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Evaluating a work/study programme for nurses and midwives at Aga Khan University, Uganda

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Abstract

The work/study programme for nurses and midwives at Aga Khan University School of Nursing and Midwifery (AKU-SONAM) is a unique concept in East Africa. This study explored whether nursing and midwifery students undergoing a work-study programme at AKU-SONAM felt their education was underpinned by an adult education philosophy. A semi-structured questionnaire designed specifically for this study based on the Knowles' (1980) 'Principles of Adult Education' was administered to 96 students who completed their programmes in 2017 and 2018 respectively. Our paper reports on both the positive aspects of students' experiences in this work-study programme, including the improvement of critical thinking skills and the direct transfer of classroom learning to clinical practice, along with negative impacts related to a poor work/life balance. Despite challenges related to quality and delivery highlighted in studies involving nursing and midwifery education in Africa, the findings of our study seem to show a positive experience in addressing the needs of the majority of the participants, as well as in meeting the objectives of the programme. We conclude that understanding the benefits and challenges faced by students will help to ensure the appropriate teaching and learning approaches.

Introduction

The High-Level Commission on Health Employment and Economic Growth (WHO, 2016) recommended that to ensure that health workers meet their full potential and the needs of the population they serve, education should be of the highest quality. Traditional access to career advancement for nurses and midwives working in low-income countries is difficult if not impossible, as most courses are full time. Most nurses and midwives support families and do not have the financial capacity to attend full-time academic programmes. Aga Khan University's School of Nursing and Midwifery East Africa (AKU-SONAM EA) has implemented an innovative work/study programme, which allows students to continue working whilst studying. This programme offers a two day per week education programme, spread over two and a half years, so that enrolled and registered nurses and midwives can gain higher qualifications, besides enhancing their career prospects. Many employers cannot release these nurses and midwives for study, so this means they have to attend their university programme on their off days whilst continuing to work.

AKU-SONAM EA is a not-for-profit tertiary education provider committed to supporting Uganda, Kenya, Tanzania, and the East Africa region in its effort to ensure the provision of high quality, responsive health services. Part of this commitment allows nurses and midwives to work part-time towards higher qualifications. The first flexible work/study programme was a Bachelor of Science in Nursing (BSc.N) offered for Ugandan nurses in 2000 and rolled out to Kenya and Tanzania in 2001 (Aga Khan University, 2020). The programmes have been expanded to include an enrolled nurse to registered nurse conversion and conversion from registered midwife to Bachelor of Science in Midwifery. The programmes have successfully graduated over 2,500 students and formal impact evaluation has found that the majority of graduates are promoted to senior leadership positions within the East African nursing and health professional workforce within two years of completion of their course (Brownie, Robb, Hunter, Aliga, Kambo, Machar, *et al*, 2016).

There has been some research undertaken in other countries to evaluate work/study programmes (Oludayo, Omonijo, Uche, & Nwadiafor, 2014; Scott-Clayton & Zhou, 2017). None of this research, however, has been undertaken in East Africa, and the students who have completed the AKU programmes have to date not formally evaluated these work/study programmes. Thus this research is both timely and necessary.

Literature Review

Research into the experience of students undertaking work/study programmes can serve an important role in monitoring, evaluating, and ultimately improving the quality of programmes, but is limited and mainly set in high resource settings (Wallace, 2016). Recent work by Copestake, Theuss, Brownie, Davies, Burke, Mukuru, *et al* (2020) suggested that successful completion of a midwifery work/study programme in Uganda was viewed very positively by the graduates. However, there is evidence to show the negative effects of working and studying at the same time on the personal and professional lives of participants, including financial stress and the difficulty of maintaining a healthy work-life balance (Martinez, Ordu, Della Sala, & McFarlane, 2013). To ensure that a programme is fit for purpose, it is important to evaluate the programme and ensure it meets the needs of the learners. A study by McLellan, Aden, Lacroix, and Shephard (2020) in Sierra Leone reported that most nursing

education is didactic and students were taught by rote, memorizing large amounts of information to pass examinations, with little opportunity to apply this knowledge in practice. This research is supported earlier work by Bvumbwe and Mtshali (2018) who reported the need for reforms in the capability of educators to develop competent nurses and midwives in Sub Saharan Africa.

