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Lecturers' Perspectives on the Effectiveness of Modular-Based Teaching in Higher Education in Zimbabwe

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ABSTRACT

Most higher learning institutions in Zimbabwe have embraced modular-based teaching in line with the Ministry of Higher and Tertiary Education's Education 5.0 Philosophy. This study explored lecturers' perspectives on the effectiveness of this approach at a public university. Using a qualitative case study design, twelve lecturers from six faculties were purposively selected, representing qualifications from master's level to professorship. Data were collected through face-to-face interviews guided by semi-structured questions and analysed thematically using N-vivo version 15. Findings revealed that modular-based teaching presents both opportunities and challenges. While it offers flexibility and innovation in teaching and learning, its success largely depends on students' ability to manage time effectively. Lecturers emphasised that adequate resources, particularly online platforms such as Moodle, are essential to support modular delivery. The study further recommended integrating artificial intelligence (AI) into teaching practices to enhance instructional innovation and align with evolving educational demands. Distinctively, this research contributes to understanding modular-based teaching effectiveness by foregrounding the lived experiences and insights of university lecturers, highlighting the need for resource deployment and technological integration to maximise its potential in Zimbabwean higher education.

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INTRODUCTION

Zimbabwean universities have recently adopted modular-based teaching as a new instructional framework, marking a significant departure from traditional models of higher education. The approach has generated mixed reactions: some lecturers regard it as a progressive reform that empowers learners and modernizes teaching practices, while others question its sustainability and overall impact. Despite these differing viewpoints, the system is already reshaping the way knowledge is structured, delivered, and experienced within higher education.

Scholars highlight that the strength of modular-based teaching lies in its ability to break down the traditional curriculum into smaller, more manageable units or modules. These modules can be adapted in various ways to create a more personalized learning experience (Ogana, 2021; Morados & Lucero, 2024). By allowing students to select modules aligned with their interests and career goals, the approach promotes greater participation and ownership of the learning process. Furthermore, modular-based teaching encourages multidisciplinary research, facilitating collaboration across diverse fields of expertise. As universities strive to respond to the evolving

demands of education, this approach represents a crucial step toward building a more dynamic, flexible, and accessible learning environment (Ogana, 2021).

Research on modular-based teaching conducted in Europe by Pilz et al. (2018), Cherusheva (2023), and Mesutoglu (2024) revealed that it is a flexible approach that lets students take modules at their own pace and customize their education to fit their needs and interests. According to Pilz (2018), modular-based teaching is an educational approach that divides curricular content into discrete units or modules, each of which focuses on a particular topic or set of abilities. In light of the above, modules are made to be more interactive and captivating; the aforementioned studies reveal better levels of student involvement. A study conducted in Asia also produced intriguing results. For instance, a study conducted in China by Xin et al. (2018), India by Karthikeya and Kurma (2014), and India by Verma and Kanwal (2019) found that modular-based teaching is one of the most effective teaching strategies because it gives students regular feedback and lessens their anxiety related to exams. Another Asian study, for example, in the Philippines by Ambayon (2020) and Morados and Lucero (2024), revealed that modular-based teaching is more effective as a teaching strategy and that students are able to learn at their own pace. Literature further reveals that modular-based teaching allows unlimited self-learning processes in which students are stimulated to learn through student-centered learning (Morados & Lucero, 2024).

In Africa, literature contains numerous studies examining modular-based teaching. For example, research conducted in Zambia by Kwaleyela (2024) and in Ethiopia by Dejene (2019), as well as Sewagen and Diale (2021), found that modular training is particularly effective for large classes. Within a modularized curriculum, lecturers are expected to evaluate students' learning through formative assessment. The central principle of modularization is continuous evaluation: to enhance performance and achieve the intended course outcomes, students must receive regular assessments accompanied by timely and relevant feedback.

Modular-based teaching has become popular in South Africa, where educational institutions like the University of South Africa have included modular teaching methods into their curricula (Phakathi, 2023). This creative method of teaching has been highly appreciated in the area, and as educational institutions and governments work to enhance educational outcomes and expand educational access, its use is probably going to keep expanding. Programs like the Postgraduate Certificate in Education, which is provided by a number of institutions, use modular teaching to prepare lecturers in South Africa (Phakathi, 2023). In South Africa, the senior phase and further education and training phase are meant to give lecturers the ability and information required to instruct particular subjects and age groups. Students can improve their overall learning and acquire a deeper comprehension of the topic by concentrating on particular modules or subjects. Another significant benefit of modular-based teaching cited in the South African context is its flexibility, which enables students to balance their studies with obligations to their families and jobs and learn at their own speed. Because modular-based teaching can assist in expanding access to education and enhance learning results, this is especially advantageous for people who might not have had access to traditional educational institutions.

