Identifying the Gaps in the Management of Work Integrated Learning Among TVET College National Certificate (Vocational) Students

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Abstract

Work Integrated Learning (WIL) is a crucial activity for students enrolled in Technical and Vocational Education and Training (TVET) programs in South Africa and globally. Effective management of this activity is essential to ensure that students are well-prepared for their placement in the workplace. Unfortunately, the current situation in South African TVET colleges often falls short, with students frequently finding themselves in workplaces where they lack the necessary readiness. To address this issue, a mixed-method approach was employed to select 50 Level 4 students from the National Certificate Vocational program and four Work Integrated Learning (WIL) coordinators. The objective was to identify the challenges faced by students during their WIL experience. Data was collected through questionnaires administered to the students and face-to-face interviews conducted with the WIL coordinators. The findings of the study revealed that 68% of the students were not adequately informed about workplace dynamics, which posed a significant challenge. Additionally, 82% of the respondents stated that they were never briefed on the employer's expectations upon their arrival at the workplace. While students found the activities in the workplace interesting, they observed a noticeable gap between what they learned in college and the realities of the industry. These challenges clearly indicate a lack of proper WIL management in the TVET colleges. To address these issues, it is recommended that the college curriculum planner collaborates closely with industries to align the curriculum with industry expectations and requirements. This synergy will enhance students' WIL experience and better prepare them for the workplace.

Keywords: Work Integrated Learning; workplace learning, skills development; vocational education

INTRODUCTION

According to Govender and Wait (2017), work integrated learning (WIL) aims to strategically inspire students to embrace prospective future careers, thereby contributing to economic innovation and growth. On the other hand, Billet (2016) describes WIL as a pedagogical approach designed for students at a learning institution like the Technical and Vocational Education and Training (TVET) colleges to learn through the integration of experience in educational and practice settings. However, the current WIL program in the TVET colleges where the study was undertaken does not seem to achieve its purpose because of the challenges that students face. These challenges hinder the students from benefiting from the

importance that WIL should provide them. Hence, this study aimed to identify and address such gaps.

According to Mabunda and Frick (2020), vocational education is intended to be a cornerstone of the national economy, as it is meant to provide the skilled artisans who should drive economic growth and sustainability in the production and service sectors. On the other hand, the NC (V) program was introduced to equip TVET college students with theory and practice, resulting in the split of the program being 40% theory and 60% practical. The emphasis is that 60% should be achieved through simulation, research projects, practical experience, work integrated learning (WIL), and workplace-based learning (WBL) for skills development. This is because the NC (V) program attracts young men and women who are most affected by the high unemployment rate that continues to worsen due to a skills shortage (Statistics South Africa, 2022).

The objective of WIL is to foster partnerships with businesses, industry, and government in order to enhance economic growth for the country (Govender & Wait, 2017). Conversely, students perceive WIL placements as the most influential factor in shaping their future careers (Gribble et al., 2014). However, TVET college students, particularly those enrolled in the National Certificate (Vocational), NC (V) program in the Engineering and Related Design (ERD) field, face difficulties in securing industry placements and completing their industrial training if they do manage to secure one (Khoza, 2019). This presents a set of WIL challenges that NC (V) students find themselves in, hence the purpose of this study. In Australia, WIL encounters resource challenges. According to Rook (2017), Australia consistently struggles with a lack of available resources to provide WIL opportunities. Consequently, students placed in industries and firms are at a disadvantage. It is further noted that managing expectations and meeting competing demands from stakeholders in Australia pose challenges (Patrick et al., 2008), as does understanding the role of each stakeholder in the WIL process (Ferns et al., 2016; Rowe et al., 2012), and fostering partnerships between the university and host organization, including aligning with industry needs (Awad, 2020; Choy & Delahaye, 2011). This disconnect between educational institutions and industries undoubtedly causes difficulties for students when it comes to placements.