Adults learn differently to children thus nursing and midwifery education (aimed at working students) requires underpinning by an adult educational philosophy. Many different adult learning models have been described over the last century and are still considered appropriate to adult education. In the 1970s Kolb postulated the theory of experiential learning describing how adults learn by doing (Kolb 1976). 'Action learning' was developed in the 80s by Revans (1982), and built on earlier work by others showing that adults learn by problem-solving. Mezirow in the early 90s developed the 'transformational learning theory' which described how adults use different assumptions to make sense of the world (Mezirow, 1991). Importantly, all of these theories share a common perspective in that they demonstrate that adults learn differently compared to children.

Knowles (1980) who highlighted the differences in the educational drivers between children and adults, demonstrated this in his seminal work. He produced seven principles that described the needs of adult learners. The simplified principles are shown in Table 1.

Table 1: Seven principles of adult education, simplified (Knowles, 1980).

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| <ol style="list-style-type: none"> 1. Adults learn best when they are involved in their learning. 2. The role of the facilitator is to provide a supportive climate that promotes conditions necessary for learning to take place. 3. Adult learners need to be self-directed. 4. Readiness for learning increases when there is a specific need to know. 5. Life's experiences are a primary learning resource; the life experiences of others add enrichment to the learning process. 6. Adult learners have an inherent need for immediacy of application. 7. Adults respond best to learning when they are internally motivated to learn. |
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The principles identified by Knowles were used as a guide to explore the views of nurses and midwives as adult learners who have recently completed a work/study programme at AKU-SONAM in Uganda using Knowles' principles.

The objectives of the research were thus as follows:

1. To explore the experiences of nursing and midwifery students who have completed a work/study programme at AKU-SONAM Uganda.
2. To identify preferred course delivery and teaching styles for mature age working nurses and midwives.
3. To benchmark the work/study programme using the seven principles of adult learning formulated by Knowles' (1980) 'seven principles of adult education'.

Methods

A questionnaire, guided by Knowles' (1980) principles and a literature review, was developed. The questionnaire was piloted on a group of final-year students (not included in the study), and small adjustments were made. Demographic data were collected including age, gender, marital status, and distance travelled to university. Additionally, information was collected regarding study skills, access to the internet, and students' working context to explore the challenges experienced by students.

For each Knowles principle, statements were developed using a five-point Likert scale ranging from strongly agree to strongly disagree. These statements explored the adult learning experiences of nurses and midwives during their work/study programme. Thirty-six (36) questions (see Table 3) were developed, addressing each of the seven principles developed by Knowles. Students' responses were analysed and coded; the coded data were entered in a Statistical Package for Social Scientists (SPSS) for analysis. Frequencies and percentages were generated for each of the responses.

Participants

Ninety-six (96) alumni who had recently (graduates of 2017 and 2018) completed their courses were asked to consent to contribute to the research. Upon their free and informed consent, the questionnaires were physically distributed by one of the alumni to each participant. All questionnaires were completed. Ethical approval was obtained from THETA Uganda, an approved local research ethics committee and final approval was obtained from the National Council for Science and Technology in Uganda (NCST). Approval number SS 4862.

Results

Demographic details of the ninety-six (96) respondents were collected including age, gender marital status, and the course which was completed. Besides, information was collected on the distance participants, travelled to attend the programme, and whether they had access to a computer and the internet when they were away from the university (see Table 2).

Over two-thirds of the participants were aged between 26 and 35 years ($n=69$, 71.9%) with 15% of participants aged 36-25 years ($n=15$, 15%). Very few participants were out of these age ranges. The participants were predominantly female ($n=86$, 89.9%), and almost half were married ($n=46$, 47.9%).

