Using simulations to improve skills needed for work-integrated learning before and during COVID-19 in Namibia

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This article explores Namibian students' perception of work-integrated learning (WIL) readiness skills developed from an offline and online business simulation course, pre and during the COVID-19 pandemic, as well as the use of simulations to prepare students for WIL placements. The findings indicate that both versions of the business simulation were able to inculcate WIL readiness skill in the students and that students perceive learning tools, such as the business simulation course, appropriate in developing the skills needed for WIL. Skills including communication, professionalism, leadership, teamwork, analytical, problem solving, critical thinking, assertiveness, time management, willingness to learn, attention to detail, diversity and accountability were more significantly developed in the offline business simulation than in the online version. It is thus highlighted in the study that pedagogical and content related strategies that can enhance online business simulations be considered.

Keywords: COVID-19, online simulation; WIL preparedness; employability skills; higher education institutions; students; innovation

Employers in Namibia have raised concerns on the lack of readiness skills amongst students placed in their organizations for work-integrated learning (WIL). According to the employers, students need to have an introduction from the university or be familiar with some skills such as basic communication, willingness to learn and flexibility, as this enables them to learn from their WIL. Industry then only enhances these skills by providing an opportunity or platform to apply them. The need for preparation for WIL placement thus becomes important. WIL preparation programs enable positive and rewarding experiences in terms of employability skills development required for professional practice hence emphasis on the quality preparation for WIL (Dwesini, 2014; Grace & O'Neli, 2014; Rayner & Papakonstantinou, 2015). Bates and Bates (2013) report that different disciplines use various ways to prepare students for WIL placements. These are usually theoretical sessions in which students are briefed on workplace etiquette with practical sessions of theory application. The COVID-19 pandemic has however prompted higher education institutions to rethink their approaches and come up with innovate ways to deliver all their courses, including WIL preparedness, as students are not able to be physically present in institutions and make use of existing programs to be fully prepared for WIL.

Faculties at a Namibian university have WIL as a compulsory component in all undergraduate academic programs. The WIL period ranges from 360 to 480 hours minimum in which students are placed in industry applying what they have learned in the classroom. To prepare students for WIL, the university offers a pre-WIL work preparedness workshop and a simulated employability improvement training. These both have theoretical and practical elements. While the theoretical parts of these WIL preparedness courses were able to continue remotely during COVID-19, the simulated workshops are practical and were unable to be carried out during the pandemic.

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The business simulation course, pre COVID-19 was conducted by students being physically present in a room and forming a virtual organization in teams of three or four with guidance from a facilitator. The course is 16 hours long; the same period an employee would be required to be at work for two days from 08.00h – 17.00h. During these 'working hours', students allocate roles to each other such as leadership, managing their team members, making decisions, and are required to finish tasks within a specified time frame. The setting also requires students to conduct themselves professionally, communicate effectively and handle tasks as they would in a working environment. During the simulation exercise, students are presented with business scenarios that may be present in a real organization. Each team analyses the given information and brainstorms on a strategic approach to solve the scenario. During the implementation, each team member takes up an organizational role overseeing different business functions such as operations, human resources, management, finance, marketing, research and development. The practice enables the transfer of knowledge to simulated businesses and helps students to understand and experience management concepts and the interrelations among the various functions of a business. This study was therefore setup to explore the possibility of using the business simulation course to develop WIL readiness skills as it is practical and can be offered online hence the institution was able to continue offering it during the COVID-19 pandemic.

LITERATURE REVIEW

Preparedness for Work-Integrated Learning

Employers rely on higher education institutions (HEIs) to produce graduates who do not only have a theoretical understanding of their disciplines, but the practical skills and knowledge to think independently and ability to adapt to new and challenging situations (Spowart, 2011). Furthermore, employers also value employability skills such as communication, teamwork, interpersonal skills and the ability to problem solve (Gamble et al., 2010; Spowart, 2011). In the Namibian context, employers have expressed that these skills should be developed first by the university and then enhanced and improved in industry during WIL placements. Institutions of higher learning are therefore urged to provide programs that would help in preparing students for WIL placement and assist the industry in providing the best support to students during their placement. Khalid et al. (2014) are of the same view that universities need to equip students not just with intellectual capabilities but also applied practical soft skills which make them more work ready. Lowden, et al. (2011) also alluded to the idea that higher education institutions should provide WIL programs that contribute to enhancing students' ability to secure employment and perform well in their jobs. Therefore, tools such as simulations can help in the development of WIL related skills and application of theoretical knowledge. Bist et al. (2020) argue that interns lack related skills (communication skills, problem-solving ability, analytical skills, and business understanding).