According to Ambiyar et al. (2020), work-based learning (WBL), also known as work-integrated learning (WIL), is a significant component of a study program in England. In this program, students are full-time employees and most of the research-based fieldwork is conducted in their own workplace. WBL is part of a three-pronged approach to the transition from school to work, which also includes school-based learning and connecting activities. This differs from the South African context, where students are placed in industries for a specific duration to engage in WIL without the expectation of research, but rather to develop skills. Based on this premise, the aim of the study is to identify and address gaps in the management of WIL in selected TVET colleges in the Limpopo province. This will ensure that students do not enter industries without the necessary knowledge, which could hinder their success in obtaining the benefits of WIL. According to Zegwaard et al. (2019), there has been a rapid expansion and diversification of WIL offerings in higher education and schooling systems in North American countries over the past 20 years. This includes the enforcement of skills and the integration of practical learning with industries. In Malaysia's vision to become a developed country by 2020, TVET colleges are expected

to train approximately 1.3 million graduates in various sectors. To meet this demand, WIL plays an integral role in the training system. Malaysia introduced the National Dual Training System (NDTS) and established partnerships with different companies (Adam et al., 2017). One common feature between the Malaysian and North American WIL systems is the involvement and awareness of industries regarding what students are exposed to in their colleges. This ensures relevance when students enter the industry for WIL or as workers. According to the European Training Foundation (ETF, 2013), employers participate in WIL programs for various reasons. One primary reason is their awareness of the programs and their benefits. If employers are not aware of the programs, they are unlikely to participate (ETF, 2013). This emphasizes the importance of raising awareness, marketing, and communication. It is crucial for employer organizations, trade unions, governments, and TVET colleges to be involved in these efforts. In Turkey, WIL is mandatory in all upper-secondary technical and vocational education (ETF, 2013). However, in the South African context, secondary schools have not yet embraced the concept of WIL. Instead, discussions regarding WIL start at the TVET college level, creating a gap compared to the practices in other countries.

Securing a placement in the workplace, even in developing countries where there are opportunities for tax rebates and skills levy paybacks, can be a complex and frustrating process. This is why it is crucial to handle Work-Integrated Learning (WIL) management correctly. To ensure the effectiveness of WIL, there needs to be an emphasis on intense pedagogic practice and professional control that is relevant to the industry. However, many Technical and Vocational Education and Training (TVET) colleges in Limpopo province seem to be struggling with their WIL programs, which is negatively impacting the NC (V) graduates. The Department of Higher Education and Training (DHET) states that the main purpose of TVET colleges is to equip young school leavers with the skills, knowledge, and attitudes necessary for employment in the labor market (DHET, 2021). Unfortunately, the Limpopo TVET colleges are currently falling short of achieving this purpose. NC (V) graduates often face difficulties in finding employment in the constrained and highly competitive local job market (Paterson et al., 2021). As a result, the already high youth unemployment rate, which stood at 63.2% for youths between the ages of 15 and 24 in the fourth quarter of 2020 (Statistics South Africa, 2022), continues to rise. This study aims to identify the gaps in the management of WIL in the selected Limpopo TVET colleges that are impacting the industrial placements of NC (V) students.

Various types of programs exist for Work-Integrated Learning (WIL) in Technical and Vocational Education and Training (TVET) colleges. These programs include Workplace Exposure (WE), Workplace-Based Experience (WBE), internships, leadership programs, and apprenticeships. This study focuses on Workplace Exposure (WE) and Workplace-Based Experience (WBE), which aim to provide NC (V) students with exposure to the workplace. The interaction with employees in the workplace helps students connect the theory they learn in class with the real world of work (Van Der Bijl & Taylor, 2020).

One of the main challenges in placing students from rural TVET colleges in the workplace is the lack of sufficient training opportunities to meet the demands of both the industry and unemployed youth. Technological advancements also hinder training opportunities for youth who lack proper resources due to qualification deficits (Fakunle et al., 2022). In the Limpopo province, TVET colleges face the burden

of theft, which affects the availability of resources due to a lack of security (Mabunda & Frick, 2020). This negatively impacts students' preparation for technological advancements as valuable resources aimed at 21st-century learning are stolen or neglected. Given the rise of the Fourth Industrial Revolution (4IR), these technological advancements are increasingly important in fast-changing workplaces that rely more on mechanized and digitized interfaces rather than human interfaces and require employee flexibility (Mabunda & Frick, 2020).

