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Research Article

The journey of service-learning: Perspectives from medical imaging and therapeutic sciences students

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ABSTRACT

Introduction: South Africa (SA) is portrayed as a developing country facing many socio-economic challenges. Service-Learning (SL) is considered an integral part of work-integrated learning (WIL) whereby students are provided an opportunity to experience the real world of work by putting to practice the theory that they have been taught. In the context of this paper, SL is embedded in the undergraduate curriculum of medical imaging and therapeutic sciences (MITS) students in SA, in the form of a SL community project (SLCP). Similar projects permit students to engage with a variety of patient groups to better understand their future patients' bio-psycho-social environments for improved person-centred care practices. Although publications pertaining to students' lived experience of SL are available, no study has yet been conducted with MITS students and their experience of SL. The authors, therefore, aimed to explore the experience of MITS students in SA who successfully completed a SLCP.

Methods: A qualitative research design was employed with the use of purposive sampling. The study population included all registered MITS students at the research site who completed a SLCP. This study was undertaken using a phased approach, phase A: a document analysis of reflective reports, phase B: one-on-one semi-structured interviews and phase C: the development of recommendations. Participation was voluntary and a reflexive thematic analysis technique was used to analyse the data.

Results: Three main themes were developed: 1) challenges and barriers, 2) positive lecturer attributes and 3) positive project outcomes. Although the participants shared some of their challenges while engaged in SL, several positive outcomes were also highlighted which encouraged them to want to give back to their communities. The support received from their lecturer was highly recognised. Recommendations for educators that were developed included having regular check-in sessions, finding methods to develop a trusting relationship with the students and the consideration of an earlier introduction of SL in the curriculum.

Conclusion: It is clear, from the findings of this study, that SL is able to bridge the gap between theoretical knowledge and practical application. Within the undergraduate curriculum of healthcare students, SL is considered a key instrument towards cultivating an enhanced sense of civic responsibility. Effective time management and finding sponsors were noted as critical for the successful completion of a SLCP. Personal- and professional growth was evident amongst the sampled participants and the importance of interdisciplinary learning was highlighted. Participants furthermore expressed their appreciation for the opportunity that SL provided them by being able to collaborate with, and learn from, other healthcare professionals.

RÉSUMÉ

Introduction: L'Afrique du Sud (AS) est décrite comme un pays en développement confronté à de nombreux défis socio-économiques. L'apprentissage par le service (AS) est considéré comme une partie intégrante de l'apprentissage intégré au travail (AIT), qui donne aux étudiants l'occasion de faire l'expérience du monde réel du travail en mettant en pratique la théorie qui leur a été enseignée. Dans le contexte de cet article, l'apprentissage intégré au travail est intégré au programme de premier cycle des étudiants en imagerie médicale et en sciences thérapeutiques (IMST) en Afrique du Sud, sous la forme d'un projet communautaire d'apprentissage par le service (PCAS). Des projets similaires permettent aux étudiants de s'engager auprès de divers groupes de patients afin de mieux comprendre les environnements bio-psycho-sociaux de leurs futurs patients et d'améliorer les pratiques de soins centrées sur la personne. Bien qu'il existe des publications relatives à l'expérience vécue des étudiants en matière d'AS, aucune étude

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n'a encore été menée sur les étudiants en IMST et leur expérience en matière d'AS. Les auteurs ont donc cherché à explorer l'expérience des étudiants de l'Institut de technologie de l'Afrique du Sud qui ont suivi avec succès un programme de formation à la santé et à la sécurité au travail.

Méthodologie: Un modèle de recherche qualitative a été employé avec l'utilisation d'un échantillonnage raisonné. La population étudiée comprenait tous les chercheurs inscrits à l'Institut de gestion de la formation professionnelle (IMTS) sur le site de recherche qui ont suivi un PCAS. Cette étude a été entreprise en utilisant une approche en plusieurs phases: phase A: analyse documentaire des rapports de réflexion, phase B: entretiens semi-structurés individuels et phase C: élaboration de recommandations. La participation était volontaire et une technique d'analyse thématique réflexive a été utilisée pour analyser les données.

Résultats: Trois thèmes principaux ont été développés: 1) les défis et les obstacles, 2) les attributs positifs des enseignants et 3) les résultats positifs du projet. Bien que les participants aient fait part de certains des défis qu'ils ont rencontrés dans le cadre de leur participation à l'AS, plusieurs résultats positifs ont également été mis en évidence, ce qui les a encouragés à vouloir rendre service à leur communauté. Le soutien reçu de la part de leur professeur a été hautement reconnu. Parmi les recommandations formulées à l'intention des éducateurs, citons l'organisation de séances de contrôle régulières, la recherche de méthodologies permettant d'établir une relation de confiance avec les étudiants et la possibilité d'introduire plus tôt l'apprentissage par la pratique dans le programme d'études.