According to Sundler et al. (2015), pedagogies in use within universities are rarely underpinned by evidence of their efficacy and more knowledge on simulations and their impact on learning is required. In Rambe's (2018) view, WIL cannot be considered completely maximized if universities continue to adopt selective approaches to WIL which prioritizes the employers' expectations and does not pay particular emphasis on the competency development of students. Dwesini (2014) argued that, students' preparation process prior to undertaking the WIL program can assist students to progress towards the skills, knowledge and attitudes needed for work industry. Similarly, Strachan (2016) is of the opinion that embedding employability skills into the course structure enables students to be aware of their importance to industry. Hence, for the WIL program to be successful, education institutions at large

have an obligation to prepare students for WIL and make sure that industry partners receive student interns who have an introduction of skills such as a positive attitude towards work as well as willingness to learn and flexibility. It is therefore important for academics to understand that, although there is a degree of learning that takes place in the workplace, the student should have some basic skills and readiness to work as workplaces prioritize productivity, profit making, and positive attitude towards learning.

Several approaches to WIL preparedness programs have been explored in literature (Bates, Bates & Bates, 2007; Dwesini, 2014; Grace & O'Neli, 2014; Rayner & Papakonstantinou, 2015), including simulations (Chad, 2020; Dodds et al., 2018; Nimmagadda & Murphy, 2014; Nofemela & Winberg, 2020). These have highlighted the employability skills enhancement as well as concerns on discipline specific simulations. In the models of simulated work-based learning suggested by Moyer et al. (2017), the intended employability skills that can be gained from the simulated workplaces are for example teamwork, responsibility, leadership, and career awareness. In addition, Nimmagadda and Murphy (2014) explained that simulating practice scenarios promotes learning, problem solving, critical thinking, and reflective practice.

Simulations

A simulation is defined as "an act of imitating the behavior of a physical or abstract system such as an event, situation or process that does or could exist" (Youngkyun, 2009). According to Lee (2010), simulations depict real life situations, where participants role-play, make decisions and receive feedback on their actions upon which participants could observe the results, reflect on their previous decisions, and improve their future decisions. According to Clayton and Gizelis (2005), simulation-based teaching relates to a specific skills-set that is not generally well cultivated through theoretical approaches. Hence, many professions such as business, law, social work, planning, politics and health care can use some form of simulation to develop, practice and test student's ability to apply, communicate, argue and negotiate with others in a manner that applies theoretical ideas in a practical sense. Lee (2010) described the use of simulation games based on Kolb's Experiential Learning Cycle (Kolb, 1984) that from the user's point of view, simulations mimic real life situations, where participants operate in a risk-free and less expensive environment to put theory into practice, role-play, make decisions, and receive feedback on the results of their actions, upon which, they have the opportunity to reflect on their previous decisions, and further improve their future decisions.

In the employability skills context, simulations are reported to have an impact on student work-readiness (Smith et al., 2014) and give students an opportunity to practice fundamental skills of their study disciplines, encourage decision making and team-working, and enhance the student learning experience (Clarke, 2009; Richmond et al., 2015). Simulations in research have however been reported to replicate or replace WIL experiences and are referred to as non-placement WIL simulations in various disciplines (Chad, 2020; Clarke, 2009; Masethe & Masethe, 2012). This simulated work-based learning replaces WIL as it allows students to immerse themselves in a realistic worksite activity without leaving campus. These are options for different reasons such as lack of resources; limited industry to take up students; logistical issues, such as the geographical isolation of rural providers or scheduling challenges that limit students' ability to travel; safety or insurance issues that restrict students' access or engagement; and labor laws, which may prohibit underage students from working (Moyer et al., 2017).

