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Research Article

Assessment in a health science programme at a South African University: views and experiences of students

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Abstract

The importance of assessments in education cannot be over-emphasised. The reason is that assessments not only promote students' learning but also evaluate students' competencies, particularly in the field of health sciences, such as acupuncture. Therefore, it is crucial for higher education institutions to ensure that assessments in their programmes are valid and reliable. However, there is a distinct lack of research focusing on assessments in acupuncture programmes. This study aimed to explore students' views and experiences of an acupuncture programme at a higher education institution within the South African context. The revised Bloom's Taxonomy was utilised as the theoretical lens to understanding students' views and experiences. A qualitative single case study design was employed in this study. The authors followed a purposive sampling strategy to recruit participants from a public university in South Africa. Ten participants were selected for this study. Thematic analysis was utilised in this study. The results of this study were: Participants stated that it was important to utilise multiple assessment tools for the educational evaluation of the acupuncture program, the frequency and continuity of the assessment motivated learning, each of the assessment tools was valuable and not superior to the other, and the assessment techniques used with the aims of the acupuncture program should be compatible.

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Introduction

Research across the globe has argued the importance of assessment in education. Assessment is an integral part of teaching and learning at higher education institutions. It provides evidence to lecturers on the quality of their teaching and students understanding of the content delivered. Stăncescu and Drăghicescu (2017) emphasise the importance of assessment and agree that it is a fundamental aspect of all teaching and learning globally in all educational institutions. According to the Department of Basic Eeducation [DBE] (2011), assessment is a continuous planned process of identifying, gathering and interpreting information about the performance of students, using various forms of assessment. The information gathered from the assessment is used by academics to assist students with their learning to improve the process of learning and teaching. The value of assessment in the health science education cannot be overemphasised.

Within the field of health science education, assessment promotes students' learning and evaluates their competencies in preparation for the world of work (Stăncescu & Drăghicescu, 2017). Liljedahl (2010) believes that

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assessment also acts as an indicator of the teaching content presented by the lecturers within this field. Through continuous assessment, lecturers can evaluate and reflect upon their teaching strategies. This view is supported by Khan (2012) and Umar (2018) who agree that assessment refers to the activities teachers (lecturers) and students undertake to get information that can be used to improve teaching and learning. In this study, the authors focused on exploring acupuncture students' experiences of assessments in health sciences within the South African context. It is of profound significance since the identified programme at a South African higher education institution (HEI) is a newly developed programme, and it is a unique programme in the African context in the HEI environment.

Khan (2012) acknowledges the importance of assessment in enhancing and promoting students' learning. He further articulates that continuous assessment clarifies the outcomes of the study and report on the progress of students' learning. The authors concur that the ultimate goal of all assessments is improving students' learning and achieving the desired outcomes so that they are competent and confident in the world of work. Furthermore, the authors contend that assessment within the acupuncture programme should be used effectively, so that lecturers can reflect on their teaching to improve learning outcomes. According to Lijedahl (2010), assessment should provide students with an opportunity to self-reflect on their skills and competencies s to meet the required learning outcomes in the acupuncture programmes.

Assessment in Higher Education

Amua-Sekyi (2016) indicates that assessment plays several crucial roles in higher education to promote quality teaching and learning outcomes. Assessment facilitates measuring students' achievement in a programme, which ensures that successful graduates meet specific learning outcomes in a particular programme (Yambi, 2018). Khan (2012) concurs with Black and William (1998) who indicate that assessment is a practical approach to strengthen learning and identifying gaps and challenges in students' understanding and application of the teaching and learning content. According to Liljedahl (2010), assessment in higher education is defined as the process of collecting and analysing data to make inferences about teaching and learning, strengthening and promoting learning outcomes (DBE, 2011) This process is further accepted by Capraro et al. (2012), who articulate that assessment is the action of documenting students' knowledge, skills, value and attitudes through a measurable approach. Umar (2018) explains that assessments are academic activities that aim at strengthening teaching and learning. Khan (2012) agrees with Earl (2006), who acknowledges the importance of assessment in enhancing students' learning.