Employers and graduates alike expect TVET colleges to incorporate these technological advancements into their instructional practices to ensure that graduates are prepared for suitable employment (Rosenberg, Heimler, & Morote, 2012). New forms of organizations have raised the qualification entry level to the labor market, making it evident that NC (V) students who are not work-ready at the TVET college level are likely to struggle in the workplace (Billinger & Workiewicz, 2019). This study aims to identify the gaps in the management of WIL in Limpopo TVET colleges in order to address the skills agenda. Jones et al. (2017) acknowledge that students are determined to succeed after their workplace experience, and their academic performance improves significantly. However, students must undergo rigorous training at the college in order to fit into industries. This also ensures that employers have a work-ready workforce upon the graduation of these students (Hughes et al., 2013) through access to the workplace for WIL. Employers can also inform curriculum reforms by serving as advisors, potentially providing potential recruits without obligations (Hughes et al., 2013).

The aforementioned factors drove the undertaking of this study to explore the challenges faced by NC (V) TVET college students, particularly in the Limpopo province. The study investigates the gaps in the management of WIL in TVET college engineering courses that affect industrial placement. The researchers believe that effective management of WIL is crucial as it encompasses various aspects such as relevance, resources, and expectations that industries demand from TVET colleges.

This study utilized the Activity Theory, as outlined by Hasan and Kazlauskas (2014). The rationale for adopting the Activity Theory lies in its ability to provide a comprehensive language and a range of frameworks for comprehending the findings obtained through observation, interviews, and other research methods, particularly in the context of intricate real-world scenarios like contemporary workplaces, community groups, or educational institutions (Hasan & Kazlauskas, 2014). The theory is elaborated upon the Figure 1.
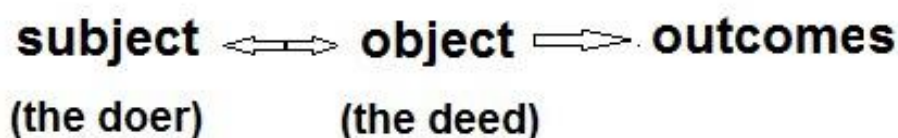
Figure 1. The concepts of the Activity Theory

Using the Activity Theory framework for research adopts activity as the fundamental unit of analysis, wherein activity is defined by the 'dialectic relationship between subject and object', or in other words, 'who is doing what for what purpose' (Hasan & Kazlauskas, 2014). As per Hasan and Kazlauskas (2014), Activity Theory places emphasis on the interplay between the subject (the human performer) and the object (the task being performed) as the core aspect of activity. The object of activity

encompasses the focus and purpose of the activity, while the subject, which can be an individual or a group engaged in the activity, encompasses the various motives of the subjects. The outcomes of an activity can be both intended and unintended. Consequently, this study employed the Activity Theory to examine how students, as performers, are prepared for the workplace through management, as well as to assess the outcomes of such preparations. In this case, the object refers to the processes that students undergo in preparation for the workplace, and the evaluation of the outcomes resulting from these preparations. Thus, the aforementioned model places the lecturer at the forefront, highlighting the need for the lecturer, particularly the Work-Integrated Learning (WIL) coordinator, to ensure thorough preparation of students for workplace placements. By utilizing these concepts, the study's findings shed light on the factors contributing to the gaps in Work-Integrated Learning (WIL) for Level 4 students of selected Technical and Vocational Education and Training (TVET) colleges in the Limpopo province.

The introduction of the NC (V) programme aims to provide students with a combination of theoretical knowledge and practical experience. However, there are challenges in the process of connecting Limpopo province TVET college engineering programmes with industry placements. In the field of Engineering and Related Design (ERD), there is an inconsistency in the management system when it comes to integrating Work Integrated Learning (WIL) across TVET colleges, including those in Limpopo province. Ideally, all registered ERD students in NC (V) programmes should have the opportunity to be placed in workplaces. The purpose of these placements is to expose students to the real world of work and enable them to integrate theory and practice. Unfortunately, the current WIL programme does not provide practical work experience for all registered students, nor does it offer guidelines for lecturers regarding their roles in this regard. If this issue is not addressed, Limpopo TVET colleges will continue to produce graduates with theoretical knowledge but no practical experience, ultimately failing to meet the needs of employers. This will result in a rise in unemployment among economically inactive youth.