This paper, however, explores simulations in terms of preparedness for WIL placement and not as a WIL replicate. This is due to our interdisciplinary students' nature and the simulations' inability to

cater for program specific learning outcomes. Industry-based WIL would thus still be required. This is in line with Nofemela and Winberg (2020) who evaluated a simulated work readiness program centered on the Kaizen principle and found it to successfully prepare transdisciplinary students for WIL. Nofemela and Winberg recommended that a simulated environment becomes more authentic and has an impact in terms of WIL readiness, if it takes into account the professional or specific fields of study. However, Dodds et al. (2018) argue that rather than debating whether priority should be given to academic knowledge or practical skills, scholars should focus on exploring simulations as an opportunity to help students synthesize the two complementary learning opportunities. Hence, whether simulations replicate industry placement or prepare students for WIL, the focus should be on the employability enhancement aspect.

Technology and virtual platforms for learning in higher education have gained momentum during COVID-19 and WIL management is no exception. Higher education institutions are experimenting with new models of WIL preparedness. Some of these contemporary trends that can inform WIL design and implementation are explored by Kay et al. (2019) and include micro-placements, online projects or placements, hackathons/competitions and events. Given the COVID-19 pandemic, these methods can be utilized as students are not able to be physically present at the institutions to attend WIL preparedness classes and take up an industry placement. Davies and Shirley (2007) have highlighted some of these E-learning platforms as video conferencing, Skype, online chat, email, discussion forums, wikis and blogs. Wilson, et al. (2013) used a 3D web-based home visiting simulation to provide students with hands-on opportunities to practice engagement and assessment skills. These authors recommended emerging 3-D virtual worlds, that is, computer-based, simulated multi-media environments where users can interact via graphical self-representations (referred to as avatars), and as-yet-unexplored avenues can be used for creative peer-to-peer interactions in online education.

Theoretical Framework

Experiential learning theory as proposed by Kolb is used as a theoretical framework in this study. Experiential learning involves learning from experience and takes a more holistic approach, emphasizing how experiences, including cognitions, environmental factors, and emotions, influence the learning process. Kolb's (1984) theory as drawn from Dewey, Lewin, and Piaget highlights the type of leaning in which personal experiences are transformed and determine the way in which individuals act, think and view the world. Kolb (1984, p. 41) defines learning in this theory as "the process whereby knowledge is created through the transformation of experience". The theory sets out four distinct learning styles, which are based on a four-stage learning cycle: (1) the student acquires actual experience through participation in an activity such as participation in a simulation; (2) the student reflects on the acquired experience; (3) the student creates concepts and ideas from the experience by identifying the significance of what was learned (this includes further reflection and analysis of the strategies used to enhance the outcome); (4) the student uses the concepts and ideas developed to test the hypotheses in future situations, creating new experiences in the process. Therefore, the learning process is portrayed as a learning cycle where the learner assumes each of the stages.

According to Thatcher (1990), simulation games recreate Kolb's learning model where a business game generates a series of micro-experiences followed by instant feedback and reflection. Kolb (1984) developed a model of how experiential learning can be used to guide simulation-based interpersonal education. Kolb's experiential learning theory model explains the process of knowledge creation through the transformation of experience using simulation-based interprofessional education. In the model, simulation represents the concrete experience of learners where reflective observation takes

place during and after the simulation debriefing phase. The abstract conceptualization phase allows students to analyze the significance of the interprofessional education activity and evaluate various ways of the activity to determine what could have been done differently to influence the outcome. During the active experimentation phase, students get an opportunity to test the knowledge gained by applying knowledge to new situations. The choice to use Kolb's experiential learning theory model as the theoretical framework in this study is therefore relevant as the principles explained can be integrated in the business simulation practice.

METHODOLOGY

This quantitative study aimed to inform the development of WIL preparatory programs by exploring students' views on WIL readiness skills developed from an offline and online business simulation course, pre and during the COVID-19 pandemic.

Participants

Students who participated in the business simulation were selected from the Faculties of Management Sciences, Human Sciences, Natural Resources and Spatial Sciences, Computing and Informatics and Engineering within the university. The participants were divided into two groups, Group 1 (offline) and 2 (online).

