**RESEARCH ARTICLE:**

# Work Readiness in an Emergency Digital Learning Environment: Students' Self-Perception and Employer Expectation

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## *Abstract*

*The employability of university of technology graduates in South Africa remains a pressing issue, with youth unemployment rates alarming at 63.9% for ages 15–24 and 42.1% for ages 25–34. Even graduates face significant unemployment, with 32.6% of those aged 15-24 years and 22.4% of those aged 25–34 years still jobless. The COVID-19 pandemic exacerbated these challenges, shifting education to digital platforms, which exposed deficiencies in digital literacy, infrastructure, and resources among students. Despite these obstacles, graduating students maintain a positive outlook on employment opportunities, evaluated through the perceived future employability (PFE) model. This model assesses graduates' perceptions of future skills, experience, networks, personal traits, labour market knowledge, and institutional reputation. Employers, however, rate graduates low on work readiness, particularly in soft skills like critical thinking, communication, and problem-solving, which are deemed more crucial than the specific field of study. This disparity underscores higher education institutions' need to focus on developing these non-technical skills to enhance graduates' employability. The study used a mixed-method design to gather data from 140 marketing and retail students and seven employers. Results indicated that while students had a positive self-perception of their employability, employers highlighted deficiencies in soft skills. Work-integrated learning (WIL) programmes are essential, providing practical experience and mentoring that bridge the gap between theory and practice and instil confidence and essential workplace skills in students. These programmes, encompassing internships, graduate programmes, and project-based learning, are crucial for preparing students for the evolving Fourth Industrial Revolution (4IR) labour market and should be integral to university curricula.*

***Keywords:*** *work readiness; employability; digital learning and work-integrated learning*

## Introduction

In today's rapidly evolving labour market, students must acquire the necessary skills and experiences to stand out among graduates and be work-ready for the future. One approach that empowers students to gain these essential skills is work-integrated learning (WIL), which refers to an educational approach that integrates academic knowledge with practical workplace experiences. WIL encompasses various forms of supervised work experience, including internships, graduate programmes, learnerships, work placements, and project-based learning. By incorporating WIL into the university curriculum, students can develop digital skills and prepare for the labour market demands of the 4IR. The COVID-19 pandemic significantly disrupted higher education worldwide, accelerating the shift to digital learning platforms and forcing universities to adapt to online teaching, remote assessments, and virtual collaboration tools (Crawford *et al.,* 2020). This transition exposed digital inequalities in South Africa, with many students lacking access to reliable internet, digital devices, and adequate e-learning resources (Motala and Menon, 2020). Despite these challenges, the pandemic catalysed innovation, integrating blended learning models, digital literacy programmes, and virtual WIL experiences (Dhawan, 2020). However,

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while universities adapted to technological advancements, employers observed gaps in graduates' digital skills, communication, and self-management abilities in remote work environments (Nguyen and Balakrishnan, 2020).

This shift underscores the importance of embedding digital competencies into university curricula to enhance graduate employability in the evolving 4IR labour market. 4IR signifies a transformative wave of technological advancements reshaping industries and societies. 4IR, also known as Industry 4.0, represents an innovative approach to manufacturing that merges operational technology with information and communication technology. This paradigm shift requires individuals to possess digital skills and competencies to adapt and thrive in the changing work environment. In this context, work-integrated learning significantly bridges the gap between academic knowledge and practical skills required by employers. It allows students to engage in real-world work experiences within their chosen fields, applying theoretical concepts, developing problem-solving abilities, and cultivating industry-specific skills. By actively participating in internships, graduate programmes, learnerships, work placements, and project-based learning, students can gain valuable insights into the professional world and acquire the digital skills necessary for the 4IR labour market.

## Literature Review

Graduate employability, defined as the ability of graduates to secure employment and succeed in their chosen careers, is significantly influenced by technological advancements, the massification of higher education, and the dynamic nature of the job market. To navigate these challenges effectively, graduates must possess relevant and up-to-date skills (Rowe and Zegwaard, 2017). Recent graduates increasingly compete for jobs in congested, dynamic, precarious, and unpredictable labour markets. These markets are challenging due to rapid technological development, widespread shifts towards the massification of higher education, and the prevalence of underemployment and unstable career paths for recent graduates (Lock and Kelly, 2020; Watzlawik and Kullasepp, 2016; Tomlinson, 2017). The competitive and dynamic nature of these markets is partly driven by the changing nature of occupations, work practices, and skill requirements brought on by 4IR and technologies like artificial intelligence (AI), robotics, and big data (Campbell, 2018; De Vos *et al.,* 2021). While these advancements create new job opportunities, they also present challenges such as job displacement due to automation, the need for continuous upskilling to keep up with evolving technologies, and an increasing demand for data literacy and digital competencies. Consequently, recent graduates often struggle with graduate work readiness especially regarding suitable job prospects, facing difficulties with application processes and heightened competition. Graduate work readiness refers to the extent to which graduates are prepared to transition into the workforce and meet the expectations of employers. It encompasses acquiring relevant skills, knowledge, and attitudes for successful employment. WIL and online learning experiences contribute significantly to work readiness. Effective work-readiness programmes often focus on career self-efficacy, which helps graduates feel confident in their ability to perform job-related tasks and adapt to various work environments. Employers look for graduates who possess technical skills and demonstrate soft skills such as communication, teamwork, and problem-solving. Comprehensive assessment and feedback mechanisms are essential to evaluate and enhance the effectiveness of these programmes in preparing work-ready graduates (Jackson *et al.,* 2013).