In this study, assessment refers to an integrated approach to facilitating and evaluating students learning in the acupuncture programme using various types and methods of assessment techniques. Stăncescu and Drăghicescu (2017) state that assessment will clarify the study's goal, report students' learning progress, and reflect the quality of teaching. Amua-Sekyi (2016) further points out that assessment plays numerous important roles in education. For instance, assessment will facilitate measuring students' achievement in a programme, providing authentic feedback to students, validating students responses to test and exam question. For lecturers assessment gives them the opportunity to reflect on their teaching, the implementation of various teaching methodologies and strategies, the depth and scope of their teaching in relation to students levels. According to Department of Higher Education's assessment policy, quality assessment will ensure that successful graduates meet specific learning outcomes in a particular programme in the institution. Although assessment provides information on students' learning achievement, Flórez and Sammons (2013) and Khan (2012) argue that the ultimate target of assessment is improving students' learning and providing lecturers with the opportunity to reflect on their teaching.. The authors believe that assessment is crucial to enhance learning and reflects students' competencies to meet learning outcomes in all educational programmes.

Challenges of Assessment in Health Sciences Programmes

Assessment is vital in higher education institution, since formative and summative play a significant role students completing their studies. In higher education institutions, the most common assessments form is summative (Yambi, 2018). Summative assessment, as defined by Earl (2006) and Yambi (2018), as assessment taking place at the end of an educational activity or programme. The primary purpose of summative assessment is to measure students' overall performance by summarising students' achievements (Umar, 2018). It often takes the form of examinations or tests and

is referred to as the assessment of learning (Amua-Sekyi, 2016). However, Umar (2018) critiques summative assessment and states that it does not offer appropriate and timely feedback to students during the learning process since it only takes place at the end of a module. It fails to identify students' competencies after a period of learning (Yambi, 2018). The authors concur with Umar (2018) that various appropriate assessment approaches should be explored to assess and evaluate students' learning. In the authors' opinion, assessment should be utilised effectively to promote students' learning process and investigate students' achievement. Therefore, it is of profound significance that assessments are valid and reliable (DBE, 2011).

Validity of assessment refers to the degree the test measures what is to measure, while reliability focuses on the consistency with which it measures what is intended to be measured (Tosuncuoglu, 2018). Yambi (2018) agrees with Earl (2006) that a valid and reliable assessment has the following characteristics. Firstly, there must be explicit purposes for assessment, which is an essential requirement to promote effectiveness in the assessment. Secondly, there should be coherence in classroom assessment that meets the purpose of learning goals and criteria. Thirdly, classroom assessment will be in various forms that best suit students' learning goals and needs. These forms include questioning, feedback, self-assessment, and the formative use of summative assessment (Flórez & Sammons, 2013; Umar, 2018). However, most assessment still focus on recall instead of application of knowledge.

Strategies to Improve Assessment

Esomonu and Eleje (2020) are of the view that there are diverse assessment techniques to promote students' learning in the field of health sciences. These approaches include classroom diagnostic assessment, formative assessment, formative use of summative assessment, objective structured clinical examination (OSCE) and portfolio assessment (Jang & Wagner, 2013; Khan et al., 2013; Payne, 2014).

Classroom diagnostic assessment in education focuses on identifying students' strengths and weaknesses for improvement (Jang & Wagner, 2013). Esomonu and Eleje (2020) explain that there are various classroom assessment techniques that contribute to diagnostic assessment, such as quizzes, student interviews, student reflections, and classroom discussions. The authors believe that different types of classroom assessments play a critical role in diagnostic evaluations. They should be an integral part of the daily learning process. This view concurs with Yambi (2018), who agrees that classroom assessment will reflect how students learn, their motivation to learn, and how lecturers teach. Yambi (2018) further explains that classroom assessment will assist lecturers in identifying students' learning process, which promotes teaching and learning. The reason is that lecturers prefer to use the results for the assessment to strengthen teaching since lecturers develop, administer, and analyse the questions in classroom assessment (Khan, 2012).

There has been arguments that time on task and increased time to complete an assessment is beneficial to attain the learning outcomes. Despite the critical role of classroom assessment for diagnostic purposes, Earl (2006) argues that there is no direct evidence that increasing time on assessment will strengthen learning. Therefore, lecturers must determine appropriate assessments to strengthen the educational programme, which requires that assessments to be valid and reliable. Classroom assessment can be utilised to assess students' knowledge in remembering, understanding, applying, analysing and creating (Krathwohl, 2002). The term formative assessment refers to the continuous process of assessing students in a course, which provides feedback to responsible lecturers to enable them to judge how well students are learning (Earl, 2006).

Formative assessment is most appropriate where the results are used internally by those involved in the learning process that is students, lecturers, and curriculum developers. (Yambi, 2018). It also provides information on the effectiveness of the teaching strategies employed , thus assisting lecturers to determine an appropriate remedial action where necessary. For this reason, Amua-Sekyi (2016) states that formative assessment is appropriately referred to as 'assessment for learning.' Yambi (2018) concurs with Amua-Sekyi (2016) that the purpose of formative assessment is to enhance the learning process by providing feedback to students.