Group 1 respondents consisted of students who had attended the offline/physical simulation prior to COVID-19. The researchers purposively selected Group 1 students as participants because they had attended the business simulation seminar and had completed their WIL placement between 2018 and 2019. The total Froup 1 (offline) population comprised of 290 full-time students, however only 180 students were chosen to participate as they had completed their WIL placement during the data collection period.

Group 2 respondents consisted of students who had just completed the online simulation during the COVID-19 pandemic. The participants were selected because they were the first cohort of the online business simulation since COVID-19. All 150 full-time students who were registered for the online business simulation were chosen to participate in the research. Students in both groups were registered as full-time students. The mode of study was purposive as the majority of part-time and distance mode students were already working and/or had worked before, hence their participation might have distorted the results.

Survey Tool

Student perceptions on WIL readiness skills gained during the business simulation were obtained via a questionnaire from offline and online participants. The questionnaire was developed by the researchers after consultation with Namibian industry partners to provide insight on the scope of desired skills. Industry supervisors who have taken in and supervised different students during WIL for the past five years were interviewed to solicit skills needed for WIL placement during a separate engagement. The acquired information provided the necessary data and the skills set that was used as a framework for the students' quantitative questionnaire. The questionnaire solicited the participants' views on the following:

- The extent to which the business simulation helped the students in developing the different skills required for WIL placement.

- Whether or not the students recommended the use of simulations to prepare students for WIL placement.
- Recommendations on other skills and attributes that the business simulation should cover to better prepare students for WIL placement.

The questionnaire comprised of closed-ended questions using a Likert scale-based rating (1 = no extent, 2 = low extent, 3 = somewhat extent and 4 = great extent) related to WIL preparedness skills developed during the business simulation session. Open-ended questions were also used, which required participants to provide their views on the use of simulation to prepare students for WIL placements. Due to the COVID-19 pandemic, questionnaires were administered online. The Google form link of the questionnaire was sent through email and WhatsApp groups for participants to answer. Out of 180 invitations to participate, 126 (70%) students from the offline group and 59 (39%) of 150 online students responded to the questionnaire. The questionnaires, for reporting and analysis purposes, were coded as follows: Offline (F) and Online (N).

Statistical Analysis

IBM SPSS Statistics™ Version 20 (IBM, SPSS, Chicago, IL) was used for the statistical analysis. Descriptive statistics such as means, and independent t-tests were computed to test the difference in mean values between the two groups. To study internal consistency of the measures, we calculated Cronbach's alpha. An alpha level of 0.05 was used for all statistical tests.

Ethical Considerations

The researchers followed the ethics clearance procedures of the Institutional Ethics Review Board in place at the Namibia University of Science and Technology and received approval to conduct this study (Reference number: S034/2020). The participants' privacy and confidentiality were upheld by requesting participants to complete a participant consent form. In this form, participants were informed that the researchers did not request their personal information and would maintain confidentiality during the data collection, compilation and reporting processes.

RESULTS

Reliability Analysis

A reliability analysis was carried out on the perceived WIL readiness skills values scale comprising of 18 items. The results in Table 1 show Cronbach's alpha of α = .911 for the offline business simulation and α = .951 for the online version which suggests strong internal consistency for the scale used. The results indicate scores higher than an acceptable α = .7, which shows that the questionnaire is reliable.

TABLE 1: Results of reliability test of perceived WIL readiness skills for offline and online simulation.

	Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**No. of Items**
Physical simulation	.911	.914	18
Online simulation	.951	.952	18

Work-Integrated Learning Readiness Skills Developed During the Business Simulation Seminar

Based on student's experience of the business simulation, participants from the two groups (offline and online) were asked to give their views on the extent to which the simulation program helped them in developing the different skills required for a WIL placement. The mean scores and differences of perceived WIL readiness skills between offline and online respondents are shown in Table 2.

TABLE 2: Mean values and independent samples test values for different WIL readiness skills developed during online and offline simulation.

