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Collaborative learning experiences of fourth-year students in a social work module

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Abstract

This article provides insight into a fourth-year social work module, integrating an authentic learning task. This task focused on the development of a funding proposal for a social service organization. It attempted to integrate collaborative learning by scaffolding students' participation in the world of work, rather than just receiving a qualification. In view of the prevalent conversation around the Fourth Industrial Revolution and the Covid-19 pandemic, it is essential that lecturers at higher education institutions embrace collaborative and problem-solving skills for student tasks. Recent evidence suggests that higher education graduates' learning and their readiness for work in a professional environment require a greater focus on creative and innovative thinking to solve real-world problems. The results from this qualitative investigation revealed that students found working in teams and collaborating with their peers both challenging and rewarding. This process contributed to the holistic development of social workers ready to work in the real-world.

Introduction

Recently, the term 'fourth industrial revolution' (4IR) has become a buzz word for describing the current technologically-enhanced world we live in. Life and career skills for working in the 4IR environment require collaborative and innovative approaches to teaching and learning, especially in higher education. Dillenbourg and Schneider (1995) argue that collaborative learning involves two or more people working synchronously and interactively toward finding a solution to the required task (Curtis & Lawson, 2001). Higher education employ collaborative learning strategies to prepare students to contribute towards the real world of work. Collaborative learning integrates social networking, flexibility, adaptability, initiative, and cultural interaction (Wangi, Nashrullah & Wajdi, 2018). Laal and Laal (2012) argue that there is no consensus in defining collaborative learning, but that it has become a trend in 21st century learning. Thus, in this paper, collaborative learning entails groups of learners working together to think critically to find new solutions to problems and to create a final, polished product or solution (Laal & Laal, 2012).

The real-world skills integrated in collaborative learning approaches have been identified as crucial to life and work; these include networking, critical thinking and teamwork skills. These skills are core to the social work discipline. Despite much research on collaborative learning, there is limited research available on this topic in relation to the field of social work. Consequently, this research addresses this shortcoming. It is argued that a collaborative learning approach will not only provide students with formal qualifications and content knowledge, but will also equip them with additional skills to fulfil their obligations as social workers in the South African, 4IR, real-world context (Mathebane & Sekudu, 2018).

Background to the study

The teaching and learning strategy of the University of Johannesburg (UJ) promotes a learning-to-be philosophy, where learning should incorporate real-world skills and knowledge (University of Johannesburg, 2014). This strategy rejects the notion of simply acquiring content knowledge using the traditional one-way teaching model. Hence, the University seeks to promote the idea that mere information transmission and memorization (learning about) should be supplemented by real-world skills and knowledge for becoming social work practitioners (learning to be) (University of Johannesburg, 2014).

Moreover, the social work discipline focuses on social service organizations addressing social issues within societies. These are not corporate institutions but organizations which concentrate on enhancing the quality of life for citizens in specific communities. The module in which this research was conducted, specifically aims at building holistic skills for students to contribute meaningfully to the real-world of social work which includes social service organizations (traditionally welfare organizations) in a South African context. The core function of a social service organization is to bring about social and economic improvements in the lives of, primarily, the most vulnerable communities. The overall aim of human social service organisations is to enhance human capabilities, opportunities and choices (Nel, 2019; Sen, 2009; Patel, 2005; 2019).

The collaborative learning approach could result in individual social and cognitive development and change, as this approach encourages intercultural interaction while managing projects and producing quality outcomes (Heyes, 2016; Christie, 2017; Kendal, Boogert, Rendell, Laland, Webster & Jones, 2018; Wangi et al, 2018). In a multicultural higher education environment, such as the module in which this research is conducted, every student can make a unique contribution to a group project (Silalahi, 2019). Thus, this social work module and specifically the funding proposal group activity was designed to address the need for authentic, real-life knowledge, skills and values for living and working in a 4IR environment. The aim of this project was therefore to prepare well-rounded final-year students for real-world jobs.

Literature review

Collaborative learning and the requirements for working in a 4IR environment

During the last two decades, higher education institutions implemented many initiatives to optimize students' learning to meet the demands of a technologically-advanced and networked society. Ferns, Dawson and Howitt (2019: 99) argue that there is "compelling evidence and new data analysis that the future of work will look very different", and employers question the return on investment and employability status of university students. Students with a university qualification often lack interpersonal, communication and other soft skills necessary in the professional working environment (Foundation for Young Australians, 2017: 23). It is vital therefore that higher education institutions develop innovative and collaborative ways of teaching, learning and assessing.