Conclusion: Les résultats de cette étude montrent clairement que l'AS est capable de combler le fossé entre les connaissances théoriques et l'application pratique. Dans le cadre du programme d'études de premier cycle des étudiants en soins de santé, l'AS est considéré comme un instrument clé pour cultiver un sens accru de la responsabilité civique. La gestion efficace du temps et la recherche de sponsors ont été jugées essentielles pour mener à bien un projet de PCAS. L'épanouissement personnel et professionnel était évident parmi les participants de l'échantillon et l'importance de l'apprentissage interdisciplinaire a été soulignée. Les participants ont en outre exprimé leur appréciation de l'opportunité que leur offrait l'AS en leur permettant de collaborer avec d'autres professionnels de la santé et d'apprendre d'eux.

Keywords: Community engagement; Civic responsibility; Health professions education

Introduction

South Africa (SA) is a culturally diverse country facing many socio-economic challenges of which one of the biggest challenges is poverty [1]. Approximately 25 % of SA citizens are living below the poverty line and it is understood that interventions put in place by the local government were deemed unsuccessful to meet these critical yet basic societal needs [2]. Higher educational institutions (HEIs) across the country, from as early as 1984, recognised and introduced the concept Service-Learning (SL) into their undergraduate curricula as a response to assist with this challenge by improving the life of their fellow citizens and in doing so, developed a credit-bearing, student-centred instructional approach [3].

Kontos [4] describes SL as "*learning by doing while helping others*." Marcilla-Toribio et al. [5] are in agreement with the latter and further adds that SL has emerged as a powerful educational approach that equips future healthcare professionals with not only the necessary technical competencies but also the vital humanistic qualities that can transform the delivery of healthcare services. SL is well-known for the opportunity it provides students to apply their newly acquired theoretical knowledge by participating in real-life projects and by delivering a service to the members of their community [3]. This, in the form of a SL community project (SLCP). According to Marcilla-Toribio et al. [5], SL comprises three important elements: 1) meaningful service, 2) applied learning and 3) reflection. The experience gained from completing a SLCP enhances the students' learning and is believed to be even more meaningful by reflecting on their experience [4].

In the context of this paper, and from the authors' experience and interpretation, SL is more than just the delivery of a service to the members of a community. The service delivered is envisioned as a gatekeeper's pass into a new and unknown learning environment, imperative for the development of socially aware and critically conscious healthcare professionals. The services delivered, in response to the need(s) of the community partner, provide students with an opportunity to interact with their community partner by getting to experience, first-hand, the social context of their potential patients. This form of social interaction between students and members of the community cultivates an enhanced sense of appreciation, awareness and understanding of the social patterns related to various aspects, including the bio-psycho-social elements associated with health and wellness. In return, the authors believe that SL enables the provision of improved, person-centered caring practices.

In the rapidly evolving landscape of service delivery, the role of healthcare professionals has transcended beyond mere medical expertise [6]. While clinical skills and technical knowledge remain paramount, there is an increasing recognition of the significance of empathy, compassion, and a deep understanding of patients' needs to deliver holistic care [7]. Similarly, professionals registered in the field of medical imaging and therapeutic sciences (MITS) offer services to a variety of patients from different socio-economic backgrounds [8]. It is therefore critical that MITS students be exposed to, and be aware of, their patients' different social contexts prior to graduation [9].

With the aim of bridging the gap between theory and the reality of the clinical environment, the pedagogy of SL has been incorporated into what is known as work-integrated learning (WIL). Fittingly, WIL can be defined as an educational approach whereby students are given an opportunity to integrate their theoretical knowledge into real-life, practical sce-