Evidence from literature shows that modular-based teaching enhances educational outcomes and expands educational access. The quality of education and the options accessible to pupils are expected to improve significantly when modular-based teaching is embraced as a cutting-edge approach to education. For instance, research on modular teaching in South Africa by Groenewald and Mpisi (2022) and Lucero with Morados (2024) revealed that modular teaching is applicable in higher education because it offers well-defined learning objectives and module content that is both well designed and captivating. As educational institutions look for creative ways to boost student engagement and improve learning results, the modular system has gained popularity throughout the world.

In Botswana, modular-based teaching in higher institutions utilizes smaller modules that have distinct learning goals and outputs (Ntseane et al., 2024). With this method, students can concentrate on a single module at a time, which helps them learn particular abilities and comprehend the material more thoroughly. Additionally, the modular-based teaching approach

gives students the freedom to select from a variety of courses, enabling them to customize their academic programs to fit their interests and professional aspirations.

One of the main advantages of modular-based teaching in Botswana has been its capacity to encourage student-centered learning (Majaule, 2023). Modular-based teaching empowers students to take charge of their education, improve their critical thinking and problem-solving abilities, and select their own modules and learning paths. Furthermore, students can learn at their own pace, which is especially advantageous for those who might need to juggle their academic obligations with jobs or family duties. The quality of education in Botswana has also improved because of the implementation of modular-based teaching.

Modular-based teaching has improved student outcomes, such as academic performance and graduation rates, by giving students a more focused and organized approach to learning. Additionally, by providing modules that are pertinent to the abilities and information that employers demand, the modular-based teaching approach has allowed universities to better adapt to the shifting demands of the labor market. Universities in Botswana have benefited from the use of modular-based teaching, which gives students a more flexible, organized, and student-centered method of education. It is anticipated that modular-based teaching would become more and more significant in determining the academic curricula and learning objectives of Botswana's institutions as the nation develops its educational system.

Evidence from literature suggests that the use of modular education is viewed as one possible remedy that addresses regional issues while adhering to international best practices. Lecturers can design more interesting learning experiences that appeal to a variety of student demographics by segmenting established curricula into manageable modules. Studies on modular-based teaching conducted in Zimbabwe discovered that it was just as successful as in-person instruction (Mukeredzi, 2005; Kaputa & Mpezeni, 2016; Munjanga, 2023).

The use of modular teaching in higher education, especially in developing countries like Zimbabwe, may solve a number of issues, for example, lack of resources, a range of learner needs, and differing levels of academic readiness. This sought to gather insights about lecturers' perspectives on the effectiveness of modular-based teaching in Zimbabwean higher education.

Literature shows that different perspectives on the efficacy of a teaching strategy are common among academic stakeholders. Students and lecturers are two examples of stakeholders that frequently hold divergent opinions on these matters. Lecturers, according to a study conducted by Ningsih (2024), Houton (2023), and Pakaya (2023), view the efficiency of module-based teaching differently. Some lecturers value the well-organized format and the opportunity to concentrate on particular subjects. Ensuring a consistent learning experience across modules could be difficult for others. Students also appreciate the modules' flexibility and focused instruction. Students are also free to concentrate on certain interests and advance at their own speed. For some reason, however, it could be difficult for some students to combine information from several sessions to get a thorough grasp of the subject. In the end, some research concludes that the modules' design, the teaching strategies used, and the general learning environment all affect how effective module-based instruction is. The use of modular-based instruction has had a big impact on lecturers' experiences and methods of instruction. By breaking the curriculum up into smaller, independent units or modules, this teaching strategy provides flexibility and personalization, enabling students to study at their own speed and concentrate deeply on particular subjects. Nonetheless, lecturers encounter a range of chances and difficulties while adjusting to this approach.