Numerous literature sources promote collaborative learning in order to develop the skills required in the 4IR higher education environment. Research supports student collaborative learning approaches as core to the development of these skills (Weinberger & Shonfeld, 2020). However, there is limited research on collaborative learning and the changing needs brought about by the 4IR era in the field of social work. Moreover, Rodríguez-Gómez and Ibarra-Sáiz (2015) argue that many higher education institutions still associate assessment processes with assignments and examinations, simply awarding grades for mostly theoretical paper submissions. Many programs, including social work at higher education institutions in South Africa (SA) are still predominantly delivered in a traditionally lecturer-centered, content-intensive manner (Department of Higher Education and Training, 2020). This implies that academia is often out of touch with the real-life skills required in today's world of work. This is a concern especially in the field of social work as this environment is dynamic and changes constantly, especially in a developing country such as SA. Social work lecturers acknowledge the need to move towards a more collaborative way of working, but implementation is slow. Figure 1 depicts the 21st century knowledges and skills required in a 4IR environment.

Figure 1 highlights the demand for different types of knowledge, skills and attitudes in the 4IR workplace. This raises questions as to whether universities are currently addressing the basic requirements of preparing students for this 4IR era. We argue that the curriculum should not only assess content knowledge, but should integrate collaborative leaning and assessment environments, contributing to the holistic development of social workers. These environments should empower students to develop various skills, and ways of working and thinking, in order to participate successfully as professionals in the world of work (Rodríguez-Gómez & Ibarra-Sáiz, 2015).

Collaborative learning addresses these components. The current research project combined the elements of the model shown in Figure 1 in three main sections: knowledge, skills and attitudes required for living in and contributing to a 4IR environment in the 21st century.
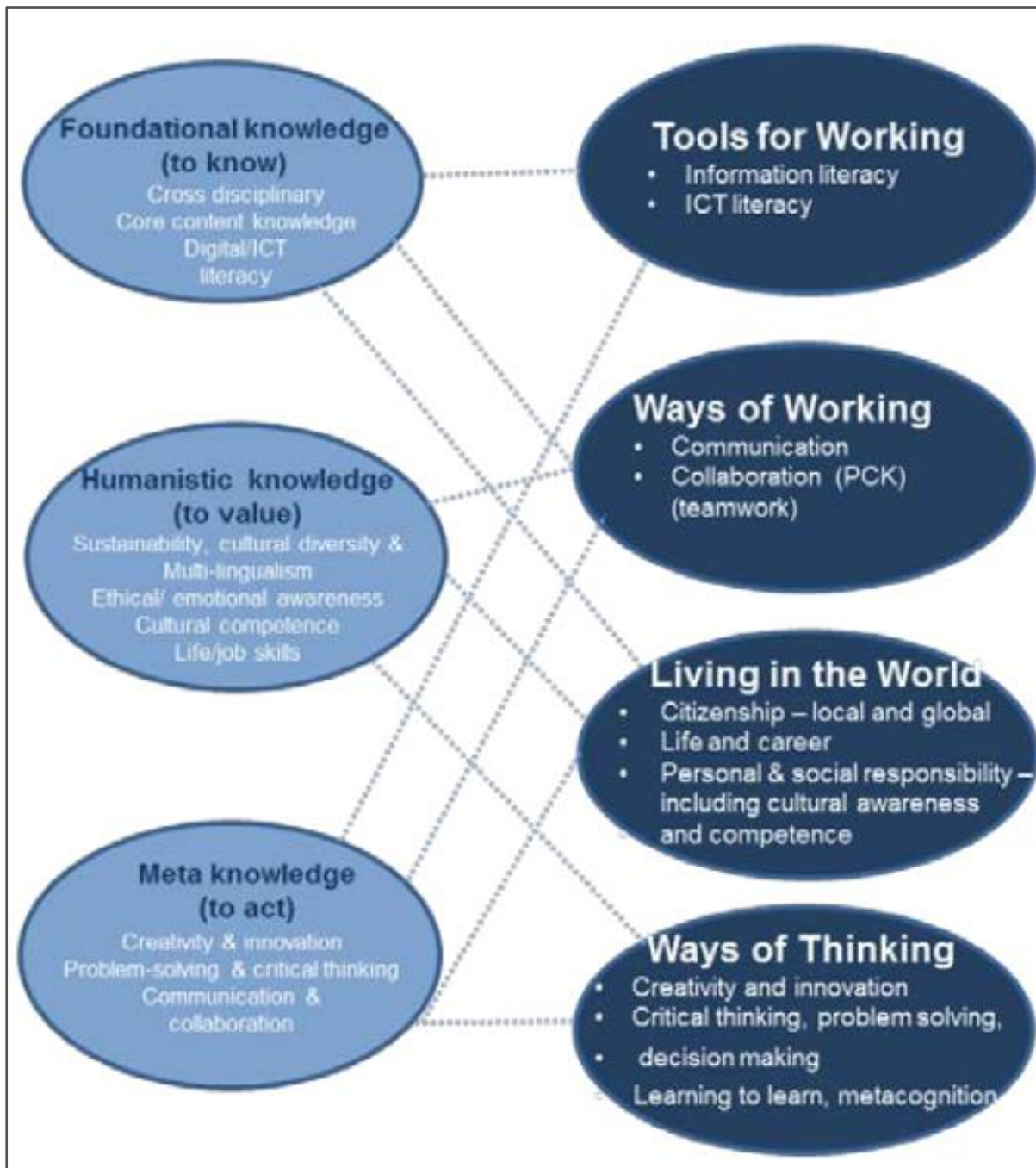