	Mean score			Independent Samples Test for equality of means
Variables	**Offline mean**	**Online mean**	**Mean difference**	**Sig. (2-tailed)**
Responsibility	3.52	3.25	0.27	0.055
Decision making skills	3.48	3.25	0.23	0.095
Flexibility	2.95	2.78	0.17	0.205
Resilience	2.75	2.88	-0.13	0.331
Interpersonal skills	3.09	3.03	0.06	0.679
Teamwork	3.79	3.27	0.52	0.000*
Problem solving skills	3.63	3.12	0.51	0.000*
Critical thinking	3.65	3.03	0.62	0.000*
Time Management	3.77	2.98	0.79	0.000*
Willingness to Learn	3.61	3.02	0.59	0.000*
Diversity	3.33	2.88	0.45	0.000*
Accountability	3.52	3.00	0.52	0.000*
Professionalism	3.33	2.86	0.47	0.001*
Analytical skills	3.46	3.12	0.34	0.001*
Assertiveness	3.16	2.78	0.38	0.001*
Leadership skills	3.53	3.07	0.46	0.002*
Communication skills	3.60	3.29	0.31	0.007*
Attention to details	3.50	3.20	0.30	0.026*

*Note: * Significant difference*

Mean scores

The results show that the mean scores of the different WIL readiness skills differ between the two groups. As visible from Table 2, the mean scores of skills in the offline group are higher than the online group, except for resilience that has a high mean for online in comparison to offline. The means for all items ranged between 2.75 and 3.79 for the offline business simulation and 2.78 to 3.29 for the online version. The highest mean score from the offline version was found to be teamwork (3.79) with the lowest being resilience (2.75). Communications skills took the highest mean score (3.29) and lowest scores are assertiveness and flexibility (2.78) from the online business simulation. It is evident from Table 2 that there is a difference in means on the extent to which the different WIL readiness skills were developed during the business simulation course. The mean scores suggest that WIL readiness skills were developed to a higher extent in the offline business simulation than in online version for the 17 skills, except for resilience which was developed more in the online version.

Equality of variances

To test whether the variance of the two groups (offline and online) are equal, a Levene's test for equality of variances was conducted. The results for Levene's test for equality of variance indicate that the equal variance ($\alpha > .05$) assumption is true with the significant value greater than .05 for the following skills: communication ($p = .100$); interpersonal ($p = .692$); analytical ($p = .374$); problem solving ($p = .287$); critical thinking ($p = .177$); resilience ($p = .550$); diversity ($p = .109$) and responsibility ($p = .273$). Since Lavene's test results show sig > .05, it can be concluded that the variances of the offline group are not significantly different from the online group for the above skills.

The results further show sig < .05 for professionalism ($p < .001$); leadership ($p < .001$); teamwork ($p < .001$); decision making ($p < .001$); flexibility ($p < .001$); assertiveness ($p = .007$); time management ($p = .015$); willingness to learn ($p = .001$), attention to detail ($p = .005$) and accountability ($p = .026$) indicating that equal variance was not assumed hence the variance for these skills differ between the two groups.

Equality of means

The statistical results indicated that the mean values for the offline business simulation were higher than the online version. Therefore, a t-test for equality of means was conducted to determine if the difference was statistically significant. The results are shown in Table 2.

The results for the t-test for equality of means show a sig (2-Tailed) value less than .05 ($p < .05$) for communication, professionalism, leadership, teamwork, analytical, problem solving, critical thinking, assertiveness, time management, willingness to learn, attention to details, diversity and accountability skills. These results indicate that the difference in means of these skills is statistically significant (shown with * in Table 2) between the two groups. Hence, these WIL readiness skills appear to have been enhanced at a higher extent in offline business simulation than in the online version.

The t-test results further show a sig (2-Tailed) value greater than .05 ($p > .05$) for the skills interpersonal, resilience, responsibility, decision making and flexibility skills, indicating that the mean differences are not statistically significant. This means that these skills were developed relatively the same for both the offline and online business simulation versions hence, they were not rated differently by students.