The increased burden related to module creation and development is one of the main issues that lecturers have mentioned. In contrast to conventional teaching techniques, lecturers using modular-based learning should produce thorough and interesting content for every module, including learning goals, teaching aids, and evaluations. Lecturers frequently have a greater workload because of this process, which requires a lot of time and effort. Despite this difficulty, many instructors find it fulfilling to be able to customize their lessons to the interests and

requirements of their students because it makes for a more successful and individualized learning environment (Sadiq & Zamir, 2021).

Lecturers also frequently encounter the necessity of ongoing professional development and upskilling. As lecturing becomes more modular, lecturers frequently need to learn new techniques for assessment, technological integration, and instructional design. To assist lecturers in this shift, numerous academic institutions offer workshops and training courses; nonetheless, continuous professional growth is still essential for successful execution. Participating in these development opportunities frequently results in lecturers feeling more competent and confident while providing instruction based on modules (Sadiq & Zamir, 2014).

Additionally, lecturers stress the need for teamwork and efficient communication between students and co-workers. A more decentralized method to education is frequently used in modular-based teaching, where lecturers provide remote guidance and support while students work independently on modules. To guarantee that students receive the assistance and feedback they require, this change calls for open and constant lines of communication. The quality and consistency of modular-based instruction can also be improved by lecturers working together to design and share best practices.

Furthermore, lecturers benefit from the increased motivation and involvement of students that comes with modular-based instruction. Students can perform better academically by better understanding and remembering material when the curriculum is divided into manageable pieces. Lecturers frequently see a rise in student engagement, excitement, and a feeling of control over their education. This beneficial effect on student results can serve as a powerful incentive for lecturers, highlighting the benefits of lecturing using modules.

In a system that is modular-based, lecturers also have difficulties in assessing and evaluating students' progress. Because modular-based learning may not be compatible with traditional evaluation techniques, lecturers may need to come up with new ways to evaluate students' learning and progress. Although ongoing evaluation and feedback are essential elements of modular-based teaching, it can also increase the effort and intricacy of the teaching process. Lecturers are therefore expected to balance the practical limitations of time and resources with the requirement for comprehensive evaluation (Friestad-Tate et al., 2021).

Literature shows that some lecturers feel isolated due to the implementation of modular-based instruction. Because of this approach's decentralized structure, lecturers might have fewer opportunities to meet with students and colleagues in person. Regular virtual meetings, collaborative platforms, and peer support networks can help reduce this isolation by creating a sense of belonging and a common goal (Ministry of Higher and Tertiary Education, Science and Technology Development, 2018).

Evidence from literature shows that lecturers have different experiences with modular-based teaching, including both positive and negative aspects. Although the method is flexible and may improve student motivation and involvement, it also necessitates more work, professional growth, and efficient communication techniques. Lecturers can improve the caliber and efficacy of modular-based teaching by handling these issues and seizing the opportunities. To improve teaching and learning outcomes, higher education institutions are increasingly implementing modular teaching. Evidence from literature points out that there is little empirical data regarding whether modular teaching is improving student engagement, academic achievement, and the overall learning experience at a Zimbabwean state university. Since lecturers lament their inability to create modules, the modular-based teaching style has become unpopular. In light of the above, the primary question is, what are lecturers' perspectives on modular-based teaching at a higher education institution in Zimbabwe?

Bloom's Mastery Learning Theory serves as the foundation for this study. According to Bloom's theory, all students can learn any subject given enough time and assistance (Lestari & Sirozi, 2025; Montgomery, 2025). The theory also recognizes that learning is an ongoing process, so each student's development should be evaluated at his or her own pace. Competency-based progression, self-directed learning, and customized learning are all products of the mastery

learning theory. The notion that student autonomy must be promoted is at the crux of this theory. Additionally, the theory accommodates a variety of learning requirements, fosters self-directed learning, deepens knowledge, and improves academic performance. It follows, therefore, that in modular-based teaching, students are categorized according to their aptitudes and receive training that is specifically designed to match their needs. Thus, by applying this approach, modules may be created to accommodate varying aptitude levels, guaranteeing that students receive teaching that is appropriate for their skill level.

Under the uniform instruction per learner policy, modular-based teaching enables each student to receive training that is consistent with their aptitude level within the module to which they are assigned. Crucially, pacing is made possible by modular learning under this category. In other words, students can go through the courses at their own speed and with flexibility, switching between them according to their skill level. Similarly, modules offer a well-organized learning route that guarantees learners have opportunities for corrective feedback, high-quality education, and defined objectives.