In South Africa, WIL has been a critical educational approach that bridges the gap between academic learning and practical, hands-on experience and is highly valued by employers (Jackson, 2015). WIL encompasses various forms of internships, work placements, and practical experiences, enhancing employability by providing students with real-world exposure (Jackson, 2018; Jackson *et al.,* 2017; Paull *et al.,* 2019; Pažur Anicic and Divjak, 2022). WIL's significance in boosting employability cannot be overstated. Rowe and Zegwaard (2017) highlight that WIL offers critical industry exposure and practical experience, making students more competitive in the job market. Patrick *et al.* (2009) emphasise that WIL helps students develop essential skills, professional networks, and a deeper understanding of their fields, which are crucial for successful career transitions. However, the COVID-19 pandemic caused a significant disruption in WIL activities, impacting students' professional readiness and career prospects. This situation underscores the need for higher education institutions to develop resilient and adaptable WIL programmes that can continue providing valuable experiential learning opportunities during emergencies (Smith *et al.,* 2014). In South Africa, WIL is a strategic educational approach relevant to universities of technology. It integrates academic learning with practical workplace experience through various forms, such as internships, graduate programmes, learnerships, work placements, and project-based learning (Council on Higher Education, 2011a). This approach aligns academic knowledge with industry-specific skills, enhancing students' employability. Best practices in WIL focus on meticulously designing programmes to align with curriculum learning objectives,

ensuring a cohesive educational experience (Smith, 2012). Aligning work placement objectives with curriculum goals ensures that practical experiences complement theoretical knowledge, creating a comprehensive learning environment (Jaekel *et al.,* 2011). Constructive feedback from workplace sources is crucial for assessing performance and identifying areas for development, thereby enhancing students' skills and workforce readiness (Jaekel *et al.,* 2011). The Council for Higher Education (CHE) in South Africa has promoted WIL through its "Work-Integrated Learning: Good Practice Guide," which outlines several curricular modalities, such as work-directed theoretical learning, problem-based learning, project-based learning, and workplace learning. These guidelines advocate integrating workplace experience with academic interests and fostering an integrated teaching and learning curriculum (Council on Higher Education, 2011b).

Various legislative, policy, and human resource development documents in South Africa, such as the Skills Development Act (1998), the National Skills Development Strategy (NSDS) III (2011), the White Paper for Post-School Education and Training (2013), and the Higher Education Qualifications Sub-Framework (HEQSF) (2013), emphasise the necessity of workplace experience as a component of skills development. Terms such as workplace-based learning, simulation, work experience, and work exposure describe these experiential learning modalities (RSA, 2011a, 2011b, 2013). Best practices in WIL focus on aligning practical work placements with academic curriculum objectives, ensuring cohesive and comprehensive learning experiences (Billett, 2009; Jackson, 2015). Constructive feedback mechanisms are crucial for assessing student performance and identifying areas for skill enhancement, as feedback fosters reflective learning and continuous improvement (Biggs and Tang, 2011). These practices improve the quality and effectiveness of WIL programmes and significantly benefit students, educational institutions, and employers by facilitating smooth transitions of students into the workforce (Coll and Zegwaard, 2006; Patrick *et al.,* 2008). On March 12, 2020, the World Health Organisation (WHO) officially declared COVID-19 a global pandemic (WHO, 2020). This declaration underscored the severity of the situation and prompted countries to implement swift containment measures. In South Africa, this led to the closure of schools, including primary, secondary, and tertiary institutions, as part of the containment strategy (Department of Basic Education, 2020). These nationwide closures significantly disrupted students' learning experiences (Ferri *et al.,* 2020).

In response to the crisis, tertiary institutions rapidly adopted online learning to ensure the continuity of education. Online learning refers to instructional delivery using digital devices to facilitate learning (Ferri *et al.,* 2020). However, it is crucial to distinguish between traditional online learning and emergency online learning. The sudden shift to online education during the pandemic should be viewed as emergency remote teaching rather than a comprehensive digital transformation of universities (Adedoyin and Soykan, 2023). The lack of access to appropriate devices has been identified as a significant barrier to effective online learning across various contexts (Beaunoyer *et al.,* 2020). Additionally, online or remote education necessitates physical separation between students and instructors, requiring robust online delivery methods (Aguilera-Hermida, 2020). The importance of stable internet connections for successful online learning cannot be overstated, as connectivity issues can severely disrupt educational continuity (Dhawan, 2020). However, there is limited literature on the advantages and disadvantages of online learning in developing countries like South Africa. A study by Hussein *et al.* (2020) on undergraduate students' attitudes towards emergency online learning during the COVID-19 pandemic highlighted several benefits. These included time and cost-effectiveness, enhanced safety, convenience, and increased participation, all of which could contribute positively to students' work readiness in an emergency digital learning environment. Conversely, a study by Aguilera-Hermida (2020) on college students' utilisation and acceptance of emergency online learning during the pandemic revealed that many students had negative attitudes and unfavourable experiences with online learning. This underscores students' potential challenges and limitations regarding work readiness when engaging in emergency digital learning.