Simulation for Preparation of Work-Integrated Learning Placement

On the use of simulations to prepare students for WIL placement, 116 (92%) of offline participants indicated that they recommend the use of simulation for WIL preparation, as it provides students with a hands-on approach of the work environment, and facilitates increased knowledge and understanding of the subject matter. Although the respondents from the online business simulation have not yet completed their WIL placement, 46 (78%) of them indicated that they will recommend the use of simulation for WIL preparation, as it not only exposes students to global ways of working, but teaches them to think forward and prepare for the future online learning and working that would be beneficial in unforeseen circumstances, such as the COVID-19 pandemic. However, some participants (22% from the online and 6% from offline simulation) did not recommend the use of simulation to prepare students for a WIL placement. According to them, simulation does not reflect the complexity of real-life situations and that all skills required for internship cannot be prepared from simulation since different workplaces have different expectations from students. Their opinion corroborates with Smith, et al. (2014) who highlighted that the impact of simulation on student work-readiness does not exceed WIL placement. Similarly, Strachan (2016) stated that simulations cannot completely replicate real-

world business scenarios on a day to day basis. However, the aim of the business simulation, in this context, is not to replicate WIL placements but to introduce the students to these skills which are still to be enhanced in industry. The institution industry partners have indicated that a student with a positive attitude towards work, for instance, will learn better than the one who does not possess this skill.

The offline simulation group (Group 1) have completed their WIL placement as well as the business simulation. Their view on the application of different skills acquired from simulation during their WIL placement indicates that skills such as time management, critical thinking, communication, problem solving, and professionalism, attitude towards work, teamwork and diversity were of great importance during their placement. These skills have been highlighted in research to be vital in WIL (Jayaram & Engmann, 2017; Roos, et al., 2016; Taylor, 2016). Participants in the offline group (Group 1) expressed that an introduction of these skills during the business simulation enabled them to effectively apply the skills in industry during their WIL placements. To demonstrate, student F-4 stated: "attending simulation helped improve my communication skills. During WIL, I was able to express myself to a large number of people and felt more confident when giving presentations and addressing issues." Importance'Student F-19 highlighted time management expressing that, "it showed the importance of time management, which is very crucial in the workplace as everything needs to be done in its schedule time period to avoid errors, delays and wasting of resources in the organisation". Additional others expressed:

> Simulation has improved my decision-making ability, leadership skills and I discovered the benefit of good time management skill which is the ability to make better decisions, when you feel pressed for time and have to make a decision you are more likely to jump to conclusions without considering every option (student F-31).
>
> Attending the simulation has helped me deal with different people of different personality, attitudes and behavior, and showed me that we as human beings have to adopt and learn to deal or work with different people not only the one we know or those one of the same tribe or culture as us rather everyone matters (student F-90).

Participants, based on their business simulation and WIL experience, suggested other skills and attributes that the business simulation should cover to better prepare students for WIL placements. The following skills were suggested: research and analysis; social communication and interaction; emotional intelligence; discipline; and cultural orientation.

DISCUSSION

This study explores the students' perceptions on the possibility of using the simulation to develop WIL readiness skills and prepare students for WIL placements. The mean rating suggests students perceive reasonable development of WIL readiness skills in the business simulation program. However, the results show a difference in means and the extent to which the different WIL readiness skills were developed during program between offline and online students. The skills where the difference was shown to be significant (*) are inculcated more in the offline version than online. Whereas, the remaining skills were developed relatively the same for both the offline and online business simulation versions. Looking at the mean average of the skills developed, none of the means from either of the groups are below average. Although skills from the offline version show a high score, both versions of the business simulation were able to inculcate at least 60% of each skill in the students. The nature of

the WIL readiness skills as perceived from both versions tell a narrative that can inform WIL preparedness programs during circumstances as COVID-19.