Figure 1 below shows how in Bloom's Mastery Learning Theory's achievement component, pupils are expected to reach a specific degree of achievement. As an illustration of their mastery, students should, for instance, receive a 70% on the tasks. Thus, by emphasizing achievement and adopting modular-based teaching, lecturers may make sure that students show a thorough comprehension of the subject matter and apply what they have learned to master it.

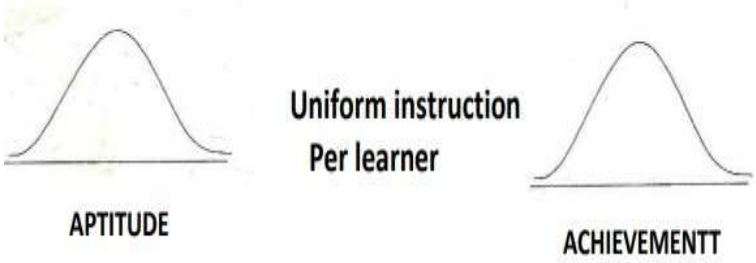

Figure 1. Adapted from Bloom (1990)

RESEARCH METHOD

Research Site

The study was conducted at one state university in Zimbabwe. The state university is a multi-faculty university that offers a wide range of academic programs. The university offers undergraduate programs and postgraduate programs in disciplines such as education, agriculture, engineering, and medicine, among other disciplines.

Study Design

This qualitative study adopted a case study design. The design was deliberately chosen because it enabled the researchers to concentrate on one state university while gathering rich insights from experienced lecturers regarding the effectiveness of the modular-based teaching approach. By focusing on a single institution, the study was able to capture clear perspectives that might have been overlooked in broader surveys. This approach also allowed for an in-depth exploration of the contextual factors influencing the adoption and implementation of modular-based teaching.

Participants of the Study

A sample of twelve participants was purposively selected for the study. This sampling technique was employed to ensure that the researchers obtained insights from lecturers with recognized areas of expertise and relevant experience in modular-based teaching. By deliberately targeting knowledgeable participants, the researchers were able to capture perspectives that were both credible and directly aligned with the objectives of the study. The sample size was determined in

line with recommendations from an empirical study done by Guest, Bunce, and Johnson (2006), who suggested that for qualitative studies, around 12 interviews should be carried out and are sufficient. There were six males and six females who participated in the present study, and their ages ranged from 25 to 55. The majority of the interviewed participants have more than two years of teaching experience at the institution.

Instrument

A semi-structured interview guide was used to collect data from the participating lecturers. This format was chosen because it provided a balance between structured questions and the flexibility to probe deeper into emerging themes. The guide contained questions that sought to understand the lived experiences and perceptions of lecturers regarding the effectiveness of modular-based teaching. For example, lecturers were asked how the modular-based teaching approach had influenced their teaching practices compared to traditional methods, what challenges they had encountered in implementing the approach, how students responded in terms of engagement and learning outcomes, and what opportunities they believed modular-based teaching created for interdisciplinary collaboration and research. By incorporating such questions, the study was able to generate rich qualitative data that combined consistency across participants with the freedom to explore unique perspectives.

Procedures

Face-to-face interviews were conducted with lecturers from one public university in Zimbabwe, drawn from across its various faculties. Each interview lasted approximately 30–45 minutes and was audio-recorded to ensure accuracy during later transcription. The research flow began with an introduction and explanation of the study's purpose, followed by obtaining informed consent from participants. After this, the semi-structured interview guide was administered, allowing lecturers to share their experiences and perceptions of modular-based teaching.

Data Analysis

Data were analyzed using the NVivo application, which enabled systematic coding and thematic analysis. Recorded interviews were transcribed in line with the interview schedule and imported into NVivo. Following Basit's (2003) framework, coding involved highlighting key phrases and quotations, which NVivo facilitated through its node system. These codes were organized into categories and then merged into broader themes. NVivo's digital tools streamlined the process by allowing efficient organization, retrieval, and visualization of data, making it possible to identify commonalities, differences, and patterns across participants' responses.