The majority of the participants had completed a Bachelor of Nursing (BSc.N) course ($n=45$, 46.9%), followed by the Enrolled nurse upskilling to Registered Nurse (EN-RN) course ($n=38$, 39.6%). Fewer participants had completed the Bachelor of Midwifery (BSc.M) programme ($n=13$, 13.5%)

Over one-third of the participants travelled over 31 km to attend university ($n=26$, 27.1%) Although many participants had some access to a computer when away from the campus ($n=89$, 92.7%), just under half of the participants had no access to the internet at home ($n=41$, 42.7%).

Almost all of the participants had a full-time job (n=86, 89.6%) but many participants felt that their employers were not supportive or were only partly supportive (n=74, 77.1%) and many felt that their job impacted on their schoolwork (n=79, 82.3%). See Table 2.

Table 2. Demographic details of participants.

Variable	Numbers (n=96)	Percentage
Age (years)		
18-25	2	2.1%
26-35	69	71.9%
36-45	21	21.9%
46-55	3	3.1%
56-65	1	1%
Gender		
Male	10	10.4%
Female	86	89.6%
Marital Status		
Single	40	41.7%
Married	46	47.9%
Separated	1	1%
Cohabiting	8	8.3%
Divorced	0	0
Widowed	1	1%
Programme undertaken		
Post RN-BSc.N	45	46.9%
Post RM-BSc.M	13	13.5%
Post EN -RN	38	39.6%
Year Study Completed		
2016	29	30.2%
2017	67	69.8%
Distance to travel to University		
0-5 km	12	12.5%
6-10 km	21	21.9%
11-15 km	19	19.8%
16-20 km	8	8.3%
21-25 km	5	5.2%
26-30 km	5	5.2%
31 km or more	26	27.1%
Access to home computer		
Yes	75	78.1%
No	7	7.3%
Sometimes	14	14.6%
Access to the internet at home?		
Yes	18	18.8%
No	41	42.7%
Sometimes	37	38.5%

Did you have a job while studying?		
Yes, full time	86	89.6%
Yes, part-time	9	9.4%
No	1	1%
If yes, did your employer support your studies?		
Yes fully supportive	22	22.9%
Yes partly supportive	46	47.9%
No	20	20.8%
I did not tell my employer I was attending university	8	8.3%
If you had a job, how did it affect your schoolwork?		
I did not have a job	1	1%
My job did not interfere with my school work	16	16.7%
My job took some time from my school work	51	53.1%
My job took a lot of time from my school work	28	29.2%

After completing the demographic portion of the questionnaire, participants were asked questions related to Knowles' (1980) seven principles of adult education. The responses were recorded using a five-point Likert scale ranging from strongly agree to strongly disagree.

In response to Principle 1 (adults learn best when they are involved in evaluating their learning), the majority of participants agreed that the work/study programme suited their needs as adult learners (n=88, 91.7%). They felt involved in the evaluation of the course (n=93, 96.9%) and that they had the opportunity to participate in discussions with other students (n=86, 89.9%) and faculty (n= 84, 87.5%).

For Principle 2 (the role of the facilitator is to provide a supportive climate that promotes conditions necessary for learning to take place), 82 participants (85.4%) felt in charge of their learning, which over three quarters felt this was facilitated by their teachers (n=76, 79.1%). A similar number of respondents felt that the available resources were adequate (n=76, 79.1%).

Principle 3 (the need for self-direction), showed that most students felt involved in developing their learning objectives (n=88, 91.7%), evaluating the courses (n=90, 93.8%), leading on project development (n=73, 76.4%) and had time for independent study (n=54, 56.3%).

