

Enhancing Evidence-Based Practice and Critical Thinking Skills of Nursing Students: Lessons from the Review of the Bachelor of Science in Nursing Curriculum of the University of Zambia

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Abstract

Background: Making changes in the existing curriculum aims, objectives, course contents learning outcomes and assessment strategies have become a fact of life for nurse educators. **Purpose:** To enhance the existing Bachelor of Science (BSc) in nursing curriculum through integration of evidence-based practice (EBP) and teaching of critical thinking skills. **Materials and Methods:** A needs analysis was conducted using a five-phased approach to review the BSc in nursing Curriculum. Kern's six-step model was adapted and introduced through a series of workshop exercises that highlighted the application of each step: 1) Desk review of the BSc curriculum offered globally; 2) Administration of the needs assessment questionnaire to key informants; 3) Strengths, weakness, opportunities and threat analysis; 4) Consultative meeting with major stakeholders; 5) Curriculum review. **Results:** The five-phased approach established some gaps in existing curricula, and identified critical core competences and best practices in integrating EPB and critical thinking in the BSc undergraduate curriculum and some "A" level content that was not in tandem with the practice of nurses. New courses were developed to support students in academic writing and enhance professionalism and duration of training was reduced from 5 to 4 years. **Conclusion:** The process demonstrated that BSc curriculum review, in fact, should be thoroughly scrutinized to encourage positive changes to the curriculum, provide opportunities for

team building and the development of leadership skills and a whole-of course perspective on the curriculum.

Keywords

Bachelor of Science, Nursing Curriculum, Evidence-Based Practice, Critical Thinking, Review

1. Background

In the current health situation, new diseases have continued to emerge and relatively rare diseases have also been shown to be on the rise. In addition, disease patterns have continued to change for both new and existing conditions. Further, there has been an accumulation of vast information on nursing care. All these changes in the health system and nursing profession require that the education system continuously integrate and strengthen important concepts that will meet the demands of society. The nursing profession requires more education and preparation to assume new roles in response to rapidly changing health care settings and an evolving health care system [1]. Improvements in existing nursing education systems have become necessary to ensure that the present-day and forthcoming generations of nurses can deliver safe, quality, patient-centered care across all settings [1].

The University of Zambia, School of Nursing Sciences (UNZASoN) undertook the latest review of its Bachelor of Science in Nursing curriculum in 2019. The aim of the review was to strengthen the curriculum through identification and inclusion of competences that will enable nursing students to fulfil their potential as primary care providers to the full extent of their education and training, and to enable the full economic value of their contributions across practice settings to be realized. Evidence-based practice (EBP) and critical thinking skill acquisition which could be facilitated by student-centred teaching/learning approaches improve learning outcomes and ultimately produce a competent and autonomous nurse capable of meeting diverse patient needs. EBP and critical thinking competences are essential process for a safe, efficient and skilful nursing intervention while student centered learning approach is an effective strategy that enhances learning of these two concepts [2]. Competences in EBP and critical thinking are one of the hopes of nursing education and are part of professionalism [3]. [4] reported that the realization about the importance for all healthcare professionals to develop a sufficient level of EBP competence is not new, as the first Sicily statement [5] outlined that it is a minimum requirement for all healthcare professionals to understand and implement the principles and process of EBP. Similarly, critical thinking skill is a basic competence that directs students to hone the skills of analysis and reasoning skills which further help them in higher education practice problem solving, creative thinking skills, and even motivate them to become more innovative [6]. Developing EBP and critical think-

ing skills at undergraduate level is therefore essential in building a scientific foundation for the nursing profession, for creating a discipline where truth is sought and implemented, and where the theoretical perspectives are increasingly integrated into practice.

Nursing scholars have proposed that EBP teaching should be introduced early in undergraduate nursing education [7] [8]. Further, the same scholars have recommended that EBP concepts should be integrated throughout the undergraduate nursing curriculum to connect multiple levels of prerequisite knowledge to equip undergraduate nursing students with the EBP competences necessary to satisfy future practice needs. Similarly, several authors report that critical thinking skills enable nurses to adopt creative and unique solutions, especially under unforeseen circumstances to make rational decisions about what they believe or do [9]. According to [10], critical thinking is at the core of being a good nurse notwithstanding that clinical skills in nursing are obviously important. The foundation for the development of critical thinking begins in the classroom or theory setting when students initially learn about nursing [11]. [12] also states that nursing graduates must have critical thinking skills in addition to basic nursing and science knowledge to make the necessary clinical judgment.