Therefore, formative feedback is exploratory, provisional, and aims at prompting further engagement from the students as part of ongoing communications between and amongst students and lecturers (Amua-Sekyi, 2016). This implies that the feedback process in the learning cycle commences with the production and submission of student work,

followed by lecturer assessment and feedback on the task (Yambi, 2018). Earl (2006) points out that students are more likely to be motivated by having their learning progress acknowledged compared to merely the success or failure in summative assessment.

Despite the difference between formative and summative assessment, Payne (2014) is of the view that summative assessment can be used for formative purposes. This is achieved by assessing students periodically throughout module (continuous assessment).. Lecturers need to provide feedback to students for further improvement. The authors agree that purposeful planning and implementation of formative and summative assessment in the classroom will contribute to improvement in student learning outcomes, further promoting their competencies in the world of work. Flórez and Sammons (2013) suggest that integrating summative and formative assessments will promote students' success in education. The reason is that students tend to apply information from the summative assessment to facilitate their learning and measure their achievement at a particular time and level of study.

In the authors' opinion, it is of significance to adopt summative assessment in the acupuncture programme since the students master the acupuncture practice through continues practice and repetition. This view concurs with Amua-Sekyi (2016) and Yambi (2018), who point out that summative assessment provides formal evidence for grading and measuring students' progress; it also confirms students' abilities and competencies to employers of acupuncturist. In the world of work, assessment profile and reports are considered to have a socially high value, indicating to the employer the calibre of employees they are recruiting into the organisation. In the field of health sciences, objective structured clinical examination is an effective method to assess students' clinical competencies. It is practically orientated and allow students to learn from their mistakes (Amua-Sekyi, 2016). OSCE also provides students with multiple opportunities of mastering the assessment activity.

Khan et al. (2013) indicate that OSCE was developed and introduced into the medical field to improve the validity and reliability of assessment and to reveal students' competencies.. Figure 1 show students engaging in OSCE in the acupuncture programme at the higher education institution. According to Khan et al. (2013), OCSE provides for multiple stations in one examination, where each station tests a single focus area or topic within allocated times. Students move from one station to another in a pre-designed order. The purpose of OSCE is to assess students' clinical competency in a simulated environments, where components are presented as broken-down objectives (Ten Cate et al., 2010). These researchers agree that OSCE does not replace the traditional assessment but serve as a supplement for traditional assessment assessment, such as formative and summative assessment.

Figure 1. Participants attending a mock OSCE

Haldane (2014) reports that portfolio assessment is accepted in health sciences education. Portfolio assessment refers to a written collection of students' work, which reflects their efforts, progress, and achievement in the education programme (McDonald, 2012),. These researchers concur that portfolio assessment is more effective in evaluating areas that are difficult to be assessed by traditional methods in a wide range of clinical contexts. These areas include attitudes, personal attributes, reflection, and professionalism (Haldane, 2014; Mokhtaria, 2015). The authors agree that portfolio

assessment effectively measures students' competencies in clinical practice since it allows them to reflect on their learning process. In 2012, a portfolio approach was adopted in the United Kingdom, which required licensed doctors to keep a portfolio of evidence of their practice for evaluation (General Medical Council [GMC], 2012).

Theoretical Framework

The Revised Bloom's Taxonomy developed by Anderson and Krathwohl (2001) was utilised as a theoretical lens in this study to understand participants' views and experiences of assessment in the acupuncture programme. In 2001, Anderson and Krathwohl proposed the revised Bloom's Taxonomy, which was developed from Bloom's Taxonomy (Hu, 2022). Bloom's Taxonomy has been used in education since the 1950s. According to the Revised Bloom's Taxonomy, there are four types of knowledge, namely, e factual knowledge, conceptual knowledge, procedural knowledge and metacognitive knowledge. This knowledge is further categorised into six processes: remembering, understanding, applying, analysing, evaluating and creating [Figure 2] (Barari et al., 2020). The Revised Bloom's Taxonomy is a valuable tool to guide teaching and institutional planning, particularly with regard to assessments. It provides examiners with an opportunity of setting questions at different cognitive levels. It also caters for various categories of students, from below average, average and above average.

The authors believe that the Revised Bloom's Taxonomy provide lecturers with the opportunity to evaluate how well the student can recall and explain content knowledge directly (remembering and understanding), how good the student is at applying this knowledge to a new situation (application), how well a student can differentiate and critique the information of a topic (analysis and evaluation), and how effective students are in extending their learning to new areas (creating). These skills represent different, progressive and cognitive levels of understanding that fall along an abridged hierarchy as outlined in the revised version of Bloom's Taxonomy developed by Anderson and Krathwohl [see Figure 2] (Chandio et al., 2016; Hu, 2022).