## Theoretical Framework

The theoretical framework for this study integrates experiential learning theory, human capital theory, the technology acceptance model (TAM), and the career readiness framework, as they collectively provide a comprehensive understanding of factors influencing work readiness among university students.

Kolb (1984) developed the experiential learning theory as a learning model that emphasises the importance of learning through experience. The theory proposes a four-stage learning cycle—concrete experience, reflective observation, abstract conceptualisation, and active experimentation—demonstrating how knowledge is created through transforming experiences. This model aligns with WIL, explaining how students gain practical skills through

internships, projects, and workplace exposure, reinforcing employability skills crucial for the modern workforce. The Human capital theory (Becker, 1964) was introduced to highlight the importance of investment in education and training to increase an individual's economic productivity. The theory posits that individuals who acquire higher levels of education and practical experience will have better job prospects and financial returns. The context of this study supports the argument that students who participate in WIL gain valuable skills that enhance their employability as they develop competencies that are highly sought after by employers. The technology acceptance model (TAM) (Davis, 1989) is a framework developed to understand user acceptance of technology. It suggests that two key factors—perceived ease of use and perceived usefulness—determine whether individuals will adopt a particular technology. The model is particularly relevant to this study because the COVID-19 pandemic accelerated the digital transformation of education, making online learning and digital platforms an essential component of skill development. TAM helps explain how students' ability to embrace online learning tools impacts their career readiness in the digital economy. The career readiness framework (NACE, 2019) was introduced to define the key competencies required to transition successfully into the workforce. It identifies skills such as critical thinking, communication, teamwork, and digital literacy, which are crucial for employability. This framework supports the study by providing measurable career readiness indicators and showing how WIL, experiential learning, and digital adaptability contribute to students' preparedness for the job market.

These theories collectively provide a strong foundation for understanding how students develop work-readiness skills through WIL and adapt to modern workplace expectations. Experiential learning theory explains how practical exposure enhances skill acquisition. Human capital theory justifies the investment in education and training to boost employability. TAM highlights the role of technology adoption in shaping students' learning experiences and readiness for digital work environments. Finally, the career readiness framework provides a structured approach to assessing employability competencies. This study integrates these theories to explore how WIL, digital skills, and practical learning experiences enhance students' employability, preparing them for the dynamic and technology-driven workforce of 4IR.

The theories illustrated in Figure 1 converge to shape graduates' perceptions of employability. The integration of WIL, the effectiveness of graduate employability initiatives, and the impact of emergency online learning collectively influence graduates' preparedness and confidence in entering the job market.

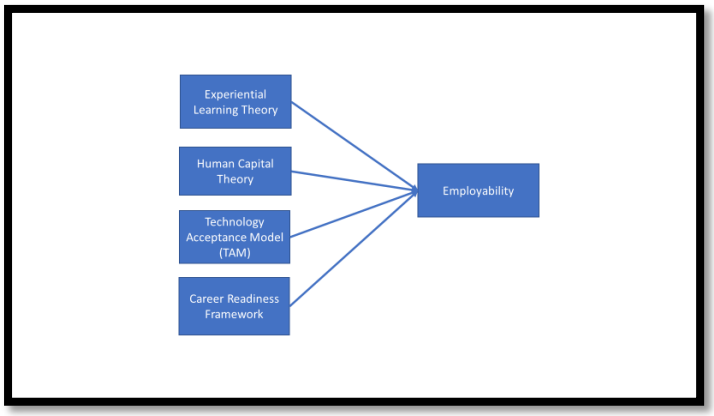


**Figure 1:** Employability

The theoretical framework illustrated in Figure 1 outlines the key factors influencing graduates' perceptions of employability. It integrates four primary constructs: work-integrated learning, graduate employability, emergency online learning, and graduate work readiness, each contributing to how graduates perceive their employability.

## Research Methodology

This study utilised a mixed-method approach, incorporating quantitative and qualitative research designs. The study was cross-sectional, focusing on two populations, students and employers, and a quantitative approach was deemed suitable due to the large number of students. By employing a quantitative methodology, the study aimed to provide a broad understanding of students' self-perception of employability and explore potential differences in employer perceptions between pre-COVID-19 and COVID-19 pandemic students. The second phase utilised a qualitative approach to collect data from the employers. This phase of the research was exploratory, as the research aimed to determine employers' perceptions of students' employability. According to Blumberg *et al.*

(2005), the exploratory research method is best for new fields of investigation to scope out the scale of a specific behaviour or research problem and hereafter produce initial ideas about a research problem or also to examine the viability of undertaking that phenomenon. Exit-level students were recruited using a convenient sampling approach, while purposive sampling was utilised to ensure a diverse sample in income, gender, age, and background. Data collection was conducted through self-administered questionnaires adapted from the perceived future employability scale (Gunawan *et al.,* 2019) as the questionnaire. The questionnaire consisted of closed-ended questions with multiple-choice options. The second phase of the study focused on employers, and interviews were conducted to gain insights into their perceptions of employability among students who studied online during the COVID-19 lockdown era. The research methodology, interview guide, and informed consent template were submitted to and approved by the university's Ethics Committee, ensuring compliance with ethical guidelines. Informed consent was obtained from each interviewee, and participants were informed about the research topic, objectives, and voluntary nature of participation, with the right to withdraw at any stage without penalty. Interviews were recorded with permission.