Figure 1: Using 21st century skills and knowledge to develop student learning in SA (adapted from Binkley, Erstad, Herman, Raizen, Ripley, Miller-Ricci & Rumble, 2012:1; Kereluik, Mishra, Fahnoe & Terry, 2013:130; Pretorius, 2015).

Figure 2 illustrates the concepts used for analysis during this project. It also integrates the concepts related to the affordances identified in the literature on collaborative learning and Vygotsky's Zone of Proximal Development (ZPD). These affordances abstracted from the literature are grouped according to knowledge, skills and attitudes.
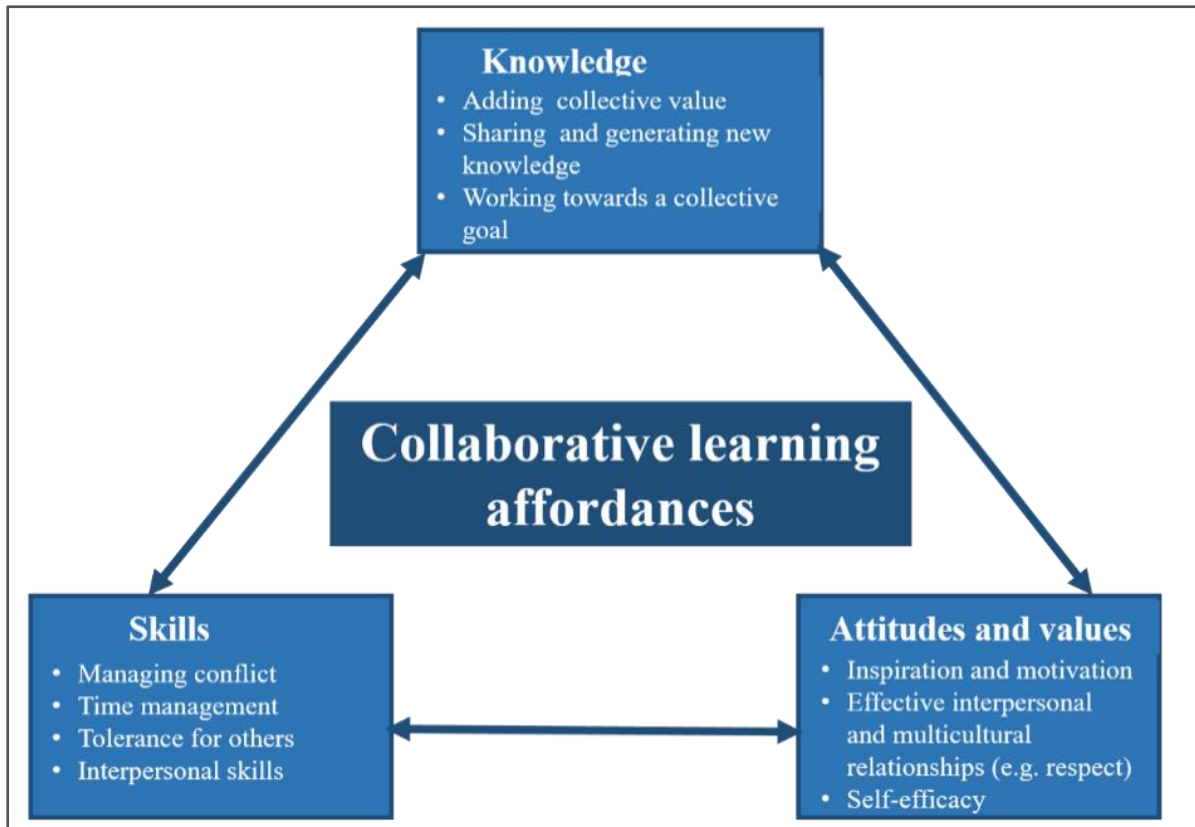