In sub-Saharan Africa, it appears that there is paucity of information on integration of EBP and critical thinking content in nursing curricula. For nurse training institutions that have recognized the need to incorporate the concepts of EBP and critical thinking into education programmes for nurses, challenges with implementation in teaching the two skills have been noted. For example, a study conducted at KwaZulu-Natal College of Nursing (KZN CN), an institution which offers a 4-year nurse training programme established that the school's curriculum did not have any specific guidelines for EBP teaching and learning; it only requires that research processes and steps to conduct research projects be taught to student nurses [13]. There is no mention of EBP and critical thinking skills or competences that must be acquired or achieved in their curriculum [13]. Such a situation may bring forth lack of commitment to ensuring that the EBP and critical thinking skills are learned by students.

Implementation of a successful EBP and critical thinking education is necessary so that from their novice stage, nursing students not only understand their importance and be competent in the fundamental steps, but should ultimately serve to influence behaviour in terms of decision-making, through application of these two competences in their professional practice [14] [15]. In essence, it serves the function of developing practitioners who value EBP and critical thinking and have the knowledge and skills to implement such practice. The ultimate goal of acquiring EBP and critical thinking skills which is to enhance the delivery of healthcare for improved patient outcomes through application of best guidelines is thus likely to be attained. [16] states that utilizing nursing best practice guidelines, reviewing and implementing applicable research evidence, and taking advantage of technological advances are ways in which nursing can move forward as a well-informed discipline.

Inasmuch as EBP and critical thinking skills are enhanced in the curriculum, the success of their development among students depends on the teaching and learning strategy adopted. One of the teaching and learning strategies that could enhance EBP is student-centred learning. Student-centred approaches seek to engage students actively in learning in ways that are appropriate for and relevant to them in their lives outside the classroom [17]. Higher education has supported a student-centred approach [18] and emphasized that students must know their own learning styles. Therefore, in addition to enhancing the EBP and critical thinking skills of the students, the needs assessment carried out by UNZASoN established that student-centred learning approach may facilitate acquisition of these two important competences. Student-centred learning allows individuals to be effective and flexible.

The UNZASoN also values EBP and critical thinking as reflected in its core values. However, the needs assessment for review of the BSc. Nursing curriculum revealed that program competences for EBP and critical thinking were not incorporated. It is therefore not clear whether the students attained the two competences or not. In addition, there was no specific topic that addressed EBP and critical thinking although some course descriptions merely made mention of EBP. This paper, therefore, reports on the process undertaken to review the Bachelor of Science in Nursing curriculum that enhances EBP and critical thinking.

2. Methods

A needs assessment was conducted using a five-phased approach to review the Bachelor of Science in nursing curriculum that was due for review. Kern's six-step [19] [20] were adapted, modified and introduced through a series of workshop exercises highlighted the application of each step: 1) Desk review, 2) Needs assessment, 3) Strengths, weaknesses, opportunities and threats (SWOT) analysis, 4) Consultative meeting, 5) Implementation/curriculum review.

2.1. Desk Review

The desk review focused on the following three areas: Evaluation of the competencies of the BSc curriculum at UNZA; An assessment of national, regional and global health trends; and review of BSc curricula at international and sub-region levels. The desk review was conducted to establish the gaps in existing curricula, and integrate evidence-based practice and critical thinking core competences in the undergraduate programs at the SoNs.

2.2. Needs Assessment

After the consultative meeting, a needs assessment was conducted through a questionnaire to gather information on the gaps and serve as the basis for reviewing the BSc curriculum. In order to reflect a diverse and representative sample, several stake holders were identified to participate in the needs assessment survey. The key informants included student nurses, nurses and health care

training and service regulators, government line ministries, nursing colleges, private and public hospitals, Non-Governmental Organizations, students and representatives of the general population. A total of 47 questionnaires were distributed to the identified stake holders and 36 were completed and collected. This gave a useable response rate of 76.6 percent. The stake holders agreed to reduce the number of years as most of the topics were repeated across courses, some “A” level content like physics was not in tandem with the practices of nurses and clinical teaching was inadequate. Students suggested that some courses be made half once duplicate topics with other courses were removed.