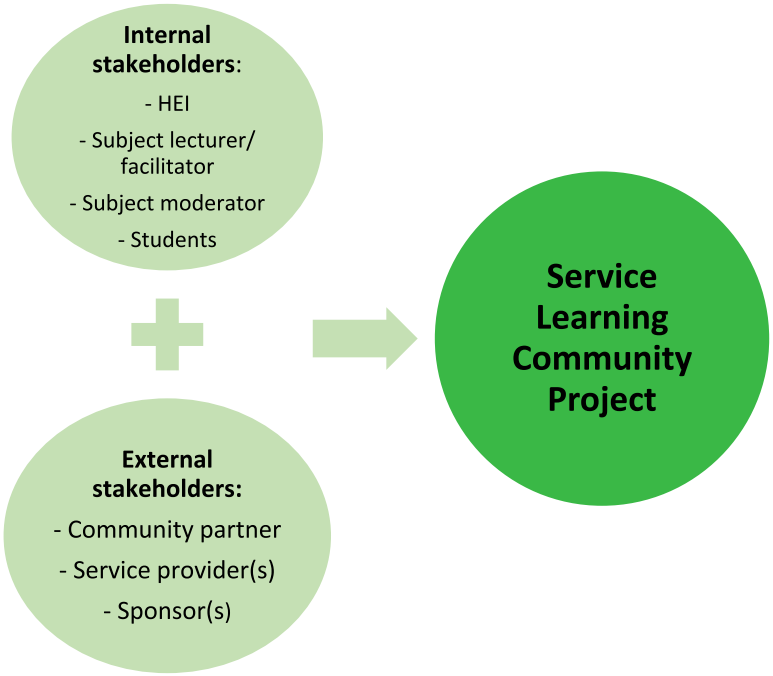

Fig. 1. The stakeholders involved in the SLCP (source: authors).

narios [10]. WIL involves various learning opportunities such as: 1) workplace-based learning (WPBL) which takes place in the hospital environment, 2) simulation-based learning (SBL) within a skills laboratory or clinical setting, 3) work-directed theoretical learning (WDTL) and 4) project-based learning (PBL) [11]. It is important to be cognisant that WIL is the alignment between work and education and is not limited to work placement. These practices can range from more theoretical to more practical methods [12].

Context and rationale

This paper speaks to the SLCPs conducted at a University of Technology located in the Western Cape Province of SA. At the research site, SL has been introduced into the undergraduate curriculum of MITS students at a third-year level. The SLCPs are incorporated as one of the elements of WIL embedded within four unique Bachelor of Science (BSc) programmes, namely: 1) Diagnostic Radiography, 2) Diagnostic Ultrasound, 3) Nuclear Medicine Technology and 3) Radiation Therapy). The programmes are offered on a full-time basis over a four-year period and include both a theoretical and clinical component during which students must rotate based on a predeveloped schedule. At a third-year level, students are typically registered for seven subjects and engage in approximately fifteen academic weeks and nineteen clinical weeks.

Multiple stakeholders (internal and external) are involved in the SLCP and are depicted in Fig. 1. The stakeholders, within the boundaries of this paper and that of the research site, include: 1) the HEI, 2) the subject lecturer/ facilitator, 3) the subject moderator, 4) the students themselves, 5) a community partner, 6) potential service provider(s) and 7) potential sponsor(s). As a point of reference for this paper, the research team comprises the subject lecturer/ facilitator (second author) and the subject moderator (first author).

The SLCPs are facilitated by following a conceptual model that consists of five sequential phases: 1) investigate, 2) analyse, 3) apply, 4) action and 5) reflect. The model was developed by the second author of this paper after he had successfully facilitated multiple SLCPs [9]. Fig. 2 depicts a visual representation of this model. In phase one, the students are introduced to the concept of SL and student groups are created. An investigation process is followed whereby students are tasked to identify a potential community partner. Contact is then made with the community partner whereby the students introduce themselves and their project requirements whilst ascertaining the need(s) of the community partner. Based on the needs, suitable service provider(s) and sponsor(s) are identified to assist the students in fulfilling the need(s) of their community partner. Phase two entails a situation analysis whereby the students need to analyse both the internal and external environments associated with their SLCP. The analysis is performed by identifying various strengths, weaknesses, opportunities and threats associated with their project. Phase three requires each student group to establish a title for their project and to identify the overall goal for their SLCP and the associated short- and long-term objectives. During phase four, an action plan is developed that consists of a proposed schedule (timeline of events) and a proposed financial budget (anticipated income and expenses) for each project. In phase five, students are tasked to organise and present all the evidence of their respective projects to the subject lecturer/ facilitator and subject moderator.

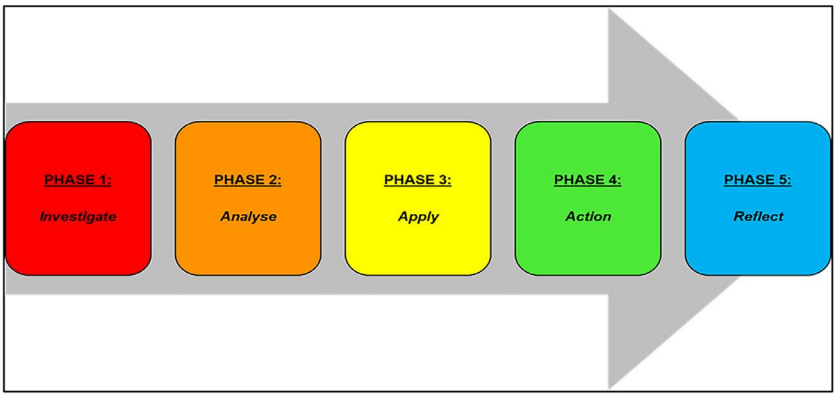

Fig. 2. The conceptual model used for facilitating the SLCPs [9].