Figure 2: Affordances of collaborative learning.

Collaborative learning in the higher education environment

Collaborative learning should feature significantly in the higher education environment, as it is a lifelong learning skill that contributes substantially to the development of problem solving and critical thinking skills. Collaborative learning is one of the core concepts mentioned in academic literature relating to the skills and ways of working required in the ever-advancing world of work. These skill requirements are fundamental in the drive to provide quality higher education in the current 4IR era. Collaborative learning is one of the primary concepts fuelling innovative learning strategies in higher education for producing an adaptive, responsive, innovative and highly-skilled workforce in a competitive global environment (Colomer, Serra, Cañabate & Bubnys, 2020; Wangi et al, 2018). Mwangi and Ingado (2020) also believe that collaborative learning, alongside reflective practices, improves active learning, engagement and student motivation.

In collaborative efforts, students engage with each other, reflecting on information and experiences while constructing new knowledge and contributing to good practice. They also transform themselves and align with the expectations and standards of the profession, coordinating their actions towards achieving a common goal (Wenger, 1998). These social interactions and relationship-building initiatives have been emphasised with the development of information and communication technologies. These technologies support collaborative activity within blended and networked learning environments, offering multiple flexible opportunities for students to learn anywhere and anytime. Reflective and collaborative learning activities do not always substitute for old information and practices, but can enhance and deepen existing practices in the process of generating new knowledge (Mwangi & Ingado, 2020). This is also the first steps towards preparing students for the

demands of 4IR, where technology is becoming an ever-present reality. Collaborative learning supports a social constructivist approach, as it allows students to transform who they are and what they can do. The idea of social constructivist pedagogy supports collaborative learning as it enables students to build new knowledge while gaining insights from their peers (Dillenbourgh, 1999; Zhu, Valcke & Schellens, 2010). Social constructivist pedagogy emphasizes learning as an active, participatory process where students engage in knowledge-building practices; this is also referred to as transformative and expansive learning (Sannino, 2010; Engeström, 2018).

Collaborative learning also transforms students' preconceived ideas of the learning process, moving from pure memorization to application of module content. As a result, students can transform their prior or existing knowledge, working towards transformational learning. This embraces the notions of critical thinking, problem solving, communication and collaboration. Collaborative learning also increases students' awareness of real-world challenges, as they share their experiences from their own communities.

It is essential that higher education institutions embrace new teaching and learning strategies. Pure memorization and content recall is no longer sufficient for the challenges faced in the 4IR era. 4IR requires the promotion of creativity, critical thinking and problem-solving skills. For example, the COVID-19 pandemic requires that numerous disciplines need to work together to find new and innovative solutions to the challenges thrown up by the pandemic. Scientists, healthcare workers, social workers have needed to find new ways of working using technology and engaging in higher-order thinking and learning skills, in order to survive these turbulent times (WHO, 2019; Mwangi & Ingado, 2020; Toquero, 2020). The problems faced by today's work force are often multifaceted and require group rather than individual solutions. Teams do not only meet to share information, perspectives and make decisions, but they produce distinct work products through members' joint efforts and contributions as they work towards a common goal (Potgieter, 2003; Lurie, Schultz & Lamanna, 2011). The importance of collaboration and teamwork is an essential skill in today's complex and dynamic world of work (Lewis et al., 2007).