Principle 4 (increased readiness to learn when there is a specific need to know), indicated that most participants completed their reading assignments (n=92, 94.8%), attended the class because they wanted to learn (n=95, 98.8%). Furthermore, they took detailed notes in class (n=75, 78.1%) and agreed that their learning was built on their prior knowledge (n=90, 93.7%). Additionally, most recognized that their learning progressed from simple to complex (n=80, 83.3%) and that completing assignments helped them to progress successfully (n=86, 89.6%).

Principle 5 (life's experiences are a primary learning resource, and the life experiences of others add enrichment to the learning process) showed that the majority of the participants agreed that the knowledge/information provided was relevant (n=95; 98.9%), and they felt engaged in learning (n=95; 98.9%). Furthermore, they were engaged in in-class assignments, projects, or presentations with others (n=95; 98.7%). Likewise, the participants' prior experience was a resource in their learning at

AKU-SONAM (n=90; 93.8%). Participants too, agreed that they were able to contribute ideas and perceptions to their discussions (n=92; 95.8%), just as they approved that different learning styles were used in teaching (n=88; 91.7%).

Participants answered the same response in Principles 4 and Principle (n=88, 91.7%), although fewer participants felt prepared for the course (n=65, 76.6%). Some repeat statements were added to Principle 5 to validate earlier responses. As in response to Principle 1, participants they felt involved in the evaluation of the course (n=93, 96.9%) and that they had the opportunity to participate in discussion with other students (n=86, 89.9%) and faculty (n= 84, 87.5%). Virtually all the participants felt engaged in learning (n=95, 99%).

In response to Principle 6 (adult learners have an inherent need for immediacy of application), almost all participants agreed that they built on their existing knowledge with new knowledge (n=94, 98%) and that attending the course enhanced their lives (n=89. 92.6%).

Finally, Principle 7 (adults respond best to learning when they are internally motivated to learn), demonstrated that most of the participants felt that feedback was a motivation to learn (n=92, 95.8%) and that they worked harder because of feedback (n=90, 93.8%). Table 3 shows the complete responses to the questionnaire formulated to interrogate Knowles' (1980) principles of adult learning.