The study focused on the Durban University of Technology, targeting students 18 years and older in their final year of study, including diploma, advanced diploma, and postgraduate diploma students. The total sample population was 320 respondents. The second phase targeted employers who recruited students from this university during the COVID-19 lockdown era, with 30 employers participating. The non-probability, purposive sampling allowed the researcher to select participants based on specific criteria relevant to the study (Burns *et al.,* 2016). This method was chosen for its ability to provide insights into the perceptions of employability among students who studied during the COVID-19 lockdown. This method's goal was not generalisation of findings (Venter *et al.,* 2010). Using calculator.net, the sample size for the student population was determined to be 175, based on a population of 320, a 95% confidence level, and a 5% margin of error. The qualitative phase involved interviews and focus groups, with a sample size ranging from 5 to 50 participants recommended for deep understanding (Dworkin, 2012). This study targeted 11 participants until data saturation was achieved. Employers were selected from the Marketing and Retail Advisory Board and the Wholesale and Retail Chair network, focusing on those who recruit DUT Marketing and Retail students and graduates. Questionnaires were administered face to face. The responses were used to create a data set. The most recent version of Statistical Software for Social Sciences (SPSS) was used to analyse the data set. The second data phase was collected, and the interview lasted 30 minutes. The data were thematically analysed using NVivo software. The recorded interview responses were transcribed, and data checking was performed by returning the transcripts to participants for confirmation of accuracy, thereby enhancing trustworthiness and credibility in the qualitative research (Wahyuni, 2012: 69). Inductive content analysis, following the recommendations of Venter *et al.* (2010), was conducted on the transcripts. Keywords extracted from the data were grouped to form themes, facilitating the analysis process.

This study adopted the measuring instrument from Gunawan *et al.* (2019), ensuring a validated questionnaire was used. This instrument assessed variables related to personal networks, expected experiences, future characteristics, reputation, labour market knowledge and future skills, thereby enhancing the reliability and validity of the data collected. Construct validity was used to examine whether the instrument accurately measures the intended construct or concept. This study assessed construct validity by evaluating the relationships between the instrument's scores on perceived personal networks, expected experiences, future personal characteristics and other employability-related constructs. According to Zikmund and Babin (2015), reliability measures internal consistency, ensuring the findings are stable and consistent over time. Reliability was crucial to verify that the objectives were met and that the findings were specific to the research study. Internal consistency was assessed using the split-half or coefficient alpha (Cronbach's alpha) approach, with Cronbach's alpha calculated for this research (Maree, 2020).

With the qualitative phase, the researcher used an interview guide as the measuring instrument. Credibility was achieved through member checking and triangulation to ensure trustworthiness (Wahyuni, 2012). The qualitative phase employed semi-structured interviews using an interview guide to ensure depth and consistency in data collection. Trustworthiness was established through credibility, transferability, dependability, and confirmability (Wahyuni, 2012). Credibility was ensured through member checking, a process where participants reviewed and validated their responses, and triangulation, which compared data across focus groups for consistency (Wahyuni, 2012). Transferability was achieved by providing rich contextual descriptions, allowing future researchers to assess applicability in different settings. Dependability was maintained through an audit trail documenting data collection and analysis. Two researchers recorded, transcribed, and independently coded focus group discussions before

comparing and refining codes to ensure consistency (Wahyuni, 2012). Confirmability was strengthened through researcher reflexivity, where personal biases were acknowledged, and interpretations kept distinct from participant narratives. Independent coding followed by discussions ensured that findings remained data-driven. These validation strategies ensured the qualitative findings' rigour, reliability, and transparency.

Ethical clearance was obtained from the Institutional Research Ethics Committee of the Durban University of Technology (IREC number: 044/23) before data collection. The completed questionnaire did not contain any identifying information about the individual respondents. During the qualitative phase, no personal information was obtained from participants. All data were kept confidential, and data protection was observed at all stages of the study. Participation in the survey and interview was entirely voluntary, and participants had the option of declining to answer specific questions or leaving the entire questionnaire blank if they did not wish to participate; however, none opted out of the interviews. This manuscript, including the literature review, methodology, analysis, and discussion, was authored entirely by the researchers. ChatGPT (4.0) developed by Open AI and Grammarly premium developed by Grammarly incorporation were used solely for grammar and language refinement and did not contribute to the conceptualisation, data analysis, or substantive content of the manuscript.

## Data Analysis

This section presents an in-depth analysis of the data collected to examine graduate employability from both student and employer perspectives. The analysis integrates quantitative data obtained through structured surveys and qualitative insights derived from focus group discussions. The study investigates key areas including demographic profiles, emergency online learning experiences, work-integrated learning (WIL) and various employability factors such as perceived future networks, expected experiences, personal characteristics, institutional reputation, labour market knowledge and future skills. Additionally, employer feedback provides a critical lens through which graduate readiness is assessed. By combining statistical findings with narrative insights, this data analysis aims to provide a holistic understanding of the challenges and opportunities facing graduates as they transition into the workforce.