Collaborative learning as a tool to promote proximal development

Numerous studies demonstrate the success of collaborative and teamwork learning activities in higher education in preparing students for the world of work (Johnson, Becker, Cummins, Estrada, Freeman & Hall, 2016; Caspersen, Frølich & Muller, 2017; Woodside, 2018). Such social interaction allows students to engage in deep discussion which leads to deep learning. New perspectives are created from the different views of the diverse team members (Storch, 2005). Diverse teams can reinforce, inspire and motivate all team members to add collective value to their objectives.

Thus, effective communication can drive creative problem solving and innovative thinking. This emphasises that knowledge can be sourced from different members in a group, can be reorganized and that new knowledge can be linked with old knowledge (Retnowati, Ayres & Sweller, 2017). Moreover, workload is shared and communal support is available as in the real world of work. Skills, knowledge, values, attitudes and opportunities are optimized to their fullest extent when working in a team (West, 2012). To work in a team means to have interaction and build relationships with team members. Interaction based on positive relationships has a major effect on academic and professional

success (Peñalver, Salanova, Martínez & Schaufeli, 2019). Research shows that if students are more able to interact socially and build relationships in the university, they are likely to perform better academically and in the workplace than those who are not able to do so (Peñalver et al, 2019). Active engagement in a student-led collaborative learning environment is known to promote the generation of new knowledge from multiple resources (Gale, 2003). This is because knowledge is co-constructed by the individuals in a team through interacting with each other as well as with resources outside the group to complete a given group project or task. It involves the students in cognitive and social experiences, which is embedded in theories of social constructivism and transformational and expansive learning (Liu & Lan, 2016; Engeström, 2018).

In Mind in Society (Cole, John-Steiner, Scribner & Souberman, 1978), Vygotsky promotes the notion of the zone of proximal development and explains that learning and development are enhanced through the assistance of more capable others, which can include group members. This idea is also well positioned within the concept of shared cognition and interwoven with the theory of situated cognition (Suchman, 1987; Lave, 1988; Lave & Wenger, 1991; Dillenbourg, Järvelä & Fischer, 2009). This is because students develop the ability to construct relevant, shared representations of collaborative processes that can be employed during tasks (Zambrano, Kirschner, Sweller & Kirschner, 2019). Collaborative learning has attracted much attention due to the growing importance of working in teams and networks to solve the complex problems of contemporary life, work and society (National Research Council [US] and others, 2011). Collaborative learning offers an extensive source of information and addresses the cognitive, metacognitive, motivational and affective dimensions of student learning (Gašević, Joksimović, Eagan & Shaffer, 2019).

Collaborative learning as a tool for interpersonal skills development

It is essential to develop interpersonal relationships within social service organizations and between organizations and their local communities. The main aim of this is to enhance and support social work efforts in local communities. Students develop negotiation, critical thinking and problem-solving skills in the collaborative learning environment. It also develops interpersonal skills allowing for the management of conflict as well as a common understanding among others and the cultivation of effective relationships (Fullan, 2011; Thiel, Harvey, Courtright & Bradley, 2019; Cruz, Zagenczyk & Hood, 2020).

The above categories of skills, knowledge and attitudes will be refined into related themes and will be returned to in the results and discussion section. First, attention now turns to discussion of the research methods employed in this study.

Research design and methods

A qualitative approach was followed in this research project. The study used limited quantitative data for biographical information and therefore cannot justify a claim of using a mixed methods approach (Timans, Wouters & Heilbron, 2019). Open-ended questions were used for data collection and closed-ended questions were mainly used to gather biographical information. This approach allowed opportunities for the participants to disclose their diverse experiences of completing the assigned task (Roller & Lavrakas, 2015). The aim of this study was to investigate the students' collaborative learning

experiences while compiling a funding proposal for a social service organization during their final year of undergraduate studies. This funding proposal activity is only one section within the broader module in which this research took place, which was undertaken by 91 fourth-year students. The aim of the assignment was to have students apply social work knowledge, skills and values to achieve the outcome of the assignment as discussed in the background of the study. The students were from various ethnic groups in SA, mainly Zulu-, Xhosa- and Sepedi-speaking students, but also included students from other regions of the African continent.