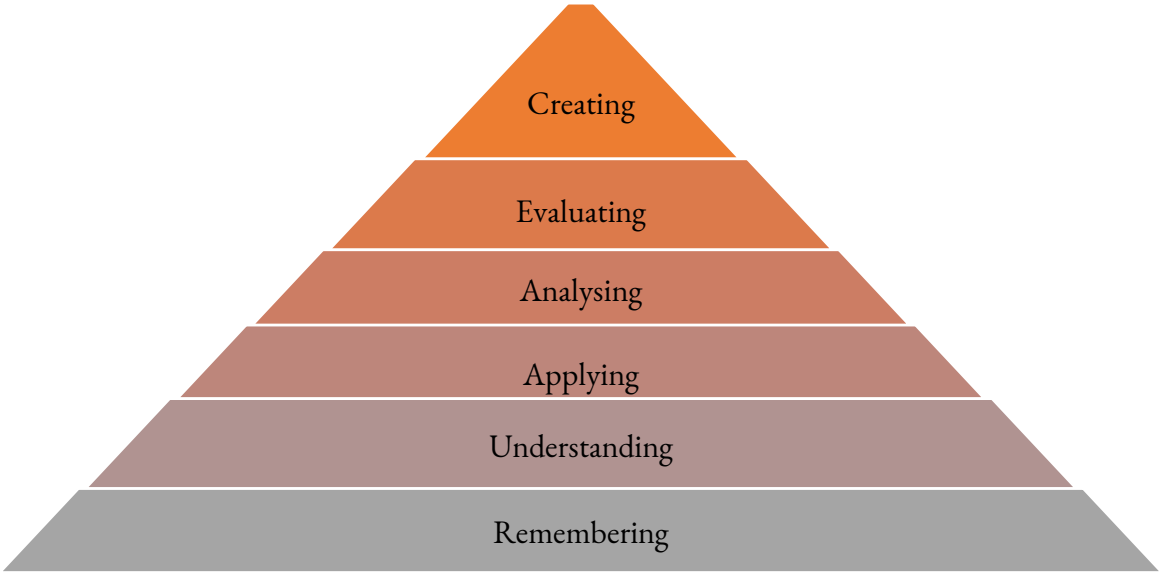

Figure 2. Revised Bloom's Taxonomy (As adapted from Barari et al., 2020)

Research problem statement and research question

Assessment in most higher education institutions in South Africa has adopted summative assessment as its primary form. This form of assessment has given students very limited opportunities for success. There is a lack of multiple opportunities for success in higher education due to the nature of traditional assessment forms. The type of assessment students are exposed to at higher education institution is primarily examination. For this study, the authors asked the questions, "*How do students in the acupuncture programme experience assessment?*" and "*What are the views of students towards the assessment form in the acupuncture programme.*"

Method

Research Design

In this study, the authors employed a qualitative research approach, with an interpretivist paradigm. Since the participants were a specific cohort, the authors opted for a a single case study design.The authors believed that the qualitative approach was suitable for this study since they aimed to explore lived experiences of participants (Hu et al., 2022; Hu & Venketsamy, 2022a). The interpretivist paradigm was adopted in this study which is a subjective epistemology (Creswell, 2014; Venketsamy & Hu, 2022). The acupuncture programme at an identified public university in Gauteng province was selected as the case for this study. The reason was that this was the only HEI that provided an acupuncture programme in SA that the authors had an opportunity to access (Yin, 2018).

Participants

In this study, the authors followed a purposive sampling strategy to recruit participants. Aninvitation to participate was posted on the notice board at the identified campus from March 2022 to April 2022. Participants who met the inclusion criteria were allowed to participate in this study. The inclusion criteria were: (i) they needed to be registered in the second, third or fourth year of study for the Bachelor of Health Sciences in Complementary Medicine; (ii). they must agree to participate in this study voluntarily by signing the research consent form; and (iii). they must be above the age of 18. There were only ten (10) students who responded to the invitation and indicated their willingness to participate in this study. To ensure confidentiality and anonymity, codes were used during the entire process of the research; for instance, the code P1-Y2 referred to Participants 1 in Year 2 of their study. Table 1 presents a summary of the participants' information.