2.3. Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

A SWOT analysis was conducted through a team effort with all the 24 School of Nursing staff. It was conducted to analyze the SoNs strengths, weaknesses opportunities and threats. Some of the focus areas for the strengths analyzed included modes of curriculum implementation that are full time and distance, quality of staff and being the first school to offer BSc training. The school has weaknesses on adequacy of infrastructure, clinical staff and internet connectivity. Its opportunities include its recognition worldwide and rating at number 1 among the country universities, strong partnerships internationally and regionally and good will from the local stake holders. However, continued increased competition from institutions who have stepped up marketing & advertising rapidly, changes in clinical placement regulations especially the introduction of mandatory clinical placement fees and economic downturn are threats for the school.

2.4. Consultative Stakeholder Engagement

Brainstorming and consultative meetings were held with the major stakeholders and the school staff through the stakeholders, management, school curriculum and board of studies meetings. The curriculum, implementation plan and SWOT analysis results were presented to these stakeholders and thereafter, an interactive consultative discussion was conducted. This stage was important to ensure that all the relevant factors that could support or challenge implementation of the revised curriculum were considered. The stakeholders included maximum of two representatives from the Ministry of Health, World health organization, Nursing and midwifery council of Zambia, Health professions council of Zambia, Zambia Union of nurses Organization, East, Central and Southern African College of Nursing (ECSACON), Deans/Directors of health professions training institutions—public & private, Government and Private Hospitals, Medical Doctors’ Association of Zambia, Bachelor of Science Nurse Alumni and UNZA Nursing Students’ Union.

2.5. Review of the Curriculum

A position paper to justify the need for the BSc curriculum review was con-

ducted and sent to the UNZA senate for approval after concluding the needs assessment from the students and other stakeholders. The permission was obtained to tailor make the “A” level courses to health professional program, introduce a course, Communication, Professionalism & Student Support at 1st Year level, Integrate interprofessional learning for the CBE courses; introduce CBE course at 2nd Year level, revise course sequencing e.g. introduce Research, psychology, Epidemiology and Biostatistics in 2nd Year, review repeated topics, Strengthen clinical practice in the ratio 1:3 theory-practice and consider reduction in the number from five to four years.

3. Results

3.1. Desk Review

The desk review of the BSc Nursing curriculum revealed that generally the BSc curriculum competencies and content was fairly good. The reviewers included students, lecturers, regulators and Deans from other health science related school at the University of Zambia. Some gaps in the curriculum were identified and some recommendations were provided to enhance evidence-based practice, critical thinking skills, research skills and other relevant skills necessary towards producing a competent and autonomous nurse capable of meeting diverse patient needs (**Table 1**). The desk review established that: the international USA and UK based BScN programmes of 3 years duration and the regional BScN programmes are four years duration. The national level BScN programmes are of 4 years duration some of which have been certified by the Nurses and Midwifery Council of Zambia and Higher Education Authority. The Zambia Qualification Authority (ZQA) classification also indicates that one can attain level 7 (Bachelors) by adding four years to level 6 (Senior Secondary). Sequencing of courses was also revised e.g. Paediatrics and Pharmacology should be taught in the third year accordingly like the USA and UK Based BScN programmes of three years duration.

Moreover, the Courses offered in International, and regional BScN programmes are equivalent to those of the BScN UNZASoN. These are broadly categorized as Advanced “A” level sciences of Biology, Chemistry and Mathematics, followed by Human Basic Sciences of Physiology, Biochemistry, Anatomy and Pathology. Others are Behavioural Sciences of Sociology and Psychology and introduction to University Studies including communication skills study and ICT. Nursing Sciences mandatory among all are fundamentals (foundations) of Nursing, Medical and Surgical Nursing, Paediatrics Nursing, obstetrics and Gynaecology. Finally Nursing Education, Leadership management and Governance practice and Research methods have ascertained that the courses offered by SoN in the BScN programme are equivalent to those offered regularly and internationally, and taking into consideration the finding of the Desk Review, SoN is proposed to change duration of the BScN programme from five to four years.

Table 1. Gaps in the BSc nursing curriculum and recommendations for improvement from stakeholders.