43 students (or 48%) of the students completed the online, qualitative survey. ATLAS.ti was used to analyze the data according to categories and themes identified from the student responses (Friese, 2014). Ethical clearance was obtained from the relevant ethics committee of the university and all student responses were anonymous and confidential (Krueger & Casey, 2014). Students gave written consent for their participation in this project.

Students used both technology and face-to-face interaction to communicate and collate their decisions on the funding proposal. This made the task authentic as students could communicate in their own languages with each other and compile an authentic product using topics and graphics appropriate to the South African context. The instructions and guidelines were posted on the module's learning management system (LMS), providing a secure and authentic online learning environment.

The team assignment encouraged online communication, but some groups still preferred using WhatsApp or face-to-face interactions. The students worked towards the same outcome of developing a funding proposal as a real-world activity within a South African context. Students could use an application of their choice, but it was crucial that everyone had access to online communication via a computer, laptop, tablet or smartphone. Internet connections were available in hotspots and the computer laboratories on campus, but some students used private data or public sites off campus.

Results, findings and discussion

Collaborative learning and the generation of new knowledge

Programs delivered at higher education institutions in SA are still predominantly lecturer-centered, as argued in the Higher Education Annual Performance Plan of 2020/21 (Department of Higher Education and Training, 2020). The student responses highlighted that this approach would take time to change within the higher education environment, as one student preferred this approach: "it's better to teach more content to prepare us for the exam paper". This highlights the extent to which content dissemination and unidirectional teaching remains prevalent in higher education. By incorporating activities such as the one used here, students not only 'receive' content, but also apply this to a real-world intervention within the social work domain.

However, many lecturers face challenges in creating and delivering collaborative activities, since they often teach the way they were taught (Le, Janssen & Wubbels, 2018). Lecturers are often concerned with monitoring on-task behaviour and group-work time management. Moreover, providing relevant resources for learning and developing collaborative activities is time consuming on the part of the

lecturer. As such, it is evident that collaborative learning approaches will take some convincing for students and lecturers to participate in such activities (Gillies & Boyle, 2010).

Nonetheless, the literature suggests that collaborative learning offers students opportunities to add collective value and to share and generating new knowledge (Muller & Young, 2019). In the present study, students gained new insights from their peers and demonstrated the concept of the zone of proximal development. As shown in these comments, the students confirmed the value of collaborative learning approaches:

> It was a learning curve because I learnt a lot from my group members
> It was eye opening and I learnt a lot from my peers
> Working in groups on the proposal helped me to perceive things in a different way
> It was informative because you get to understand how other people think and get clarification on things you didn't understand
> It was very interesting and I gained lots of perspectives concerning my group members' views on the assignment.

Comments such as this demonstrate how students gained new insights and ideas from their peers, and how they generated new knowledge and proposed new solutions in their assignment submissions. Existing knowledge was enhanced by the varied views of their team members, as suggested by the literature (Storch, 2005; Chai, Koh & Tsai, 2013; Muller & Young, 2019).

Collaborative learning and the development of 4IR skills

The 4IR era represents a networked global community where technology supports collaboration and allows for flexibility in time and space. Students can interact within their own environment and in their own time. A collaborative team learning approach can include both face-to-face interaction and online interaction, both synchronously and asynchronously (Curtis & Lawson, 2001). Some participants in this study preferred to meet face-to-face (F2F). Figure 3 indicates the students' preferences in this regard. This finding may be a result of technical challenges that are common occurrences in SA, where many students lack computer skills and/or experience infrastructure constraints, including intermittent or lack of access to electricity and internet connectivity (Chisango, Marongwe, Mtsi & Matyedi, 2020). This explains why some students opted for alternative contact methods such as using WhatsApp or face-to-face meetings. Nonetheless, this collaborative learning experience expanded the students' technological skills.