Table 1. Participants' information

Pseudonyms	Gender	Year of study
P1-Y2	Female	2nd year
P2-Y2	Male	
P3-Y2	Male	
P4-Y3	Female	3rd year
P5-Y3	Female	
P6-Y3	Male	
P7-Y4	Female	4th year
P8-Y4	Male	
P9-Y4	Female	
P10-Y4	Female	

Data Collection Tools

The authors used multiple data collection tools; these included text-based interview (see Appendix 1), observation, participants' reflective journals and documentation. The authors concur with Yin (2018) that the use of multiple data collection techniques allows for triangulation which would strengthen the trustworthiness of the study (Hu & Venketsamy, 2022b). A permission letter was obtained from the head of the department before the commencement of this study. The data collection process took place between March to April 2022.

Data Analysis

In this study, the authors opted for the thematic analysis to elicit participants' views and experiences of assessment in the acupuncture programme. During the data analysis, the authors followed the six-step thematic analysis as proposed by Creswell (2014). The six steps include familiar with data, coding, generating themes, reviewing themes, defining themes and writing up (Venketsamy, Smart & Hu, 2021). Qualitative validity criteria, including credibility, transferability, dependability, and confirmability, were ensured in this study by being audited by a second coder.

Ethical Committee Permission

A Research Ethics Committee approved ethical clearance at a public university in Gauteng Province (Reference: EDU137/21).

Results

Findings from this study revealed that all participants acknowledged the importance of assessment in the acupuncture programme. However, they indicated that there was a need for various assessment forms and techniques to accommodate content knowledge and the diverse purposes of assessments. Three major themes emerged from the raw data during the analysis: i) Students' perceptions and experiences of assessment; ii) Need for diverse assessment techniques; and iii) Frequency of assessment .

Theme 1. Students' perceptions and experiences of assessment

Findings revealed that assessment not only evaluated students' knowledge of acupuncture but also enhanced their learning. All participants in this study expressed a shared perception of the importance of assessment in the acupuncture programme. The findings of this study also affirmed participants' shared views on the importance of assessment in facilitating their learning process. Participants agreed that the assessment promoted their study and identified the shortages in their study. They believed assessment was one of the most critical perspectives in their studies since it served various purposes. To this, P1-Y2 wrote: *"It [assessment] helped strengthen my knowledge because it ensured I was constantly revising and learning my work. It also gave me the practice of testing my knowledge and understanding*."
P2-Y2 indicated: "*The assessments were fair and well-structured. However, I found it a bit of 'parrot learning' instead of applying the knowledge. I acknowledge that a lot of theory needs to be memorised and thus taught this way."*

P3-Y2 stated: "*If I struggle to answer a question in an assessment, then I know where I should focus my study more. It helps me see which content I know and lack*."

P5-Y3 added:

> *It has helped me identify areas of the content I do not know as well as I thought I did. I also found I learned clinical knowledge from the assessments as they required the student to apply the content they have learnt so far. I find assessments in this subject very helpful as a growth factor for the student.*

P6-Y3 added: "*We need all the theory that we have been taught in order to apply acupuncture in practice efficiently. The assessment also serves as proof of how far I am with the knowledge of acupuncture*." P7-Y4 stated: "*It [assessment] aided me because it allowed for an opportunity to write a test, which was a true reflection of my knowledge*."

Both P7-Y4 and P9-Y4 concurred that assessment served as an effective way to monitor their progress in learning. P9-Y4 indicated assessment was an effective way to revise the acupuncture content. From the assessment, they believed that lecturers would also be able to identify their competence, which may be used to reflect teaching and learning in the acupuncture programme.

Theme 2. Diverse assessment techniques to improve learning outcomes

The findings of this study highlighted that all participants acknowledged the importance of assessment in the acupuncture programme. However, they indicated that various assessment techniques should be employed to enhance their learning and evaluate students' knowledge effectively. Most participants agreed that various assessment techniques could facilitate their learning and practice, such as diagnostic assessment in the form of various classroom assessments, formative use of summative assessments, and OSCEs. They indicated that various forms of assessment were needed to serve different purposes in their studies. The findings of this study agreed that informal classroom assessment and formative use of summative assessment enhanced students' learning.

P1-Y2 stated: "*The weekly reports [a short essay that students submitted every week] was good in order to keep us studying continuously and to make sure we understood the work*." P1-Y2 further indicated that the formative use of summative assessment "*allows enough time to grasp the content in tolerable segments before getting assessed. It made it easier to focus on certain portions of the contents. Despite a large amount of information to be memorised and understood, the work became bearable*." P2-Y2 mentioned: "*The online mini-assessments were great for achieving study goals and constantly assessing*

progress." P3-Y2 mentioned: "*Personally, if I wanted to gain more knowledge and skills on acupuncture, I would revise my work frequently and quiz myself on it*."