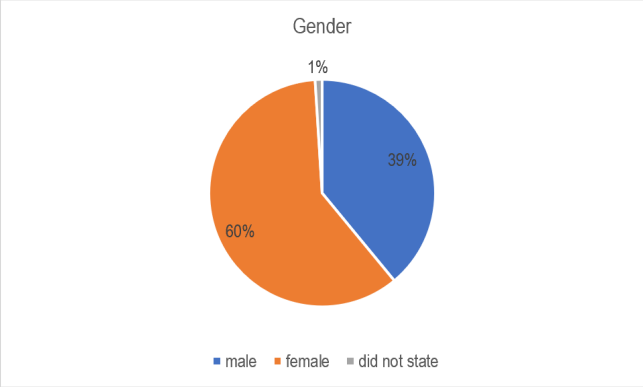


**Figure 2:** Gender

As displayed in Figure 2, the majority of the respondents were female (60%), followed by male (39%), and (1%) did not state their gender.

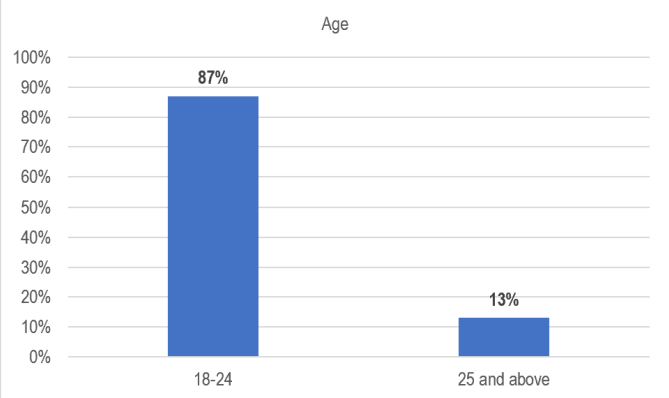


**Figure 3:** Age of respondents

As indicated in Figure 3, the majority of the respondents (87%) were in the 18-to-24-year age category, followed by 13% in the 25 and above age category.

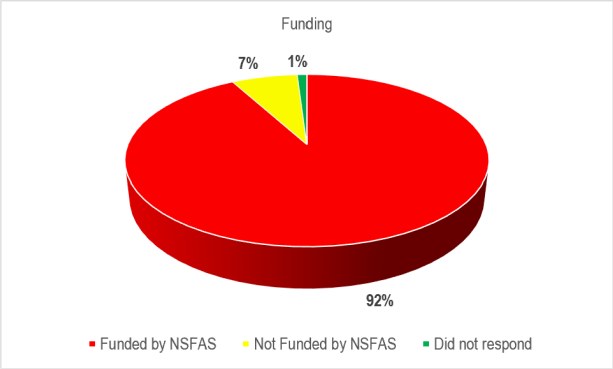


**Figure 4:** Funding

As shown in Figure 4, the majority of respondents (92%) were funded by NSFAS, followed by 7% of respondents not being supported by NSFAS, and 1% of the respondents did not answer the question.

Table 1 displays three statements related to this emergency online learning, students responded positively to all the statements.

**Table 1:** Emergency Online Learning

| Question | Options | Percentage |
|---|---|---|
| The institution gives platforms and tools for emergency online learning. | Laptop | 5% |
| | Access to computer lab | 0% |
| | Smartphone | 30% |
| | No tool | 65% |
| Reliability and accessibility of the Internet for students | Reliable internet connection | 86% |
| | Unreliable internet connection | 14% |
| Provisions available for students without access to necessary devices or the internet | Yes | 0% |
| | No | 100% |

### *Work Integrated Learning (WIL)*

**Table 2:** Work-Integrated Learning

| Question | Options | Percentage |
|---|---|---|
| Did you complete any WIL programme? | Yes | 0% |
| | No | 100% |

One hundred per cent of the respondents did not complete their WIL practical placements due to the COVID-19 pandemic.

### *Employability factors*

The following section discusses the employability factors as adopted from Gunawan *et al.* (2019). Four questions were asked about this element, as displayed in Table 3; students responded positively to all the statements measuring perceived future network.

**Table 3:** Perceived future network

| Perceived Future Network | *Disagree* | *Neutral* | *Agree* | *Total* |
|---|---|---|---|---|
| 2.1 I will be able to draw on the network I have developed to succeed at my work. | 7% | 11% | 82% | 100% |
| 2.2 I will have built up a social network that will help me do well in my job. | 7% | 10% | 83% | 100% |
| 2.3 I will have developed a network of contacts who can help identify potential work opportunities. | 8% | 10% | 82% | 100% |
| 2.4 I will know how to network with people who can help me find work in my chosen career. | 4% | 8% | 88% | 100% |
| Cronbach's Alpha - 0,74 | | | | |

Table 3 illustrates individuals' perceptions regarding their future networks and their potential impact on professional success. The data reveals a prevalent sense of optimism among respondents, with a significant majority expressing agreement with the statements. Cronbach's Alpha coefficient of 0.74 suggests reasonable internal consistency among the survey statements, affirming their reliability in capturing perceptions about future networks and their influence on professional success. The findings indicate a positive outlook regarding networks' perceived value and potential impact on career growth.

Table 4 included four questions on this element; students responded positively to all the statements measuring perceived expected experiences.