Care must be taken in interpreting the differences between the offline and online groups as the results may be influenced by other factors explained below such as access to technology and inability to respond to the questionnaire. The online business simulation approach was taken as a necessary step in response to the COVID-19 restrictions. It was conducted remotely and took approximately six weeks for students to finish the program that is usually completed in only 16 hours offline. Due to the sudden shift brought by COVID-19, adopting changing circumstance from offline to online learning methods might have caused challenges regarding transitioning successfully to eLearning. Challenges such as lack of resources (computer/ laptop, network and internet access to fully participate, time) could have limited student attendance and made it difficult for some students to perform different tasks. For students who did not have laptops or computers and relied on their smartphones, the simulation tools were not compatible with some of the phones hence it was challenging to access the tools. This is indicated by Luaran et al. (2014); Mässing (2017) and Shahmoradi et al. (2018) who highlighted challenges in online learning relating to access of technology and internet thus reducing opportunities to stay online and respond quickly and effectively. In addition, since the simulation requires students to work in teams, it was difficult to get all team members online at the same time due to geographical .distances and different commitments. Furthermore, while students who participated are registered in different faculties, the simulation attended was general and not tailor-made for a specific discipline. The students' opinions and views may therefore differ depending on their discipline.

A significant difference between the WIL readiness skills gained from the online and offline business simulation course as indicated in Table 2 is observed for communication, professionalism, leadership, teamwork, analytical, problem solving, critical thinking, assertiveness, time management, willingness to learn, attention to details, diversity, and accountability skills. The fact that these skills were developed significantly in the offline business simulation could mean that proximity is indeed important. Unlike interpersonal, resilience, responsibility, decision making and flexibility skills which can be developed in both offline and online simulations at the same extent, measures to develop skills such as accountability, time management, and willingness to learn, amongst others, may need to be embedded into the pedagogy and content of the course to be developed. This highlights the need to not only shift courses online but to re-think of strategies that would yield the same results, if not higher. Additional means or amendments, in consideration of the above mentioned skills, therefore have to be applied to the course to ensure that students gain the same skills to a greater extent as they did in the offline course.

Students perceive reasonable development of work-related knowledge and skills in undergraduate programs (Jackson, 2019) where these skills are introduced in class through discussion of theory, and suitable learning tools that give them an opportunity for practice. Further refinement of these skills will then be done in a professional work environment during WIL (Jackson, 2015). Furthermore, the university environment has been highlighted in research as important in imparting skills needed by the labor market (Callier et al., 2014; Pereira & Costa, 2017; Robles, 2012;). Therefore, the implementation of appropriate simulation activities into the WIL readiness program could be part of the university's efforts to develop WIL readiness programs that focus on developing and equipping students with necessary competencies needed for WIL placements. These, in circumstances such as COVID-19, need to be innovative especially because of technological challenges and accessibility.

While both groups highly recommended the use of simulation as a learning tool to prepare students for WIL placements, there is a need for simulations to add more practical organizational scenarios from the industry who take on students for WIL. The scenarios should fit the students' disciplinary profiles (HR, IT, engineering, marketing, logistics, management organizations). These practical aspects could focus on the application of different skills in the workplace as this will acquaint students with the reality on the ground. This suggestion is in line with the work of Mickan (1995); Dwesini (2014) and Strachan (2016) who reported that preparation for WIL placement requires an incorporation of active learning activities and practical application of knowledge alongside skills to assist students in developing the required skill, knowledge and attitudes and be aware of their importance to work industry.

LIMITATIONS

While simulations offer different benefits to WIL placement preparedness, their limitations cannot be ignored. The questionnaire used in this research focused on perceived preparedness rather than actual performance. The results obtained are based on students' self-assessment of their perceived learning, rather than testing the effectiveness and impacts of the WIL preparedness simulation. There may also be concerns for rating bias among participants. Further investigation regarding the influence of this simulated learning activity on actual student performance on WIL placement is required. The sample size for online participants was also limited hence a follow-up with a larger sample size is needed.

CONCLUSION

This article highlights students' perceptions of the use of online and offline simulations to develop WIL readiness skills and prepare them for WIL placements and the world of work. It is clear from the findings that simulations have an undeniably important place in educational pedagogy and can certainly be extended to WIL preparation. Simulations for WIL preparedness can be designed with an employability focus aiming to develop WIL readiness skills in preparing students to obtain a job placement in industry and learn from their WIL experience. The responsibility therefore lies with higher education institutions and educators to develop educational technologies both online and offline that drive knowledge and skills acquisition, and create a learning environment that allows students to practice realistic scenarios related to their programs of study, that are also applicable and easily adjustable to change of circumstance as required by the changing environment brought about by COVID-19.

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