According to the Complementary Medicine Practice 2 Learning Guide (Razlog, 2021), students in the 2nd year were assessed every second week. P5-Y3 indicated that she preferred the formative use of summative assessment in her second year when she was assessed every second week and got timely feedback on her assessment.

P5-Y3 explained:

> *I feel smaller, more regular assessments are much more beneficial to have before the larger summative assessments. Because they can improve students' confidence in tests and assist in identifying areas of the work we don't know very well.*

In her reflective journal, P5-Y3 wrote: "*This [practice in the classroom] could be used as an informal testing system to help the students identify their weak areas*." P5-Y3, P6-Y3, P7-Y4, and P9-Y4 concurred that they would prefer to be assessed more frequently. They believed that frequent assessment in the form of classroom assessment improved their confidence and competence practice. P10-Y4 added:

> *We are assessed via tutorials, quizzes, tests and even through blackboard collaboration. The practical part of it [acupuncture] we do tutorials online as it prepares us for tests and to retain the knowledge. Every week we send in a self-reflection to document our improvement and assess our knowledge and look at what areas to focus on*.

This study revealed that participants agreed that assessment was crucial in the acupuncture programme. They further highlighted their support for adopting various assessment techniques in the programme to assist them in evaluating their competencies. They believed various assessment techniques, such as classroom quizzes and mock assessments, facilitated their learning. In her reflective journal, P4-Y3 wrote: "*I have realised that during the assessment of the mock practical, we are given the freedom to ask anything or say anything, and that is what I liked most about it*."

P9-Y4 answered: "*Doing case studies has helped me to evaluate my knowledge. Questions that are being asked are a good way of assessing us. Also, writing cases as a portfolio will be beneficial because it forces us to study*."

Theme 3. Need for frequent assessment

The findings of this study disagreed with Earl (2006), who reported that increasing time on assessment did not strengthen learning. Participants in this study revealed that increased time in assessment would enhance their learning. Therefore, participants indicated that there was a need to have frequent assessments to improve learning outcomes. To this, P5-Y3 stated: "*I feel smaller, more regular assessments are much more beneficial to have before the larger summative assessments*." When answering the question, 'Explain how you would prefer to be assessed in the acupuncture programme', P6-Y3 indicated: "*Have an assessment for each term and with the normal format that we are used to.*"
P7-Y4 wrote:

> *The OSCEs, however, were very frustrating as I had never done an OSCE before in my whole life, nor had I even done a mock OSCE before the exam. This made me extremely nervous even though I knew and understood the theoretical content quite well. I did very badly in my OSCE for this reason*.

P9-Y4 indicated: "*We should be assessed more frequently during the year so that we can get used to how to answer questions and how are questions asked*." P10-Y4 added: "*Studying for the different assessments helped with my general knowledge as the test helped with showing me what I need to focus on and my strengths and weakness for me to work on*."

P7-Y4, P9-Y4, and P10-Y4 expressed their desire to have more frequent assessments as they believe frequent assessment will not only strengthen their study but also reduce their anxiety during the assessment.

Summarily: Graphically

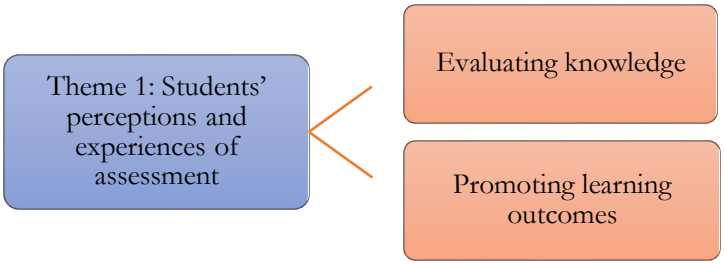

Figure 3. Codes of Theme 1: Students' perceptions and experiences of assessment

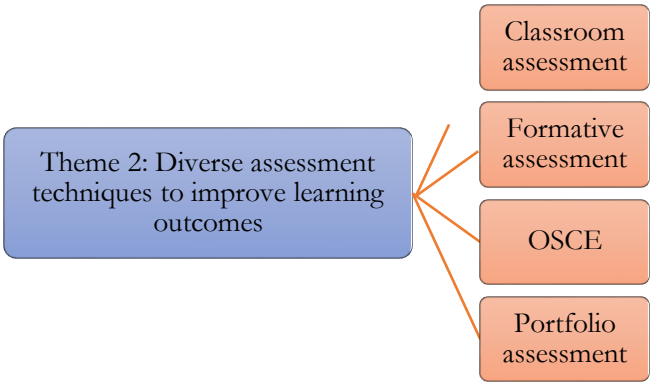

Figure 4. Codes of Theme 2: Diverse assessment techniques to improve learning outcomes