The offering of the SLCP at the research site is carefully designed to meet the outcomes of a theoretical module that incorporates the principles and steps of the managerial planning function. The student assessment comprises three components to assess the students' understanding and application of the theory, and include: 1) a written group assignment, 2) a group oral presentation and 3) an individual reflective report. The reflective report follows a structured approach, known as the Gibbs' Reflective Cycle [13].

Although SL can be used as an approach to improve graduate attributes, [4] it is important to acknowledge that the context might be considerably different for each project. Differences across the projects may include: the different populations (community partners) being served, the different need(s) of these community partner(s) and the instructional offering (method) that the HEI is using to facilitate their SLCPs. The authors observed publications in a variety of journals pertaining to students' lived experiences of SL and that from a variety of backgrounds such as human resource management studies [2] and web-design studies [4]. To the best of the authors' knowledge, however, no study has yet been conducted to explore the MITS students' experiences of SL. This paper aims to bridge the gap in literature on SL as experienced by MITS students. The findings of this paper, furthermore, proves valuable for contributing new knowledge in the field, especially towards the development and offering of a socially responsive, health sciences curriculum.

Aim

This study aimed to explore MITS students' experiences of SL after having participated in and successfully completed a SLCP to develop recommendations that may enhance the offering and facilitation of future SLCPs.

Methodology

Research design

This study followed a qualitative, exploratory, and descriptive research design. Qualitative research allowed the researchers to explore the experiences of the sampled population [14]. An explorative design is used when researchers aim to obtain new information about an unknown situation [15]. This design was deemed necessary as the researchers wanted to explore the experiences of MITS students who engaged with SLCPs as this was not conducted before. The findings of this study are presented descriptively, hence the use of a descriptive design.

Population and sampling technique

The population of this study included all registered MITS students at the research site, from all four BSc programmes, who have participated in and completed a SLCP. The target population included the 2022 cohort of 97, third-year students at the end of the academic year. Students who engaged in SL prior to 2022 were excluded as the researchers wanted to gain understanding from students who were in the same cohort, working under the same conditions and context. Recruitment and data collection took place when the students were in their fourth-year of study in 2023. Participants were recruited by an independent person who was not involved with the facilitation of the SLCPs but was a member of the MITS team. This was done to ensure that students were comfortable to decide for themselves if they wished to participate without any fear of academic implications if they did not participate. A purposive sampling technique was used as it allowed the researchers to select a sample positioned within the inclusion and exclusion criteria. This allowed for information-rich data to be obtained [16].

Inclusion criteria

- MITS students who participated in and completed a SLCP in the year 2022.
- MITS students registered in one of the four BSc programmes: Diagnostic Radiography, Diagnostic Ultrasound, Nuclear Medicine Technology, and Radiation Therapy.

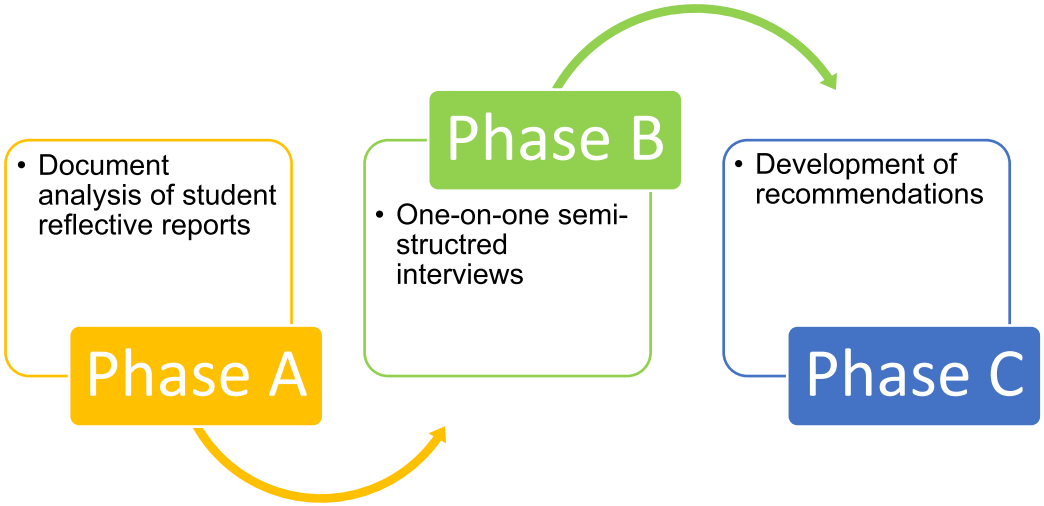

Fig. 3. Phased approach for data collection (source: authors).