Ethical Clearance

Since it was critical to safeguard the interests and concerns of those who participated in the study, the researcher applied for the ethical clearance, and the study was approved by the National University of Science and Technology's Institutional Review Board under NUST/IRB/2025/22.

RESULTS AND DISCUSSION

Demographic Information

Table 1 below depicts the demographic information of the participants who took part in the study.

Table 1. Participants demographic information

Participant	Age	Degree	Gender
Participant 1	44 years	Masters	Male
Participant 2	37 years	Masters	Female
Participant 3	29 years	Masters	Female
Participant 4	50 years	PhD	Female

Participant	Age	Degree	Gender
Participant 5	44 years	Masters	Female
Participant 6	56 years	PhD	Female
Participant 7	35 years	Masters	Female
Participant 8	43 years	Masters	Female
Participant 9	55 years	PhD	Male
Participant 10	60 years	Prof	Female
Participant 11	37 years	Masters	Female
Participant 12	47 years	PhD	Male

The findings of this study are presented in table 2 below and are presented in terms of the codes and themes that emerged during data analysis. The participants were coded from Participant 1 (P1) to Participant 12 (P12) to anonymise their responses.

Table 2. Codes and themes

Theme	Codes (Lecturer Excerpts)	Interpretation / Relation to Theme
Influence of Modular Teaching on Lecturer's Role and Emerging Opportunities and Challenges	- (P8) Shifted role to designing self-contained modules; increased workload without incentives. - (P5) Role as facilitator/mentor; promotes student ownership; challenge with self-paced learners lacking motivation. - (P4) Requires covering wide topics, immediate feedback, flexibility; challenge in maintaining coherence and pace.	Lecturers perceive modular teaching as transformative, enabling innovation and diverse strategies. However, it increases workload, demands careful planning, and presents challenges in sustaining student motivation and course coherence.
Observed Successes and Areas of Improvement in Student Learning Outcomes with Modular Teaching	- (P1) Students engage deeply, revisit modules, improve comprehension; challenges with time management, procrastination, reliance on memorization. - (P2) Students gain independence and responsibility; risk of reduced peer interaction, need for collaborative projects.	Modular teaching enhances student understanding and independence. Yet, weaknesses in time management and reduced peer interaction highlight areas needing improvement.
Essential Resources for Successful Implementation of Modular Teaching	- (P7) Need for digital platforms (Canvas, Moodle, Teams) and multimedia tools. - (P6) Training in instructional design, digital tools, and assessment strategies. - (P12) Requirement for diverse, high-quality instructional materials (textbooks, case studies, multimedia).	Successful modular teaching requires investment in digital tools, lecturer training, and varied instructional resources to meet diverse student needs. Lack of these resources hampers effectiveness.
Future Evolution and Innovations in Modular Teaching	- (P10) AI and machine learning for personalization; VR/AR for immersive learning. - (P9) Emphasis on collaboration and interdisciplinary; project-based, cross-disciplinary teamwork.	Lecturers envision modular teaching evolving through advanced technologies (AI, VR/AR), interdisciplinary approaches, and flexible online platforms. Innovations aim to enhance personalization,

Theme	Codes (Lecturer Excerpts)	Interpretation / Relation to Theme
	- (P11) Online platforms for accessibility; micro-credentials and digital badges for skill recognition.	collaboration, and recognition of student achievements.

Theme: Influence of Modular Teaching on Lecturer's Role and Emerging Opportunities and Challenges

The majority of the lecturers viewed modular-based teaching in terms of their own roles and the opportunities and challenges brought about by this teaching approach. The majority of the lecturers indicated that while modular teaching allows them to be more innovative in their roles, it also comes with a lot of workload. The following excerpts from lecturers demonstrate the opportunities and challenges of modular teaching as reported by lecturers.

> ***(P8)*** *Modular teaching shifted my role toward designing comprehensive, self-contained modules. This has challenged me to create interactive content and engaging activities that target specific learning outcomes, making my teaching more effective. However, the workload of writing modules has increased without any incentives.*
>
> ***(P5)*** *As a lecturer, modular teaching has turned me into more of a facilitator and mentor than a traditional instructor. It encourages students to take ownership of their learning while allowing me to use diverse strategies like collaborative and project-based activities. Yet, self-paced learning can disadvantage students who lack motivation.*
>
> ***(P4)*** *Modular teaching has significantly changed my role, requiring me to cover a wide range of topics and keep students motivated with immediate feedback. While it offers flexibility, maintaining course coherence and pace is challenging. This demands careful planning and close monitoring of students' progress and needs.*

Theme: Observed Successes and Areas of Improvement in Student Learning Outcomes with Modular Teaching.