**Table 4:** Perceived expected experiences

| **Perceived Expected Experiences** | ***Disagree*** | ***Neutral*** | ***Agree*** | ***Total*** |
|---|---|---|---|---|
| 3.1 I will have had relevant work experience applying the knowledge acquired in my studies. | 8% | 10% | 82% | 100% |
| 3.2 Future employers will be impressed with the relevant work experience I have accumulated. | 8% | 8% | 84% | 100% |
| 3.3 Future employers will be satisfied with the work experiences I have gained. | 5% | 9% | 86% | 100% |
| 3.4 I will be able to show future employers that I have the required practical skills and academic experience they require. | 4% | 5% | 91% | 100% |
| Cronbach's Alpha – 0,87 | | | | |

Table 4 displays the results of a survey related to perceived expected experiences. The respondents were asked to indicate their agreement or disagreement with several statements regarding work experience and future employers. Cronbach's Alpha value of 0.87 suggests a high internal consistency and reliability level of the survey items used to measure perceived expected experiences.

Table 5 included four questions on this element; students responded positively to all the statements measuring perceived future personal characteristics.

**Table 5:** Perceived future personal characteristics

| **Perceived Future Personal Characteristics** | ***Disagree*** | ***Neutral*** | ***Agree*** | ***Total*** |
|---|---|---|---|---|
| 4.1 My experiences will show that I have developed resilience and do not give up easily. | 3% | 3% | 94% | 100% |
| 4.2 Prospective employers will be able to see from what I have achieved that I am well-motivated. | 3% | 4% | 93% | 100% |
| 4.3 Prospective employers will be able to see that I have clear goals for myself. | 2% | 1% | 97% | 100% |
| 4.4 My record will show that I have a strong work ethic. | 2% | 2% | 96% | 100% |
| Cronbach's Alpha – 0,91 | | | | |

Table 5 represents the survey results focusing on perceived future personal characteristics. Participants were asked to indicate their agreement or disagreement with statements related to individual traits that prospective employers could perceive from their experiences. Cronbach's Alpha value of 0.91 suggests a high internal consistency and reliability level of the survey items used to measure perceived future personal characteristics. While most respondents expressed agreement, disagreement and neutral responses indicate a variance in the participants' perception of these individual traits.

Table 6 included four questions on this element; students responded positively to all the statements measuring the anticipated reputation of the educational institution.

**Table 6:** Anticipated reputation of educational institution

| **Anticipated Reputation of Educational Institution** | ***Disagree*** | ***Neutral*** | ***Agree*** | ***Total*** |
|---|---|---|---|---|
| 5.1 I will have an advantage as future employers will be more likely to recruit graduates from my institution than from other Institutions | 5% | 10% | 85% | 100% |
| 5.2 The reputation of my educational institution will be a significant asset to me in job seeking | 3% | 7% | 90% | 100% |
| 5.3 I will have a lot of work opportunities open to me because my teaching institution has strong partnerships with many potential employers | 4% | 10% | 86% | 100% |
| 5.4 I will be in demand because graduates from my institution are well-prepared for work roles that are in high demand | 4% | 14% | 82% | 100% |
| Cronbach Alpha – 0,82 | | | | |

Table 6 illustrates individuals' perceptions of the anticipated reputation of their educational institution and its potential impact on their career prospects. Overall, the findings indicate a high level of agreement among respondents, highlighting a positive perception of their institution's reputation. The Cronbach Alpha coefficient of 0.82 suggests reasonable internal consistency among the survey statements, supporting their reliability in capturing perceptions about the anticipated reputation of educational institutions and its influence on career prospects. Overall, the findings underscore the value placed on an institution's reputation and its perceived advantages in the job market.

**Table 7**: Perceived future labour market knowledge

| Perceived future labour market knowledge | Disagree | Neutral | Agree | Total |
|---|---|---|---|---|
| 6.1 I will have developed a good understanding of the various work opportunities available to me. | 2% | 5% | 93% | 100% |
| 6.2 I will know the steps I need to take to succeed in my chosen career. | 3% | 3% | 94% | 100% |
| 6.3 I will have developed the ability to find job opportunities in my chosen field. | 2% | 3% | 95% | 100% |
| 6.4 I will be up to date with occupational trends in my chosen field. | 1% | 3% | 96% | 100% |
| Cronbach's Alpha – 0,79 | | | | |

The data presented in Table 7 demonstrates a positive outlook among individuals regarding their anticipated future knowledge of the labour market. Respondents generally agreed, indicating their confidence in acquiring comprehensive knowledge about work opportunities (93% agreement for statement 6.1). The satisfactory Cronbach's Alpha coefficient of 0.79 suggests that the survey statements reliably measure related constructs and provide an internal consistency in assessing respondents' perceptions of their future labour market knowledge. Overall, the findings indicate a positive perception of readiness among individuals about their future labour market awareness and preparedness.

**Table 8:** Perceived future skills

| Perceived future skills | Disagree | Neutral | Agree | Total |
|---|---|---|---|---|
| 7.1 I will have gained the knowledge required to get the job I want. | 3% | 1% | 96% | 100% |
| 7.2 I will have the relevant skills for the occupation I choose. | 2% | 4% | 94% | 100% |
| 7.3 Future employers will see that I have learned the right discipline-specific/technical skills and knowledge they want. | 2% | 1% | 97% | 100% |
| 7.4 I will have developed the reasoning and problem-solving skills that future employers often require. | 2% | 1% | 97% | 100% |
| Cronbach's Alpha – 0,88 | | | | |

Table 8 presents data on individuals' perceptions regarding their perceived future skills. The overall trend indicates a high level of agreement among respondents, reflecting a positive perception of their future skill acquisition and preparedness for the job market. Cronbach's Alpha coefficient of 0.88 indicates a high level of internal consistency among the statements in the survey. This suggests that the statements measure related constructs and are reliable indicators of the respondents' perceptions regarding their anticipated future skills.