Table 1
Interview guide.

Interview Questions
1. What were your initial feelings when you heard about the SLCP?
a. What did you do to overcome these feelings?
2. Did you feel the assessment guidelines were adequate?
a. Did your lecturer provide any assistance?
3. What was the highlight/ best part of this project?
4. What was the worst part of this project?
5. Do you feel you gained any management skills?
a. Besides management skills, did you learn anything else?
6. What type of group leader do you think is needed for a SLCP?
7. What was your experience like, working with the community partner, service provider and sponsor?
8. If you had to do the project again what would you do differently?
9. Do you have any suggestions on how to improve the SLCP?
a. Suggestions for the lecturer?
10. Now that the project is over how do you feel?
11. What are your thoughts about SL now that you have completed the project?
a. Has your world perspective changed?
b. Has the project had any impact on your personal life?
c. Professional life?

Exclusion criteria

- MITS students who have not yet completed a SLCP.
- MITS students who participated in and completed a SLCP in the year 2021 and before.
- Students who did not sign consent.

Data collection process

Data collection took place in three phases (A, B, C) as illustrated in Fig. 3. The first phase (A) involved a document analysis of twelve reflective reports that were submitted to the lecturer as an assessment outcome. Frey [17] describes document analysis as a type of qualitative research that entails the reviewing of document evidence to answer a defined research question. The reflective reports were reviewed to gain an understanding of students' experiences of the SLCP. Common themes were highlighted, and these themes were used to develop the interview guide for phase B (Table 1). Only the reflective reports of those students who signed consent were included in the document analysis.

For phase B, the same population from phase A was invited to participate in the one-on-one semi-structured interviews. The purpose of these interviews was to further explore the experiences described in the reflective reports and to gain a more meaningful understanding. While there are two researchers involved in the research team, data collection was undertaken by the first author to ensure consistency in the interview technique between the different sessions. Despite the first author being an academic lecturer, it was important for the interviews to be conducted by her as she is knowledgeable about the research topic being explored. Participants were however made aware that participation was completely voluntary and that they could withdraw at any time.

The interview data collection was undertaken during the month of February 2023. One-on-one interviews were selected due to the sensitive nature of the phenomenon being researched. Data was collected until data saturation was achieved [18]. Data saturation was achieved after the 7th interview. Two additional interviews, however, were conducted to confirm that data saturation was reached, and, to add to the rigor of the study. All interviews were audio recorded and transcribed verbatim.

In phase C, the researchers developed recommendations based on the data analysed in phases A and B, which they hope will assist by enhancing/ supporting future MITS students' experiences whilst engaging in SL. The focus of this paper will be presenting the findings from phases B and C of the study.

Data analysis

Data analysis was conducted using the reflexive thematic analysis (RTA) approach as discussed by Braun and Clark [19]. Both researchers were involved in the data anaysis process. The six-phase RTA approach involves ***Phase one****:* familiarisation with the data, ***Phase two****:* generating initial codes, ***Phase three****:* generating themes, ***Phase four****:* reviewing potential themes, ***Phase five****:* defining and naming themes, and ***Phase six****:* producing the report. RTA underscores the dynamic role of the researcher in knowledge creation and involves the researchers' interpretative approach to the data at the juncture of a) the dataset, b) the theoretical assumptions of the analysis, and c) the analytical skills/ resources of the researchers. In this study, the researchers used a collaborative and reflexive approach to the data analysis with the aim of co-constructing richer interpretations and meanings from the datasets [19].

Trustworthiness

This study abided by the trustworthiness principles outlined by Lincoln and Guba, [20] namely: credibility, transferability, dependability, and confirmability. Credibility was ensured using triangulation of data and through sharing the findings with the participants to ensure the accuracy of the researchers' interpretations. Transferability was achieved by providing verbatim quotations to support the themes and sub-themes developed. In addition to this, the researchers provided a detailed description of the study context and population. The researchers kept a well-documented audit trail of the research process to ensure dependability. To ensure confirmability of the study, records were kept in the form of field notes, coding sheets and audio recordings.

Ethical considerations

Ethical approval for conducting this study was obtained (HWS-REC 2022/H20). Gatekeeper permission was received from the research site's Head of Department to access the participants' completed assessments (the individual student reflective reports) and to initiate the recruitment process. Participants were each provided with a research information letter as well as three consent forms: one to access their individual reflective reports, one for participating in the research study and one for the interviews to be audio recorded.