Table 3. Responses to Knowles Principles

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Missing Data
Principle 1: Adults learn best when they are involved in evaluating their learning						
1. The work/study programme was the best programme for me as an adult learner	69 (71.9%)	19 (19.8%)	4 (4.2%)	3 (3.1%)	0 (0%)	1 (1%)
2. I was well prepared before coming to this programme	27 (28.1%)	38 (39.6%)	20 (20.8%)	9 (9.4%)	2 (2.1%)	0 (0%)
3. I was involved in evaluating the courses taught each semester	64 (66.7%)	29 (30.2%)	2 (2.1%)	1 (1%)	0 (0%)	0 (0%)
4. I participated with other students in discussions with faculty members outside class	55 (57.3%)	31 (32.3%)	5 (5.2%)	3 (3.1%)	0 (0%)	2 (2.1%)
5. I discussed my academic programme/courses with faculty	42 (43.8%)	42 (43.8%)	9 (9.4%)	3 (3.1%)	0 (0%)	1 (1%)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Missing Data
Principle 2: The role of the facilitator is to provide a supportive climate that promotes conditions necessary for learning to take place						
6. I was given the chance to lead my own learning	49 (51%)	33 (34.4%)	10 (10.4%)	1 (1%)	0 (0%)	3 (3.1%)
7. The teacher was a facilitator	51 (53.1%)	25 (26.0%)	2 (2.1%)	10 (10.4%)	3 (3.1%)	5 (5.2%)
8. I had adequate resources to facilitate my learning	46 (47.9%)	30 (31.3%)	8 (8.3%)	9 (9.4%)	1 (1%)	2 (2.1%)
Principle 3: Adult learners need to be self-directing						
9. I was involved in developing clinical and learning objectives	57 (59.4%)	31 (32.3%)	3 (3.1%)	4 (4.2%)	0 (0%)	1 (1%)
10. I was involved in evaluating courses and programme	55 (57.3%)	35 (36.5%)	5 (5.2%)	1 (1%)	0 (0%)	0 (0%)
11. I was able to lead on project development	28 (29.5%)	45 (46.9)	16 (16.7%)	5 (5.2%)	0 (0%)	2 (2.1%)
12. I had independent study hours	30 (31.3%)	24 (25.0%)	15 (15.6%)	20 (20.8%)	2 (2.1%)	5 (5.2%)
13. Moodle enhanced my learning	55 (57.3%)	26 (27.1%)	4 (4.2%)	8 (8.3%)	1 (1%)	2 (2.1%)
14. My AKU course was in line with my future goals	87 (90.6%)	9 (9.4%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
15. My learning experience was internally motivated	63 (65.6%)	29 (30.2%)	3 (3.1%)	0 (0%)	0 (0%)	1 (1%)
Principle 4: Readiness for learning increases when there is a specific need to know						
16. I completed all the assigned class reading	58 (60.4%)	33 (34.4%)	2 (2.1%)	2 (2.1%)	0 (0%)	1 (1%)
17. I took detailed notes in class	24 (25.0%)	51 (53.1%)	14 (14.6%)	3 (3.1%)	2 (2.1%)	2 (2.1%)
18. I attended classes because I wanted to learn	82 (85.4%)	13 (13.5%)	1 (1%)	0 (0%)	0 (0%)	0 (0%)
19. The work/study programme was the right mode of study for my learning needs	72 (75.0%)	16 (16.7%)	5 (5.2%)	2 (2.1%)	0 (0%)	1 (1%)
20. My learning progressed from simple to complex	61 (63.5%)	19 (19.8%)	4 (4.2%)	5 (5.2%)	1 (1%)	6 (6.2%)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Missing Data
21. My learning built on my prior knowledge	78 (81.2%)	12 (12.5%)	1 (1%)	1 (1%)	1 (1%)	3 (3.1%)
22. Having a variety of assignments helped me to progress successfully	61 (63.5%)	25 (26.1%)	2 (2.1%)	2 (2.1%)	1 (1%)	5 (5.2%)
23. I actively contributed to classroom discussions	65 (67.7%)	26 (27.1%)	4 (4.2%)	0 (0%)	0 (0%)	1 (1%)
Principle 5: Life's experiences are a primary learning resource; the life experiences of others add enrichment to the learning process						
24. My prior experience was a resource in my learning at AKU	55 (57.3%)	35 (36.5%)	3 (3.1%)	1 (1%)	0 (0%)	2 (2.1%)
25. I worked on class assignment or projects or presentations with other students	73 (76.0%)	22 (22.9%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
26. I was able to contribute ideas and perspectives to the discussions	78 (81.2%)	14 (14.6%)	1 (1%)	1 (1%)	0 (0%)	2 (2.1%)
27. The facilitator encouraged me to reflect on my life experiences	68 (70.8%)	19 (19.8%)	1 (1%)	3 (3.1%)	0 (0%)	5 (5.2%)
28. The knowledge/information provided was relevant	87 (90.6%)	8 (8.3%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
29. I felt engaged in learning	84 (87.5%)	11 (11.5%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
30. Different learning styles were used in teaching	84 (87.5%)	4 (4.2)	2 (2.1%)	1 (1%)	0 (0%)	5 (5.2%)
Principle 6: Adult learners have an inherent need for immediacy of application.						
31. I connected new information to previous knowledge for understanding, retention and utilization	82 (85.4%)	12 (12.5%)	2 (2.1%)	0 (0%)	0 (0%)	0 (0%)
32. I came to class early	52 (54.2%)	32 (33.3%)	8 (8.3%)	2 (2.1%)	1 (1%)	1 (1%)
33. Attending course enhanced my life	74 (77.1%)	15 (15.6%)	4 (4.2%)	1 (1%)	0 (0%)	2 (2.1%)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Missing Data
Principle 7: Adults respond best to learning when they are internally motivated to learn.						
34. Feedback was a motivation to learn	70 (72.9%)	22 (22.9%)	3 (3.1%)	0 (0%)	0 (0%)	1 (1%)
35. Assignments were meaningful	79 (82.3%)	16 (16.7%)	0 (0%)	0 (0%)	0 (0%)	1 (1%)
36. I worked harder as a result of feedback	71 (74.0%)	19 (19.8%)	3 (3.1%)	0 (0%)	1 (1%)	2 (2.1%)

