexus between lecturers and students in the use of Blackboard technology for curriculum development. Hence, it is important to highlight the continued evolution and integration of blackboard within the curriculum development process. Therefore, it has become a valuable tool in shaping the future of higher education. Overall, the result of the study indicates that Blackboard has become a valuable component in the curriculum development, with teaching and learning in leveraging its capabilities and enhance the learning experience. However, the following recommendations are suggested as follows:

1. There is a need for more training from the teaching and learning center for both ECP lecturers and ECP students on how to navigate around Blackboard.
2. There is a need to incorporate some features into Blackboard like gamification game elements for students to increase engagement through the use of competition, creativity, students-led learning and immediate feedback.
3. It is also important to support and strengthen ECP lecturers and ECP students by the institution beyond academics.

Recommended future work is to incorporate and accept the use of Artificial Intelligence tools into Blackboard with some AI ethical considerations for both ECP lecturers and ECP students.

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