Participation in the study remained voluntary and no participant received any form of remuneration. Assistance was sought from an independent individual (not directly involved in the teaching and learning activities of the same students), for the recruitment of the study participants during both phases. The participants were allowed to withdraw their participation at any time and without penalty or consequence.

No identifiable details were collected or recorded from the participants themselves or from that the various community partners. Before a SLCP can be implemented, a memorandum of understanding (MoU) is signed with the community partner and service provider. This MoU stipulates the terms and conditions towards the implementation of the project, for example: the purpose and duration of the project, the project activities, stakeholder obligations and disputes, indemnity, breach of contract, and confidentiality. In addition to this, a confidentiality agreement was entered into with an independent transcriber before the transcription of the audio recordings. The principle of non-maleficence was adhered to by avoiding harm to the participants and provision was made for student counseling at the research site should any of the participants have needed it.

The data obtained were analysed and reported on objectively to ensure adherence to the principles of integrity and trust. The integrity of the data was maintained by the authors having had in-depth discussions to review the accuracy of their interpretation of the data. Hard copy data were safeguarded under lock and key by the authors and soft copy data were kept under strict password protection.

Findings and discussion

The findings presented are from phase B of the study. Nine participants were interviewed, and the interviews averaged twenty minutes. Three main themes were constructed from the data namely: 1) challenges and barriers, 2) positive lecturer attributes, and 3) positive project outcomes. In this section, the themes are presented with supporting verbatim quotations following a conceptualisation of the findings using literature. The abbreviation ***P*** is used to depict participants. The themes, with their respective sub-themes, are illustrated in Fig. 4.

Theme 1: challenges and barriers

The participants of this study shared several challenges and barriers that they encountered while undertaking their SLCP. Finding dedicated time to engage with their SLCPs proved to be challenging for the students and this was because of both their academic and WIL commitments.

> ***P9****: "When I first heard about it I was worried because it seemed like a lot of work to do. So I was wondering how we were going*

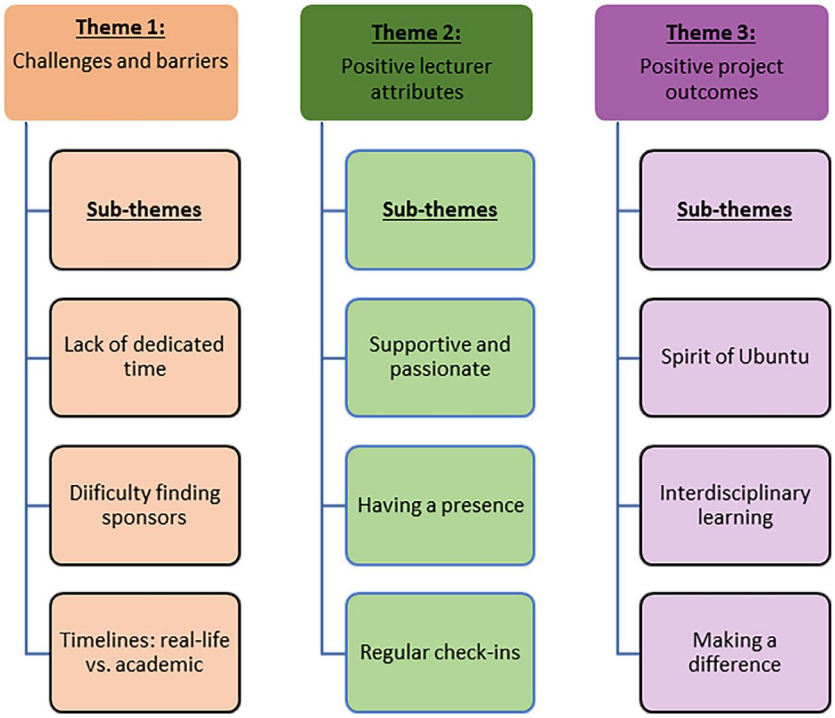

Fig. 4. Themes and sub-themes generated from the data (source: authors).

to do it because we were having these - we have clinicals, we spend the whole day at the hospital – so I was worried that we won't have enough time to do it."

Finding sponsorships and funding was noted as a barrier. The participants also shared a realisation that their academic timelines were not considered as important when dealing with external organisations. Some community partners did not respond to the students' emails timeously and this often created stress within their groups as they had other academic deadlines and responsibilities to meet.