Discussion

The findings suggest that the principles of adult learning as described by Knowles (1980) underpinned the programmes at AKU-SONAM. This research was undertaken after participants had completed their courses, so it was reassuring to see that the responses were overwhelmingly positive. Unlike other research in nursing and midwifery education in Africa (Fullerton, Johnson, Thompson, & Vivio, 2011; Roets & Maritz, 2017) which highlighted challenges in the quality and delivery of education, the courses offered by AKU in Uganda met the needs of the majority participants concerning.

Demographics and experiences

The majority of participants were between 26-35 years, which is to be expected as nurses and midwives in Uganda must practice for two years before upgrading to a higher qualification. Those over 36 years may be nurses and midwives who are working towards a promotion. This could be a good venture as it also promotes the profession per se. This argument is in line with (Kagan, Biran, Telem, Steinovitz, Alboer, Ovadia, *et al*, 2015) who assert that the promotion of the image of nursing by an individual nurse, in the course of her or his daily activities, is a step to improving the marketing of the nursing profession. The majority of the participants were females, which is unsurprising as nursing and midwifery are traditionally female-dominated; the larger number of participants who completed the BSc.N and EN to RN courses is in line with the course enrolments, where nursing students form the majority of the students.

Just more than two-thirds of participants completed their qualification in 2018; almost double the number of participants who completed in 2017. This completion rate would have been improved due to increased marketing strategies, and the additional midwifery programme for AKU-SONAM – the first cohort of which graduated in 2017. The increased marketing strategies are positive ventures as evidenced by Gomez de la Fuente (2016) whose findings indicated that the breadth of the marketing focus, determines the overall market size.

Many participants travelled over 31km to attend university, which would indicate increased marketing strategies beyond Kampala. Although to the individual students, it could be a stressful experience to travel long distances every week to access their education programmes. While many participants

(78%) had access to a computer when away from the campus, just close to half had no access to the internet while at home. This may explain the reason for some students not completing their assignments in time, despite the programme's innovative modality of utilising an online Moodle platform for learning.

The Nurses and midwifery programmes run by AKU-SONAM are work-study programmes, which are a strategy to target working nurses and midwives. Thus it was not a surprise to have almost all the participants being employed in full-time jobs. However, the majority felt that their employers were not supportive and many felt that their job impacted their schoolwork. This concurs with Halliday-Waynes and Nguyen (2014) who explained that work-study programmes may negatively affect work/life balance with too many competing pressures.

Responses to Knowles's principles

Principle 1: Adults learn best when they are involved in their learning.

The participants overwhelmingly agreed that the work-study programme was the best programme for adult learners. This finding helps reinforce the need to provide opportunities for career advancement whilst continuing to work. An interesting finding was that just under one-third of participants did not agree that they felt prepared for the programme. This may be as a result that not all participants who had undergone basic training in other institutions might have not utilized adult learning strategies as suggested by Mclellan *et al* (2020). This may also have been the first time participants were exposed to a wide variety of teaching and learning techniques. A recommendation would be to organize a pre-course open day to discuss the difference in basic and post-basic education.

Principle 2: The role of the facilitator is to provide a supportive climate that promotes conditions necessary for learning to take place.