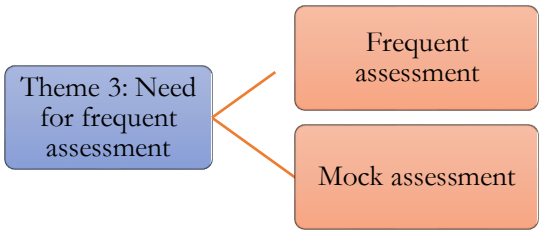

Figure 5. Codes of Theme 3: Need for frequent assessment

Discussion

Significance of assessment in education

According to the Regulations in terms of the Allied Health Professions Act, 1982 (2001) and the CHE (2011), assessment is an effective approach to evaluate the learning outcomes of a programme. Liljedahl (2010) and Stăncescu and Drăghicescu (2017) agree that assessment assists students in identifying learning outcomes and promoting students' learning (Amua-Sekyi, 2016). In the authors' opinion, assessment is of profound significance in investigating students' knowledge and skills and this is evident in P1-Y2 who stated that assessment is important for students learning. Assessment provides students with feedback and guides them in impoving the learning outcome. The authors opine that there should be different levels and forms of assessment, which reflect students' competencies from various perspectives, such as memorising and perception of the CK. These competencies should meet the appropriate levels of the revised Bloom's Taxonomy of learning (Chandio et al., 2016).

This view concurs with Chandio et al. (2016) and Jang and Wagner (2013). They agree that there should be multiple levels and different forms of assessment to measure students' competence. According to the revised Bloom's Taxonomy, Barari et al. (2020) explain that students need to remember and understand content knowledge before applying and analysing using their knowledge. The authors believe that the acupuncture programme requires a solid theoretical foundation in order for students to be able to analyse, evaluate, and create the phenomenon using the knowledge. Subsequently, memorising is emphasised in the assessment of the identified acupuncture programme. According to the revised Bloom's taxonomy, the authors believe that different depths of knowledge should be framed in diagnostic

assessment in the forms of various types of classroom assessment. Apart from classroom diagnostic assessment, formative assessment is another effective approach to promote students' learning.

Flórez and Sammons (2013) and Khan (2012) agree that assessment is an effective technique for promoting students' learning. Umar (2018) and Yambi (2018) are of the view that assessment promotes students' learning and further reflects the quality of teaching. The authors contend that assessment is a useful approach to enhancing students' learning. The reason is that assessment provides an opportunity for students to reflect on the challenges and gaps in their studies. This view agrees with Liljedahl (2010) and Stăncescu and Drăghicescu (2017), who state that assessment effectively assesses students' progress, provided the assessment is valid and reliable (Tosuncuoglu, 2018; Yambi, 2018). According to the Complementary Medicine Practice 2 Learning Guides, students in the second year of study had mini classroom quizzes every second week that was implemented in 2021 (Razlog, 2020; Razlog, 2021). Participants from the 3rd year, who were second-year students in 2021, reported that frequent assessments strengthened their learning and reduced stress in assessment. Therefore, the authors believed that a lack of frequent assessment in the programme resulted in students' anxiety because they were not familiar with the structure of assessment.

Need for differentiated assessment techniques

Esomonu and Eleje (2020), Jang and Wagner (2013), and Payne (2014) point out that there are various assessment methods that can be adopted in teaching and learning. These approaches include classroom assessment, quizzes, formative use of summative assessments, and a portfolio assessment (Flórez & Sammons, 2013; Jang & Wagner, 2013; McDonald, 2012). Khan et al. (2013) further propose OSCEs in evaluating clinical practice. The authors agree that different forms of assessment serve different purposes. Therefore, there is a need to identify the most appropriate forms of assessment for specific purposes. This view concurs with Cakmak (2013) and Goh (2013), who state that lecturers should select the most effective assessment to evaluate students' learning outcomes.

The authors are of the view that various forms of assessment offer an opportunity for students to receive timely feedback, which is crucial to their study. This view is supported by Umar (2018), who argues that delayed feedback from summative assessments is one of the most critical disadvantages in teaching and learning. Since assessment is a crucial element of teaching and learning, the authors concur with Yambi (2018) that various assessment techniques should be adopted to achieve different levels of assessment, such as memorising, understanding, applying, analysing, evaluating, and creating (Barari et al., 2020; Chandio et al., 2016). Therefore, the authors argue that different forms of assessment should be implemented in the acupuncture programme. These approaches include quizzes, tutorials, formative assessment, formative use of summative assessment, self-reflection, portfolio assessment, and debriefing through Socratic questioning (Amua-Sekyi, 2016; Delić & Bećirović, 2016; Payne, 2014; Yambi, 2018).