### *Employers' perception of graduate employability – qualitative findings*

To provide a comprehensive understanding of the data collected, the researchers transitioned from the quantitative analysis, which offered numerical insights and patterns, to the qualitative study, which delves deeper into the contextual and experiential aspects of the respondents' responses. While the quantitative data presented thus far highlights trends and general attitudes, the qualitative analysis explored the respondents' perspectives, motivations, and personal experiences. This approach ensures a holistic view of the study, integrating statistical evidence and personal narratives to enrich the overall findings and provide a more detailed interpretation of the data. The themes stated below emerged from the focus group discussions and represented the various perspectives and experiences of the three groups of employers. They highlight positive and negative aspects of confidence, expectations, maturity, skills, leadership, industry support, networking, social learning, interpersonal skills, enthusiasm, empathy, policy, communication, and data. Based on the interviews, the themes identified from the focus groups can be summarised as follows:

**Group 1 – confidence and expectation gaps:** Graduates in this group are generally seen as confident, relaxed, and mature. These qualities reflect a level of self-assurance that is beneficial in professional settings, particularly when transitioning into new roles. However, a key concern raised is the disparity between graduates' expectations

and the realities of the workplace. While their confidence is commendable, it often leads to unrealistic assumptions about job responsibilities or career progression. This misalignment can result in frustration or dissatisfaction when faced with entry-level tasks or slower advancement.

**Group 2 – knowledge, skills, and networking barriers:** This group acknowledges that graduates bring with them strong formal knowledge and valuable soft skills, such as communication and adaptability. These attributes are essential in modern work environments. Nevertheless, challenges remain when it comes to integrating with more senior professionals. The generation gap creates barriers in networking and relationship-building, which are crucial for career development. The perceived disconnect may hinder retention and progression, especially in industries where mentorship and informal connections play a significant role.

**Group 3 – leadership potential and social setbacks:** Graduates in this group are noted for possessing natural leadership qualities. They benefit from industry initiatives such as structured inductions and training programs that support their development. However, the impact of the COVID-19 pandemic is evident. Many graduates developed professionally in remote or digital environments, which has led to underdeveloped interpersonal skills. Being "behind the screen" for prolonged periods limited opportunities for organic social learning and collaboration, crucial elements in leadership and teamwork.

**Overall strengths and challenges:** Across all groups, graduates are recognised for their confidence, maturity, formal education, soft skills and leadership potential. Industry support through training and induction also contributes positively to their transition. On the other hand, several recurring challenges emerge. These include having high expectations without readiness to start at entry-level roles, digital skill gaps, limited social learning experiences, and reduced enthusiasm or empathy, particularly as a result of studying online. Hybrid working arrangements and communication issues further complicate integration, along with difficulties managing and interpreting data.

## Discussion of Results

This section integrates quantitative and qualitative findings to comprehensively discuss emergency online learning, WIL, employability factors, and employer perspectives on graduate work preparedness. Combining self-reported perceptions from students with employer insights, this discussion offers a holistic view of the factors influencing graduate employability. The findings highlight significant challenges in emergency online learning, particularly in terms of access to essential tools. Only 5% of students received laptops, while 65% had no access to any device for online learning, and 30% relied on smartphones. Although 86% of students reported having reliable internet, the absence of proper digital infrastructure hindered their ability to engage effectively with learning materials. This confirms previous studies showing that smartphones, while useful, are not ideal for complex academic tasks (Adedoyin and Soykan, 2020; Beaunoyer *et al.,* 2020). From an employer's perspective, several challenges emerged. The lack of digital infrastructure significantly impacted students' technical skills and adaptability to hybrid work environments. Employers reported that many graduates struggled with digital collaboration tools and had weaker problem-solving skills in virtual settings, reinforcing concerns about digital literacy gaps (Czerniewicz *et al.,* 2020; Hodges *et al.,* 2020). These findings suggest that higher education institutions must improve access to digital tools and offer training on workplace-relevant technologies to prepare students for increasingly digital work environments.

The data indicate that none of the students participated in WIL programmes due to COVID-19 disruptions. This highlights a major gap in industry exposure, as WIL is essential for bridging academic knowledge and practical skills (Jackson, 2015; Rowe and Zegwaard, 2017). Without hands-on experience, students missed critical opportunities to apply their learning in real-world settings. Employers echoed this concern, stating that graduates lack practical exposure, industry-specific skills, and professional adaptability. Many noted that graduates struggle with workplace expectations and often face a steep learning curve upon entering the job market. This aligns with literature emphasising WIL's role in fostering job readiness (Patrick *et al.,* 2009; Smith *et al.,* 2014). These findings highlight the need for alternative WIL models, such as virtual internships, industry-led projects, and hybrid learning, to maintain practical exposure even during disruptions. The results from Table 3 show that most respondents expressed confidence in their ability to develop professional networks, believing these connections would support career success. Employers, however, noted that many graduates struggle with networking in professional settings, particularly due to limited exposure to in-person industry events during the pandemic. Key employer concern is that many graduates lack the ability to initiate and maintain professional connections, aligning with studies

emphasising the importance of networking in employability (Granovetter, 2005). By implication, universities should facilitate industry connections through mentorship programmes, alumni networks, and virtual networking events to strengthen graduate readiness.