Some lecturers verbalised that while modular teaching was a good method of instruction, however, they indicated that there are areas such as time management skills that students may need to improve on. The following verbalisations capture the lecturers' views on observed successes and areas of improvement.

> ***(P1)*** *Modular teaching has helped students engage more deeply with fewer concepts, improving their understanding. They can revisit modules repeatedly, which strengthens comprehension and allows focus on one topic at a time. However, challenges like poor time management, procrastination, and reliance on memorization sometimes leave them underprepared for exams.*
>
> ***(P2)*** *Modular teaching has increased student independence, empowering them to take control of their learning. This self-directed approach has made them more responsible and focused, marking a significant success. Yet, it risks reducing peer interaction, so encouraging collaborative projects is essential to maintain a sense of community.*

Theme: Essential Resources for Successful Implementation of Modular Teaching

The interviewed lecturers indicated that modular-based teaching in its current state is not effective. They indicated that many resources were needed for this approach to be a success. The lecturers lamented lack of digital tools and lack of training by the lecturers on how to fully utilize these teaching tools. Below are the excerpts from some of the lecturers interviewed.

> **(P7)** *Teachers must sharpen their skills in digital platforms and use comprehensive tools for modular teaching. Learning management systems like Canvas, Blackboard, and Moodle allow students to access materials, submit assignments, and receive feedback. Multimedia resources such as simulations, Google Workspace, and Microsoft Teams further enhance engagement and learning experiences.*

(P6) *Lecturers need training to design and deliver effective modules that are fit for purpose. Capacitation should include instructional design principles, digital tools, and assessment strategies. Webinars, workshops, and courses on modular teaching methodologies help lecturers create engaging and meaningful learning experiences.*

(P12) *Successful modular teaching requires diverse, high-quality instructional materials. Textbooks, scholarly articles, case studies, and multimedia content provide comprehensive and engaging modules. These resources must address varied learning styles and levels of understanding to meet diverse student needs.*

Theme: Future Evolution and Innovations in Modular Teaching

Most lecturers interviewed pointed out that, as it is, the modular-based teaching was not effective; they indicated that they envisage an evolved teaching that is both advanced and collaborative. They indicated that innovations such as virtual reality (VR) and augmented reality (AR) integrated into modular teaching, offering immersive and interactive learning experiences that go beyond traditional classroom settings, could be integrated into modular teaching. The following verbalizations from the lecturers indicate their views on future evolution and innovations.

(P10) *Artificial intelligence, especially machine learning, can make modular teaching more personalized and adaptive. Future modules could adjust in real-time to each student's progress and provide tailored feedback, resources, and challenges. Integrating technologies like VR and AR would create immersive, interactive learning experiences beyond traditional classrooms.*

(P9) *Modular teaching should emphasize collaboration and interdisciplinary to meet evolving job market demands. By blending fields such as business and creative arts, students can develop diverse, well-rounded skills. Project-based learning and cross-disciplinary teamwork would better prepare students for real-world challenges and workforce complexities.*

(P11) *Technological advances can make modular teaching more accessible and flexible, especially through online platforms. This approach would reach wider audiences, including professionals and remote learners. Incorporating micro-credentials and digital badges would allow students to showcase their skills and achievements in a clear, shareable way.*

Discussion

The study sought to gather qualitative insights from lecturers regarding the effectiveness of modular-based teaching, and the results reveal mixed reactions. The finding that modular-based teaching is an effective method of instruction delivery resonates with the conclusions of Sadiq and Zamir (2021), Bragarenco (2023), and Maqsudova (2026), who similarly reported that modular teaching enhances student participation, enthusiasm, and a sense of ownership over learning due to the innovative roles adopted by lecturers. This outcome aligns closely with Bloom's Mastery Learning Theory, which emphasizes that students can achieve high levels of understanding when provided with structured learning opportunities, sufficient time, and supportive instructional environments (Vasilev, 2024; Jowallah & Bennett, 2025; Leland, 2025). In practice, lecturers in the present study created enabling conditions by allowing students to engage with modules according to their workload, thereby promoting self-paced learning and reinforcing Bloom's principle that mastery is attainable when learners progress at their own rate. Such flexibility empowers students to take responsibility for their learning, a hallmark of Bloom's framework.