Curriculum Gaps	Suggested Recommendations
1. The number of courses in relation to the training period was quite many probably due to repetition of some content as well as the inclusion of some “A” level content that was not in tandem with the practice of nurses. The programme is thus too long	Some A level courses not in tandem with the practice of nurses were removed
2. Sequencing of courses such as Pharmacology, Paediatrics and Paediatric Nursing and Pharmacology needed review to allow for prerequisite courses to be taught earlier	Sequencing of courses and review was done
3. Some courses were repeated	Segmented learning across disciplines
4. Course grading does not allow for fairness between pre- and in-service students	Courses revised to allow for fairness
5. Clinical placement and supervision needed strengthening	Recommend for appointment of clinical tutors in all clinical practice areas
6. Poor academic writing skills and inadequate support systems for students	Introduce new half course that will reflect communication skills, university governance student support and Scope of practice
7. Some competences were at a lower level of the Zambia Qualifications Authority (ZAQA) framework	Expand role of graduates in line with Nursing and Midwifery Act 2019 as well as competences required at this level as enshrined by the Nursing and Midwifery Council of Zambia and the ZAQA framework
8. There was a focus on general courses and not on specialised courses—Focus on specialised programmes and reduce on general courses	The focus was moved to specialized courses

Furthermore, it was established that there are several concepts that have been repeated in the curriculum e.g. student support Services which has been repeated in the abridged Medical-Surgical Nursing and Fundamentals of Nursing as well as Nursing Education. There is also a repetition in content in Pathology, and Medical Surgical Nursing. The number of hours allocated to theory should was too much and the critical areas for clinical placement/practice need to be identified. Competencies like (EBP), teaching of critical thinking skills, enhancement of students centered teaching/learning approaches, improving learning outcomes necessary for producing a competent and autonomous nurse capable of meeting diverse patient needs were not in the curriculum.

3.2. Needs Assessment

The needs assessment survey revealed that the number of courses in relation to the training period were quite many probably due to repetition of some content as well as the inclusion of some “A” level content that was not in tandem with the practice of nurses. The programme is thus too long. Sequencing of courses such as Pharmacology, Paediatrics and Paediatric Nursing and Pharmacology needed review to allow for prerequisite courses to be taught earlier. Segmented learning across disciplines was encouraged. It was established that course grading does not allow for fairness between pre- and in-service students. Clinical

placement and supervision needed strengthening. There were poor academic writing skills and inadequate support systems for students. It was discovered that some competences were at a lower level of the Zambia Qualifications Authority (ZAQA) framework. The curriculum focused on general courses and not specialized courses. Recommendations were made to consider lower level qualifications for students who fail to complete the programme and incorporate EPB, critical thinking, emerging aspects in health and health care such as emerging diseases (for example, COVID-19), use of innovative teaching methods, strengthen clinical leadership and other relevant skills.

3.3. Stakeholder Engagement

The meeting resulted in the validation of the gaps and identification of best practices from the curriculum as well as the discovery of other gaps and best practices including EBP and critical thinking skills. The stakeholders were willing to support the UNZASoN in the curriculum review and suggested that the “A” level courses be tailor made to health professional program, the school should introduce a course, Communication, Professionalism and Student Support at first Year level and integrate interprofessional learning for the CBE courses; introduce CBE course at second Year level. The school was advised to revise Course sequencing e.g. Introduce Research, Epidemiology and Biostatistics in second Year, review repeated topics, strengthen clinical practice in the ratio 1:3 theory-practice and consider reducing duration of training from five to four year to match international and regional standards.

3.4. Review of the Curriculum

Following the results gathered from desk review needs assessment, stakeholder engagement and SWOT analysis (**Table 2**). The curriculum road map was outlined; this was conducted in conformity to the agreed reduced number of years

Table 2. SWOT analysis results.

SWOT ANALYSIS RESULTS				
NO	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
1.	First provider of BSc nurse training in the country	Non-availability of clinical teaching staff	Recognized institution worldwide: rated on position 1 in Zambia	Continued increased competition who have stepped up marketing and advertising rapidly
2.	Established programme since 1989	Non-availability of independent science laboratory	Strong partnerships with global and regional institutions	Changes in clinical placement regulations especially introduction of mandatory clinical placement fees
3.	Successful different modes of implementation: full time and distance	Limited infrastructure	Expansion of online programmes	Economic downturn
4.	Quality of staff	Intermittent internet connectivity	Good will from stakeholders	

for the program from five years to four years. Almost all courses were revised to remove repeated topics, integrate EBP, teaching of critical thinking skills and enhancement of student centered teaching/learning approaches was conducted to improve learning outcomes. The prescribed and recommended books were updated. The “A” level courses were tailor made to health professional program, a new course, Communication, Professionalism & Student Support at first Year level and interprofessional learning for the CBE courses was intergrated in the curriculum. Course sequencing was revised and clinical practice was strengthened in the ratio 1:3 theory-practice. BScN Curriculum review was undertaken in 2019 and curriculum implementation in 2021.