Students felt optimistic (as shown in Table 4) about their future work experience, with most believing they had acquired the necessary skills and knowledge to impress employers. However, employer insights suggest a disconnect between student expectations and industry realities. While students viewed their academic training as sufficient, employers observed gaps in real-world application, critical thinking, and adaptability. This confirms the literature stating that academic knowledge alone is insufficient for workplace success (Andrews and Higson, 2008). Thus institutions should integrate real-world problem-solving projects into curricula and encourage students to gain practical exposure through part-time jobs, industry partnerships, or capstone projects. Students believed that their personal attributes (as shown in Table 5), such as resilience, motivation, and work ethic, would be evident to employers. While employers agreed that many graduates were confident and driven, they also noted gaps in adaptability, teamwork, and professional maturity. Consequently, many graduates struggled with workplace expectations, particularly regarding starting at entry-level roles. Some expected rapid career progression, which led to job dissatisfaction and turnover (Tomlinson, 2017). Going forward, career coaching and expectation-setting workshops could help align student perceptions with industry realities, preparing them for professional environments. Most students believed that their institution's reputation (as shown in Table 6) would provide a competitive advantage in job-seeking. Employers acknowledged that institutional reputation plays a role, but emphasised that skills, experience, and adaptability were far more critical factors in hiring decisions (Times Higher Education, 2020). Employers noted that some graduates relied too heavily on institutional prestige without actively developing industry-relevant competencies. It is thus recommended that institutions focus on skill-building initiatives, emphasising practical training and employer-driven competencies over brand reputation alone.

Students felt well-prepared to navigate the labour market (as shown in Table 7), but employers identified gaps in labour market awareness, particularly in understanding job market trends and career growth strategies. Many graduates were unfamiliar with hiring expectations, industry trends, and long-term career planning. This aligns with findings that career readiness depends on proactive labour market awareness (OECD, 2020). It is important that universities strengthen career services, integrate job market analysis into coursework, and encourage students to engage with professional development resources. Generally, students expressed confidence in their technical skills (as shown in Table 8), believing they possessed the knowledge and competencies required for employment. Employers, however, noted gaps in problem-solving, digital literacy, and workplace communication skills. The concern from employers is that graduates were technically proficient but lacked soft skills such as teamwork, conflict resolution, and leadership, all essential for long-term career success (Kramer and Usher, 2011; Rowe and Zegwaard, 2017). Thus, institutions should integrate soft skills training, leadership development, and hands-on problem-solving activities into the curricula.

Based on interviews and focus group discussions, several themes emerged regarding graduates' workforce readiness, highlighting strengths and challenges. Employers identified key strengths and challenges among graduates. The strengths include: confidence and maturity; strong theoretical knowledge; soft skills (communication, teamwork); and industry support for leadership development. The challenges include: high job expectations with reluctance to start at entry-level; limited digital and hybrid work skills; reduced networking and social learning opportunities; poor adaptability and problem-solving in real-world settings; and struggles with workplace communication and collaboration. Employers reinforced the importance of practical exposure, workplace adaptability, and developing well-rounded competencies beyond academic achievements (Rowe and Zegwaard, 2017).

## Conclusion

In conclusion, this research study examined the topic of work readiness in an emergency digital learning environment, specifically focusing on students' self-perception and employer expectations. The findings revealed positive perceptions among students regarding their future networks, expected experiences, personal characteristics, the anticipated reputation of their educational institution, labour market knowledge, and future skills. Most students agreed with statements about leveraging their networks, acquiring relevant work experience, developing personal traits valued by employers, benefiting from their institution's reputation, gaining labour market knowledge, and obtaining the necessary skills for their chosen careers. These findings highlight students' optimism and confidence in their ability to succeed in their future careers despite the challenges posed by an emergency

digital learning environment. Cronbach's Alpha coefficients demonstrated reasonable internal consistency and reliability of the survey items, further validating the findings. Based on this study's findings, higher education institutions should prioritise integrating alternative forms of work-integrated learning (WIL), such as virtual internships and project-based learning, to address the absence of practical experience due to the COVID-19 pandemic. Institutions should also embed digital literacy, soft skills training, and real-world problem-solving activities into the curriculum to bridge the gap between students' self-perception of employability and employers' expectations. Enhancing networking opportunities, aligning career expectations with industry realities, and promoting digital collaboration skills are essential to improve graduates' readiness for the evolving labour market. Future research should explore the long-term impact of emergency digital learning on graduates' employability, particularly the effectiveness of alternative WIL models in developing work-readiness skills. Studies could further investigate employers' evolving expectations in digital work environments and assess targeted interventions, such as virtual mentoring and digital soft skills training, for enhancing graduate outcomes. Additionally, understanding the disconnect between students' self-perceptions and actual workplace performance remains a critical area for ongoing inquiry.

## Declarations

**Interdisciplinary Scope:** The article demonstrates a multidisciplinary scope by integrating insights from employability, and teaching and learning.

**Author Contributions:** Conceptualisation (Reddy and Mkhize); literature review (Reddy and Mkhize); methodology quantitative (Reddy) qualitative (Mkhize); analysis (Mkhize); investigation (Reddy and Mkhize); drafting and preparation (Reddy and Mkhize); review and editing (Reddy and Mkhize). All authors have read and approved the published version of the article.

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