However, the study also highlights tensions that echo critiques in the literature. Friestad-Tate et al. (2021) argued that modular teaching can lack interactivity and overwhelm students with dense material that may not make academic sense. This contradiction underscores the importance of aligning modular design with Bloom's insistence on formative feedback and structured scaffolding. Without opportunities for interaction and corrective guidance, modular teaching risks diverging from Bloom's vision of mastery learning, reducing its effectiveness. Thus, while the study confirms the potential of modular-based teaching to embody Bloom's principles of

learner autonomy and mastery, it also reveals that poor implementation can undermine these benefits, explaining the mixed reactions among lecturers.

Further, the study findings provide a clearer perspective on modular teaching in higher education, emphasizing its dual character as both an opportunity and a challenge. The observation that modular-based teaching presents advantages while simultaneously posing difficulties for students aligns with the conclusions of Sewagegn and Diale (2021), who likewise reported the coexistence of opportunities and challenges inherent in this instructional approach. A recurring theme emerging from the findings is the transformation of the lecturer's role from that of a traditional instructor to a facilitator and instructional designer. This shift has enabled lecturers to concentrate more deliberately on targeted learning outcomes and to adopt innovative pedagogical strategies such as project-based and collaborative learning. Such practices reflect Bloom's Mastery Learning Theory, which emphasizes structured instruction, formative feedback, and the creation of enabling environments that allow students to progress at their own pace toward mastery. At the same time, however, this transformation has introduced considerable workload demands, particularly in the development of modules, which are often undertaken without adequate institutional support or incentives. This tension highlights the practical challenge of fully realizing Bloom's vision: while modular teaching can embody the principles of mastery learning, its effectiveness depends on institutional commitment to supporting lecturers in their expanded roles.

Lecturers noted that modular teaching was effective because of its ability to allow students to focus on a particular topic, once at a time, and in so doing improved the understanding of the concepts taught. This finding aligns with findings from Herningtyas et al. (2025), who found modular-based teaching to be effective, as it allows learners to distinguish the specific goals, select materials and methods, and focus on a specific subject at a particular time. This particularity of the structure allows learners to revisit concepts and master them at their own pace. Furthermore, the self-paced nature of modular instruction risks diminishing peer interaction and community building, underscoring the need for intentional collaborative activities to maintain social cohesion.

The finding in the present study that the effectiveness of the modular-based teaching is contingent upon the availability of essential resources is in sync with findings from Fernandez et al. (2025) and Mpofu et al. (2026), who reported that essential educational resources such as modern technology, virtual classrooms, and self-learning modules were essential for modular-based teaching. Also, the findings of this study align with findings from Luqman et al. (2026), who researched integrated modular systems and found them to be effective if properly implemented. In the present study, lecturers emphasized the importance of digital infrastructure, including learning management systems and multimedia tools, to facilitate access, communication, and engagement.

Importantly, in the present study, lecturers envisioned a future where modular teaching is enhanced by immersive technologies such as virtual and augmented reality (Rahayu et al., 2006; Madinabonu, 2026). These innovations promise to elevate learner engagement and simulate real-world experiences, potentially bridging the gap between theoretical knowledge and practical application. However, realizing this vision requires strategic investment in infrastructure, training, and pedagogical redesign. While modular teaching offers promising avenues for personalized and outcome-driven education, its effectiveness hinges on institutional commitment to resource provision, capacity building, and pedagogical innovation.

CONCLUSION

The study concludes that modular-based teaching is a valuable innovation but requires proper implementation, particularly through lecturer training in module design. A hybrid delivery method that combines hard copies and electronic formats was found to enhance accessibility, student engagement, and lecturer-student interaction. These findings imply that modular teaching, when supported by training and technology, can strengthen higher education in

Zimbabwe. While the study was limited to one public university, this does not diminish its contribution, as it provides rich, context-specific insights into the approach's effectiveness. Future research should broaden the scope to multiple institutions and include student perspectives, enabling comparative analysis and the identification of best practices for modular-based teaching.

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