4. Discussion

Although the study findings signify that the BSc. Nursing curriculum was fairly implemented from 2014 to 2021, some participants cited EBP and critical thinking as some of the competences that were inadequately addressed in the curriculum. Such a scenario is a potential threat to the attainment of EBP and critical thinking skills by nursing students; and consequently compromises provision of safe and quality care. [2] reported the lack of evidence-based practice in nursing resulted in negative outcomes for patients. In addition, patient safety and quality of care require that future nurses have EBP skills, which means that they must use available research as well as patients’ preferences and their own clinical expertise in decision-making processes [7] [21]. Since the BSc. Nursing programme prepares graduates to assume responsibilities as professional and competent nurses at basic level in providing promotive, preventive, curative and rehabilitative services, it is cardinal that EBP and critical thinking skills be strengthened at this level of nurse training. Thus, enhancing EBP and critical thinking skills of BSc. Nursing students will equip them with prerequisite knowledge and skills that will enable them make rightful decisions in nursing situations and protect the rights of individuals and groups in pursuit of health.

Following the UNZASoN review process, EBP and critical thinking skills were integrated in all the courses from year 2 to year 4 to allow for early exposure to the concepts. This decision is supported by [22] who reports that the nature of EBP, its relevance to nursing, and the skills needed to support it should be the required components of baccalaureate education and must be introduced early in students’ development as independent, self-directed learners and as professional nurses. Similarly, [11] states that it is necessary for nursing students to be introduced to the concept of critical thinking early within the nursing program. Introduction of early exposure to the concepts of EBP and critical thinking could prepare students progress through the nursing program effectively as they would be able to apply the skills in the performance of learning activities. Without evidence of exposure to EBP and critical thinking skills from the onset of any teaching activity, students are less willing to participate and actively engage in the learning experiences offered [23].

Enhancing critical thinking content into a nursing curriculum also serves another purpose as it complements attainment of EBP skills. Critical thinking skills are congruent with and needed for EBP and that both competences can be taught and fostered in baccalaureate nursing education programs as well as in practice settings [22]. In addition, the acquisition of critical thinking is reported to be of paramount importance among the knowledge, skills, and processes needed to support EBP [22] [24]. The ability to think critically builds the foundation for clinical decision making and assists nursing students and nurses in thinking beyond routines and protocols. Thus, critical thinking allows nursing students to be reflective and critical in their daily practice and provides them with the confidence to be prudent in the performance of EBP activities as well as differentiating good practice from ineffective practice. Further, the development of critical thinking can prepare nurses with the necessary skills and dispositions (habits of mind, attitudes, and traits) to support EBP [22].

The recognition to enhance EBP and critical thinking skills in the curriculum provided an impetus for UNZASoN to level learning with the rapidly evolving training regulations and professional practice. The training duration for BScN in most universities globally and regionally train undergraduate nursing students for a period of 3 - 4 years (Penn State University, 2020; Africa University, 2020; Cardiff University, 2020). With early introduction of EBP and critical thinking skills, nursing students are likely to apply these two concepts at early stage training and lifelong learning is likely to be attained in the initial years of training. Establishing an evidence-based nurse practice is a means of engaging in lifelong learning to strengthen decision-making skills. [25] demonstrated that EBP and critical thinking skills has had lasting effects for 6 weeks after completion of learning on all the EBP variables and critical thinking. Kim's findings and partly our findings are relatively consistent with previous studies on EBP education incorporated into clinical practicum. [26] found improvements in EBP knowledge, attitude, and behaviour (use) following a 4-week self-directed learning and three workshops during clinical practicum.