Throughout the courses, participants are exposed to a variety of faculty according to the specialty being studied. There was overwhelming agreement that the faculty acted as facilitators. The institution has reinforced that the role of the facilitator is to create and maintain a supportive climate that promotes the conditions necessary for learning to take place (Rao, 2012). Similarly, Henschke (2014) in their study that looked at andragogical curriculum for equipping successful facilitators of andragogy in numerous contexts, asserts that people tend to feel committed to any decision in proportion to the extent to which they have participated in making it. This implies that adult learners are concerned with issues that affect their learning.

Principle 3: Adult learners need to be self-directing.

Although the majority of participants agreed that they were actively involved in the planning and evaluation aspect of the programme, one problematic aspect that was identified, was the lack of independent study time. Just under half of the participants mentioned this factor. This may have resulted from the lack of support from employers, a factor mentioned by 77.1%, with even more participants adding that work impacted upon their studies 82.3%. Many nurses and midwives in Uganda favor work-study programmes as they can attend university on their days off if their employers are supportive of their studies. Although this means nurses and midwives have an opportunity to advance their careers, it may also impact their work-life balance as reported in this study and elsewhere (Martinez *et al*, 2013).

Principle 4: Readiness for learning increases when there is a specific need to know.

The participants appeared to be motivated to learn when provided with drivers, such as class reading assignments and attending class promptly. The majority agreed that the programme built on their prior knowledge and progressed from simple to complex, which motivated their learning. This finding is supported by a scoping review by Gewurtz, Coman, Dhillon, Jung, and Solomon (2016) who concluded that activating the link between prior knowledge and new knowledge helps learners to challenge their pre-existing beliefs and concepts.

Principle 5. Life's experiences are a primary learning resource; the life experiences of others add enrichment to the learning process.

According to Kear (2013), life experience develops learners' understanding of the world. This is supported by Parker and Myrick (2010) who found that adults are motivated by revising their perspective of the world based on new knowledge. The finding of this research supported these researchers, with the majority of respondents agreeing that their previous life experience was important in their learning and that faculty encourage reflection and inclusion of these experiences.

Principle 6: Adult learners have an inherent need for immediacy of application.

Almost all the participants agreed on the need to connect new information to previous knowledge for understanding, retention, and application. The AKU-SONAM programmes are competency-based programmes, which incorporate problem-based learning approaches. This is supported by other research that reported that adults are motivated by immediate problem-centered approaches (Hean, Craddock, Hammick, & Hammick, 2012; Taylor & Hamdy, 2013).

Principle 7: Adults respond best to learning when they are internally motivated to learn.

Almost all the participants attended the programmes to enhance their lives and because they wanted to learn. Despite the challenges of working and studying at the same time, the motivation of the participants through their responses was evident. The importance of feedback was evident, with the majority of the participants citing feedback from course facilitators as a motivating factor. Kaur (2018) identified appropriate feedback as a key motivating factor, with research by Tan, Whipp, Gagné & Van Quaquebeke (2019) further elaborating that two-way feedback is more likely to facilitate higher-order learning outcomes.

Limitations

This is a relatively small study, undertaken in one university, and recall bias may be a factor. It would be useful to extend this study to other universities in low resource countries for comparison and to highlight the benefits of utilizing adult learning strategies in nursing and midwifery in low resource countries.

Conclusion

This research has found that the programmes offered by AKU-SONAM Uganda evaluated positively using the principles described by Knowles (1980), and were perceived by the students to meet their personal adult learning needs. The findings indicate that learners perceived that they benefited from undertaking the programmes and were internally motivated, despite the challenges of their work-life

balance. Our findings contradict the findings of other research undertaken in Africa, which suggests rote learning and didactic dominates such courses (McLellan *et al*, 2020; Bvumbwe & Mtshali 2018). Rather, findings from our study have implications that, for such programmes to be successful, they should be designed and underpinned by a strong adult education philosophy. Further qualitative research is recommended to explore how AKU-SONAM can support prospective students in preparing for the work-study programme.

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