The responses indicated that a majority of students preferred the use of online platforms rather than face-to-face meetings. This data indicates that students, even in a developing country such as SA, are reasonably able to engage in online interaction, which is in line with the 4IR demands of a networked society. For this assignment, students were presented an opportunity to strengthen their technological skills. As such, the project scaffolded the development of the 21st century skills needed for life and work (Ferns et al., 2019).
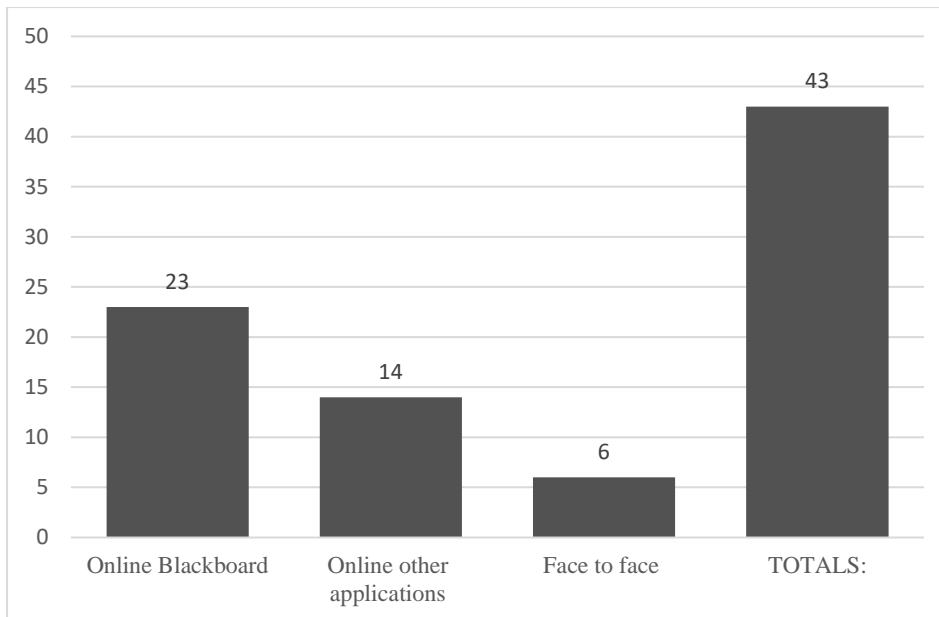
Figure 3: Student online vs face-to-face (F2F) participation.

Collaborative learning as a tool for developing interpersonal skills

Collaborative learning encourages interaction among students. It is important to acknowledge that relationships are important in bringing about change (Daly, 2010). Collaborative learning involves integrating cross-cultural beliefs, which necessitates thoughtfulness and respect. Social interactions with others can develop the necessary skills and knowledge and simultaneously enhance a sense of self-efficacy (Shin, 2018). Fullan (2011, as cited in Pretorius, 2015) argues that relationships are an important factor for affecting development and progress. The most successful ventures are accredited to people but "it is actually relationships that make the difference" (Fullen, 2011, cited in Pretorius, p. 96). These findings are well-reflected in the responses from the students:

> It also made me to be more relaxed as I had the members for support
> A great experience because I was working with the people who understood each other.
> We communicated well and we did our work as a group, there was no individualism
> I learn that I can be able to share my ideas with other people and through that I was able to identify my strengths and weaknesses
> I am used in working with groups and again being with different people in a group it helps because you learn from them
> You also try to be positive and focus in terms of coming with ideas in a group
> It was good working with a group on the funding proposal. Again, it will help in the future.

Skills development as an affordance of collaborative learning includes managing conflict, time management, tolerance of others and building new relationships (Thiel et al, 2019; Cruz et al, 2020). The students' responses related to multicultural integration and conflict management highlighted the challenges and affordances students encountered when participating in the group activity. Working in a multicultural environment such as the South African higher education context requires tolerance for diverse ways of working. Some students experienced this as conflict, as reflected in some responses:

> Working in groups is always a challenge because you are reliant on people for marks
> Work ethic may be totally different
> Members who may or may not be as committed as you are to study
> I would have preferred doing the project on my own
> They either did not do the work assigned or they had other excuses

Students had to find a way to resolve these differences. This suggests that their conflict management and tolerance for diversity were extended via the collaborative learning experiences:

> Eventually, when group members did get together, they did not want to spend a long time together to discuss
> They were always in a hurry to do other things
> Our group had a number of communication barriers, but worked well together
> Beginning it was not easy to get people to get together
> The experience was great as you get to hear other people's opinions and learnt from that and also you get to take out your own views
> At the end everyone's contribution was essential and beneficial to the whole group