It is therefore possible that with the EBP and critical thinking skills that have been strengthened in the UNZASoN curriculum by integrating these concepts at an early stage of training (year 2) and throughout training, nursing may not require additional time for learning certain topics repeatedly. Thus, course load may reduce and consequently the reduction in the number of years for training. Partly, this is what has led to the reduction of training for the UNZASoN BScN program from five to four years. Some universities in Western countries which had suggested inclusion of EBP and critical thinking skills in their curricula had expected that their undergraduate students will attain desired competences in critical appraisal and the synthesis of research evidence by their third year [27] [28]. However, we propose that a thorough yearly monitoring process as well as evaluation plans to ascertain the development of these competences be put in place. Additionally, the reduction in duration of training for the BScN program

at UNZASoN has been attributed to the 3-4 years length of BScN training currently offered by universities whose curricula was reviewed although the syllabi was not explicitly studied. Thus, it is not clear whether content on EBP and critical thinking skills were integrated into the early years of nursing students' training.

In addition to the inclusion of EBP knowledge and skills in undergraduate nursing curricula, educators must consider effective strategies and resources to enhance and foster a positive attitude toward EBP in students [2]. This may also be the case for the attainment of critical thinking skills. Evidence from the SWOT analysis revealed that UNZASoN have well trained faculty and has strong partnerships with regional and international universities. These findings are similar from those obtained from the local stakeholder engagement where partners re-affirmed their support to UNZASoN. Specific attributes of faculty need to be present in order develop effective EBP and critical thinking skills among the students. Having knowledgeable faculty who know how to pose questions from lower to higher levels of abstraction and explain the questioning process are some essential characteristics [2]. Additionally, prior to effectively teaching of critical thinking, faculty must possess a clear understanding and expertise of the purpose of the content [29] [30].

Strong partnerships are an essential resource to developing EBP and critical thinking skills among nursing students. While a considerable amount of EBP activity throughout health profession education is apparent, effectively embedding EBP throughout curricula requires further development, with a 'real-world' pragmatic approach that engenders dialogue and engagement with all stakeholders required [14]. This is supported by [31] who reported that establishing interprofessional teaching partnerships (such as collaboration with librarians to better teach on the use electronic databases and with clinical professionals to better teach on the application of evidence) may be considered as potentially supportive EBP teaching resources. UNZASoN would therefore seek for key perspectives from EBP and critical thinking education experts from its partners during the implementation of the revised BScN curriculum.

The UNZASoN curriculum review process also established challenges that would hinder successful acquisition of EBP and critical thinking skills among nursing students. Non-availability of clinical teaching staff, intermittent internet connectivity and increased competition from other universities in the country were some of the challenges UNZASoN was facing. National surveys of EBP education delivery in UK, Canada, New Zealand and Australia [32] [33] found that a lack of academic and clinical staff knowledgeable in teaching EBP was a barrier to effective and efficient student learning [14]. To advance clinical effectiveness of EBP and critical thinking, UNZASoN set a target of recruitment of clinical staff, re-orientation of the available staff to clinical application of EBP and critical thinking concepts and improvement in internet connectivity by within six months of implementation of the revised curriculum. However, UN-

ZASoN recognizes that it would have been more prudent to mitigate the challenges prior to implementation of the curriculum.

It is undisputable that at a practical level, teaching EBP and critical thinking requires a more concerted effort to move away from a predominant reliance on stand-alone didactic teaching towards clinically integrative and interactive teaching in addition to utilizing multiple sources of literature. Such a practice is essential to bridge the gap between academic and clinical worlds, enabling students to experience “real” translation of EBP in the clinical context [14] [32]. Thus, the successful attainment of EBP and critical thinking requires a pragmatic amplification of the discourse between academic and clinical teaching staff. Further, realization of successful student learning and understanding of EBP and critical thinking skills reflects into quality education, thereby making the university to remain competitive in the training of BScN students.

5. Conclusion

Continuous BSc curriculum review is a data-driven approach for improving the curriculum’s quality, ensuring that delivery issues that affect the student experience are quickly detected and corrected. The BSc curriculum review was used as a springboard for integrating evidence-based practice and critical thinking skills instruction. The process demonstrated that BSc curriculum review, in fact, should be thoroughly scrutinized to encourage positive changes to the curriculum, providing opportunities for team building and the development of leadership skills and a whole-of course perspective on the curriculum. It also provides a portfolio of evidence for formal course reviews and enables new employees’ professional development based on the collective wisdom of experienced course assessors.

Ethical Approval

Ethical approval was granted by the University of Zambia-Biomedical Research Ethics Committee (REF: 920-2020).

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Conflicts of Interest

Authors declare no conflicts of interest.

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