***P8**: "I was supposed to get like a sponsor as well and I reached out to a few, and then a lot of them were like just very like not interested and so on."*

***P3**: "Like we are students and they have their own schedule. So basically what I mean is let's say we send an email and in our group, okay, maybe by the end of the week we'll get a reply. And then we don't get a reply, because our schedules are different."*

It is evident from the findings that the students found time management problematic. SLCPs are a component of WIL and incorporate both academic learning as well as WPBL. This ensures that students are supported in the classroom and within the communities that they visit. The participants are engaged in a two-week rotation between WPBL and academic classes (WDTL). During their WPBL rotation, MITS students are expected to work shifts similar to qualified radiographers. Educators involved in SLCPs are encouraged to incorporate dedicated time into the academic timetable of students to provide better support. This recommendation should assist in alleviating some of the worry and anxiety often associated with SL.

Several studies confirm that while SL is a valuable pedagogy in education, it is not without challenges. The challenges as per the literature are similar to those challenges shared by participants of this study [21,22]. The literature highlights students as vital entities in SL because they are responsible for steering their projects and often the collaborating community partners have a different understanding or viewpoint of the SL activities [22]. These differences in perspectives could be the reason why participants viewed community partners as having little regard for their academic timelines. While the participants of this study indicated limited time as a challenge, it is interesting to note that literature also demonstrated that educators facilitating these projects also face a similar challenge of a lack of time [21,22]. In the current study, however, only the students' experiences were explored.

Getting sponsorships and funding for SLCPs was a common challenge noted in literature [21,22]. This is in keeping with the stories shared by the participants of this study. The authors would like to highlight the importance of having access to institutional support systems such as transport services to and from community partners and pre-approved/ generic sponsorship letters that the students can use when requesting sponsorships/ donations from external entities/ stakeholders. Students should also be reminded that in order for their projects to be a financial success, they need to draft their action plans as early as possible and be actively engaged in group meetings to monitor the progress made.

Theme 2: positive lecturer attributes

An essential outcome of the participants' experiences was their encounters with their subject lecturer, who facilitated the SLCPs. The participants recognised valuable attributes in their lecturer, which they considered to be key to the success of their SLCPs. Some of these lecturer attributes include being supportive and passionate about SL.

> ***P7***: *"I think our lecturer in that regard was very supportive, he would help out when needed."*

Participants appreciated that the lecturer was actively present in class and during project meetings. This provided students with assistance when needed. Regular checking in with students was highlighted as a positive tool to monitor progress.

> ***P3***: *"So I would say overall, because he was there for us during the meetings, during the visit to the community project, he was there with us all the way."*

> ***P2***: *"I feel like because he did this other meeting, just to check how things are going with each group, so I feel like he was also following up or how things are, not just waiting for, was it, for the day to come and – I feel like he did the most."*

Studies on student perspectives of SL advocate the fundamental role of the lecturer [22]. The philosophy of relational pedagogy explains teaching and learning practices as being a relational process and is based on the notion that humans exist in relationships. This pedagogy holds true in the current study because it was evident from the students' stories that they valued the interactions that they had with their lecturer. Human interaction is critical for effective teaching and learning to occur [23]. This pedagogy is a shift from the teacher-centered and student-centered approaches and focuses more on the relationship between lecturer and student.

According to Resch and Knapp [24] SL *"is built on equal partnerships between students, teachers, and community partners*". It is for this reason that the lecturer's involvement in these projects is so critical and that this involvement or a lack of involvement can significantly impact the students' overall experience of SL. Lecturers are encouraged to develop a trusting and respectful relationship with their students as this will make students feel more comfortable when approaching them. Evidence of this positive relationship was noted in the experiences shared by the participants of the study. It is also important to note that this relationship does not only take place within the confines of the classroom but can also take place outside of office settings if needed. The participants recalled facing challenges during their project, but after meeting with or having a discussion with their lecturer, they felt more at ease. The stories shared of having the lecturer present when meeting the community partners demonstrated that there was a collaborative partnership between the lecturer and students. The findings of this study demonstrate that the students felt supported while undertaking such a large project and this could be due to the positive relationship they had with their subject lecturer.

Theme 3: positive project outcomes

The SLCPs appeared to have had a positive influence on participants as they felt they were making a difference in the various communities. There was evidence of the spirit of Ubuntu being reflected in their stories. Many participants indicated they were excited about meeting and engaging with each other in this meaningful way.

> ***P1***: *"It was a nice opportunity for students coming together."*

> ***P2***: *"I feel like helping and seeing someone being grateful for your help is overwhelming for a person. I myself, I felt like, okay, we made an impact because they were grateful in that sense."*

They articulated having interdisciplinary learning as some groups engaged with students from other healthcare professions to assist them in providing a service to their community partner. Many participants indicated that the SLCP impacted both their personal and professional lives. They developed communication skills for interacting with external people as well as life skills such as what age babies can start eating solid foods. This was a memorable learning experience.