The experience also enhanced students' ability to share and delegate work, which contributed to effective use of their time. As such, the students' time management and communication skills may also have improved as a result of this collaborative learning experience. The comments below indicate their experiences:

> Learned to delegate work with the members and able to learn from them
> At honours level, groups are a difficult thing to manage and coordinate
> Working in groups was good because we got to share the workload
> It was easier to work in groups because of the fact that the workload and the weighting of the assignment became easier to do when the tasks were assigned to different people
> Reason being that as a group we are able to think beyond an individual and tasks finish quicker than when working alone
> Time constraints; I could not finish my part of the assignment in time.

These responses show that students developed a tolerance for each other, developed leadership skills through coordinating meetings and learnt to accommodate the different views of their group members.

Collaborative learning and the development of attitudes and values

Collaborative learning can also inspire and motivate students towards improving their work ethic and achievement. Reflection has been highlighted as an approach to transform and expand learning (Alsina & Mulà, 2019). This was evident in the students' support of one another, which in turn led to more positive attitudes and completing activities and tasks more successfully. The comments below, extracted from the student responses, highlight this:

>   Working in groups was good because we got to share the workload and were able to come
>   up with different perspectives on how to make our proposal sound good
>   It was also easier to have various creative people bring their ideas to the front in order to
>   plan for the funding proposal
>   It was challenging but I enjoyed myself because I learnt new things from my colleagues
>   It was wonderful because it is where I learned more from my group members because we
>   were all giving each other positive comments based on the discussions that we had in our
>   group.

The students emphasized that when the workload was shared, it not only helped to clarify difficult concepts, but also resulted in better quality submissions. They could focus on their particular allocated share of work which led to more motivated students in participating more widely to achieve the best possible outcomes. Peer support and varied insights from multicultural perspectives contributed to a higher quality submission (Shin, 2018).

Collaborative learning develops real-world knowledge and skills that can be applied within a multicultural environment (Patel, 2005; 2019). It is essential that social workers become culturally adept and people-centred (Scott, Beckham, Gross, Pariyo, Rao, Cometto & Perry, 2018). The student responses highlighted the development of these skills and knowledges that are crucial to positive social intervention. The following comments emphasis aspects of social development that need to be included in higher education programs:

>   Because writing a proposal is one of the fundamental skills that we have to know as social
>   workers as we work with different communities
>   The module is very good, especially in the final year as we will go to the field knowing
>   exactly what we are expected to do in the field
>   What we learn in terms of collaborative learning could be applied in practice with our
>   colleagues and community members – these are vital skills for social development
>   It was a great experience, a good way of learning how to manage in the working place
>   The module was good in a way that we now know what is expected of us in the practice

Another issue is managing a diversity of traditions, perspectives and beliefs in an online environment. Cross-national and transdisciplinary communication has broken the barriers between cultures and has become vital, especially in the fields of the social and health sciences (De Vries, Van Bommel & Peters, 2018). Despite challenges mentioned by some respondents, the findings indicate that collaborative learning generally yielded positive outcomes such as improved product and overall positive student attitudes. Students developed a sense of belonging as they participated in their groups. This in turn also developed related to the interpersonal skills, crucial within the South African context (Thiel et al., 2019; Cruz et al., 2020).

Conclusion

The findings emphasize that collaborative learning offers multiple affordances. These affordances include generation of new knowledge and ideas and the sharing of opinions and insights. It was evident that collaborative learning also offered peer support and soft skills development contributing

to preparation for the world of work. Collaborative learning opportunities guided students in developing conflict and time management skills alongside tolerance and interpersonal skills. The collaborative learning approach also had a positive effect on the students' sense of self-efficacy, as shown by positive comments and interactions amongst team members. The knowledge, skills and attitudes gained through this collaborative learning experience will certainly contribute to more effective social development practitioners in SA. This project, promoting collaborative learning in higher education, highlights the relative affordances and challenges of working in teams. Overall, the students recommended that a collaborative learning approach be implemented at all year levels. As one student comments: "I suggest this module be taught in first year or second as it plays a huge role in our professional experience". As a result of this study, it is recommended that further studies be conducted to validate the affordances of collaborative learning in higher education, specifically within the social work context, where beneficiaries are also included in such a project.

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