The authors believe that OSCE is critical in the acupuncture programme since it provides an effective way to assess students' clinical competence, which is a higher level of knowledge according to the revised Bloom's taxonomy. This approach is of particular significance because it takes place in a simulated environment, which ensures the safety of patients and students when assessing clinical skills. In recent years, portfolio assessment has gained increased attention in health sciences. The authors argue that it is necessary to have frequent assessments in the acupuncture programme to monitor students' learning. Students can have different forms of assessment every second week, according to the findings of this study.

Amua-Sekyi (2016) and Khan (2012) articulate the importance of assessment in education. They assert that assessment enhances students' learning by identifying students' weaknesses in their studies (Flórez & Sammons, 2013). Stăncescu and Drăghicescu (2017) agree with CHE (2011) that assessment is an effective approach to evaluating learning outcomes, which further ensures the quality of education. The authors concur with these researchers that assessment plays a critical role in all education programmes, which promotes learning and ensures learning outcomes.

Conclusion

The importance of assessment in health sciences education cannot be overemphasised (. The authors concur with Esomonu and Eleje (2020) who are of the view that there is no specific assessment technique that is more superior to

the other. The selection and implementation of assessment techniques must meet the purposes of the assessment while taking the content knowledge into consideration. This is of particular significance in the field of health sciences education as students should be competent in both the theoretically aspects and practical implementation. The identified HEI provided a newly developed acupuncture programme and from this study it is evident that the assessment needs to be strengthened. This study made contributions to exploring students' experiences of the assessment in the acupuncture programme in the South African context. This was the first study conducted in the South Africa to explore the first cohort of acupuncture students experiences of assessments in the newly developed and implemented acupuncture programme. The findings of this study will make contributions to promoting contextualised quality assessment in health sciences with a particular focus on acupuncture in higher education.

In particular, classroom diagnostic assessment, formative assessment, formative use of summative assessment, OSCE and portfolio assessment are effective approaches to promote students learning in the acupuncture programme and evaluate students' competencies in the world of work (Jang & Wagner, 2013; Khan et al., 2013; Payne, 2014; Yambi, 2018). In the authors' opinion, these assessment approaches can be utilised in other programmes in the field of health sciences. The reason is that these techniques can be used effectively for both theoretical and practical content knowledge and skills which are essential for all health sciences programmes.

Recommendations

Based on the above conclusions, the authors reached the following recommendations:

- It is recommended that various forms of assessment techniques should be applied frequently to the acupuncture programme. These techniques include classroom assessment, quizzes, formative use of summative assessment, portfolio assessment, and OSCEs (Flórez & Sammons, 2013; Jang & Wagner, 2013; Khan et al., 2013; McDonald, 2012).
- It is further recommended that HEIs should provide adequate guidance and training for emerging academics. This will ensure that they use assessment techniques effectively in their daily teaching activities.
- It is recommended that the assessments should be designed appropriately according to the revised Bloom's Taxonomy. This will ensure that assessments meet the specific requirements according to the learning outcomes.

Recommendations for Further Research

The authors are of the view that future studies can be conducted with first year acupuncture students. Furthermore, further research should be done in a 3-year cyclic process. Comparative studies could also be conducted with international partners who present similar course in their higher education institutions.

Limitations of the Study

Since this study was limited to explore students' views and experiences of assessments in the acupuncture programme at one HEI in Gauteng province. The reason was that the identified HEI was the only HEI that provided an acupuncture programme that the authors had the opportunity to access. Although the authors employed multiple techniques to ensure the trustworthiness of this study, the subjective analysis in qualitative study was another limitation of this study.

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Appendix 1. Text-based semi-structured Interview Form

Semi-structured Interview Form

1. Please indicate which year of study you are in. For example, year 2, year 3 or year 4.

   _____

2. Briefly describe your experiences of the acupuncture programme?

   _____

   _____

   _____

3. Describe your experiences in the assessment of the acupuncture programme.

   _____

   _____

   _____

4. Explain how the assessment has helped you to strengthen your knowledge in the acupuncture programme.

   _____

   _____

   _____

5. Explain how you would prefer to be assessed in the acupuncture programme.

   _____

   _____

   _____

6. Describe how technologies have helped to assess your knowledge in the acupuncture programme.

   _____

   _____

   _____