> ***P3***: *"So I got the chance to learn from other healthcare departments, not just like radiography students and stuff, but other disciplines as well, departments. It was so nice, yes."*

> ***P9***: *"It showed me that people are going through different things so we should treat people with patience, empathy."*

Ubuntu is an African value that embodies the notion of inclusivity and togetherness and emphasises the ideology of the community, village, and family [25]. Ubuntu can be described as having compassion and humanity for others [26]. Additionally, this philosophy can be viewed as the awareness of oneself alongside the awareness of one's responsibility towards one's neighbor [27]. In other words, Ubuntu teaches us that while we are individuals, we cannot exist without others. By engaging in SLCPs students recognised and embraced the philosophy of Ubuntu and have demonstrated the importance of serving others and giving back to the community. The spirit of Ubuntu was also apparent among the students as they appreciated engaging with each other during these projects.

Research findings show that higher education (HE) engagement with SL has improved student learning outcomes [28,29]. In particular, SL promotes civic engagement and enhances civic attitude, thus playing a role in civic learning in HE. SL has been established as one of the high-impact educational practices in HE [29]. From the literature reviewed, SL was found to increase students' motivation to work with and to commit to more volunteer work within their respective communities. This was motivated by a generalised sense of achievement when giving back to their community [28]. The findings of this study are in keeping with the literature as it is evident that the services delivered impacted the students in a positive manner. Additionally, there was evidence of improved care for patients and a better understanding of diverse population groups.

A study conducted in the United States of America showed student growth in a variety of areas including moral and social development, cultural understanding, self-efficacy, leadership, communication, critical thinking, problem-solving and professional career skills [26]. Similarly, a study that targeted students enrolled in the field of Psychology, demonstrated the important role of SL in the development of ethical and social responsibility, professional awareness and identity [30]. Findings from literature demonstrated similar patterns when compared to the results of this study. After visiting their community partners and delivering the services that they needed, many participants felt that their outlook on life had changed. Most participants expressed feelings of gratitude for the lives they lived which, previously, they took for granted. They also felt they had a better understanding of the patients that visited their clinical departments which demonstrates the professional impact that SL has on health sciences students.

Recommendations

The following recommendations were derived from the data collected in phase A and phase B of the study, for educators who facilitate SLCPs with the aim of enhancing/ supporting such projects. These recommendations address phase C of the study.

- Have regular check-ins with the students which is critical for the monitoring of student progress and for providing continuous support throughout their individual journeys. Offering support may include providing assistance with getting sponsorships and funding for their projects if needed.
- Find ways to build trusting relationships with their students and be accessible when needed, especially when challenges arise.
- Incorporate SL earlier into the undergraduate curriculum using a scaffolded approach (varied scaled projects), from the first-year level to the final year due to the positive impact that it had on improved patient care and an enhanced sense of civic responsibility. Additionally, the introduction of SL earlier in the programme could possibly alleviate the challenges of difficult time management which was encountered by the current study participants.
- Explore interprofessional education and collaborative projects within faculties for future SL instructional offerings as it yielded positive experiences for the participants in this study.

Limitations

This study did not encounter many limitations; however, the following may be considered for future studies of a similar nature:

- Although the number of participants interviewed is in keeping with qualitative research and is supported in the literature, future studies could explore including/ interviewing more participants to allow for improved transferability of the results to similar contexts.
- The current study was conducted at a single site with a single population; however, the authors recommend performing similar research endeavors at other institutions with other healthcare professions offering SL.

Conclusion

In the context of health professions education, SL as a component of WIL, holds immense potential to cultivate a generation of practitioners who are not only proficient in their respective fields, but professionals who are also deeply attuned to the diverse needs and struggles of the patients that they serve. These experiences offer students a broader perspective on health disparities and the multifaceted nature of patient care, transcending textbooks and lectures to provide an intimate understanding of the realities faced by their future patients.

The MITS students, from this study, highlighted both positive and negative experiences following their individual SL journeys. An understanding of the information shared has provided the authors with valuable insight into the authentic experience of students engaged in SL. These experiences can be used to improve the facilitation of future projects.

This study bridges the gap in the existing literature by exploring the experiences of and giving a voice to MITS students engaged in SL. As educators, the authors believe that SL can be used as an approach to develop socially aware and critically conscious healthcare professionals by immersing students in hands-on community-based service and by exposing them to diverse populations. Furthermore, and from the results of this study, SL has proven to cultivate empathy, cultural competence, and a sense of civic responsibility amongst the sampled undergraduate students.

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