Therefore, this study aims to identify gaps in the management of WIL at Limpopo province TVET colleges, examine their impact on industries, and propose solutions to address these managerial issues faced by NC (V) students. To investigate these gaps, the study focuses on two objectives: (1) understanding the process of placing NC (V) students in industries for their WIL, and (2) developing strategies to align TVET college students' programmes with industries, particularly those in NC (V). These objectives will help answer the main research question: What challenges do TVET college students face in the WIL programme? This question is supported by two sub-research questions: (1) How are NC (V) students at Limpopo province TVET colleges placed in industries for their WIL, and (2) what strategies need to be developed to align TVET college students' WIL programmes with their college activities? The study's limitation is that it only includes four WIL coordinators and 50 students, excluding lecturers due to COVID-19 restrictions preventing researchers from freely collecting data.

METHOD

Research Framework of the Study

The research utilized a sequential explanatory mixed method approach, incorporating both qualitative and quantitative research methods. According to

Creswell (2014), combining these methods allows for a comprehensive understanding of the topic at hand. The qualitative approach was employed to gather detailed information on the operations and practices of NC (V) ERD students in their work-integrated learning (WIL) experiences. On the other hand, the quantitative approach allowed for the collection of statistical data from a larger sample of NC (V) ERD students. By integrating both types of data, the study aimed to highlight key insights into current practices and identify gaps in the integration of WIL with industries in the NC (V) program. This complemented the qualitative data collected. A pragmatic research paradigm was deemed most suitable for investigating the integration of WIL into NC (V) programs at TVET colleges. The research problem, methodology, ontology, and the use of a variety of data collection methods (both qualitative and quantitative) supported this pragmatic approach (Caruth, 2013).

Research Design

In order to address the research questions, a multiple case study design was employed to examine the gaps in WIL management in NC (V) programs at four selected TVET colleges in the Limpopo province. Merriam and Tisdell (2015) define a case study as an in-depth analysis of a single, bounded unit. In this study, each of the four selected TVET colleges was analyzed as an individual unit, and then the findings were combined to generate cross-case analysis and generalization of results, making it a multi-case study. The use of a descriptive multiple case study was appropriate for investigating the challenges in WIL management in NC (V) programs at the selected TVET colleges in Limpopo province. Research design, as defined by Babbie (2013), encompasses the procedures used by researchers to identify research questions, collect data, and analyze results.

Population and Sample

The population of the study included students enrolled in the NQF Level 4 ERD program and WIL coordinators. Data were collected through student questionnaires and individual semi-structured interviews with WIL coordinators. The study focused on the selected Engineering campuses of the TVET colleges in the Limpopo province, as they directly related to the objectives of the study. To form the sample, four TVET colleges were conveniently selected from the larger population of seven in the province. Participants were then conveniently sampled from these four colleges for inclusion in the study (Sedgwick, 2013). Non-probability sampling was used due to the widespread use of the TVET college population in question across the province. The table below provides a breakdown of the sample for this study.

Table 1. Total sample of the study

Participants	Instrument	Number
Students	Questionnaires	50
WIL coordinators (WC)	Semi-structured (individuals)	4
Total sample		**54**

A stratified proportionate simple random sampling technique was utilized to select a sample of n=50 students from a total of N=198 students enrolled in an ERD field at level 4 in four particular TVET colleges. The sample sizes for each college are provided, with the proportional allocation being applied to determine the size. The proportional allocation formula employed is presented in Equation 1.

$$ni = (hi/N) \times n \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (e.1)$$

where N_i = the number of respondents required per site; H_i = the possible number of respondents per site; and N = the total number of all possible respondents is 198 of the total sample required which is 50.

The researchers purposefully selected these TVET colleges based on their convenience. The selection process was purposive, as these four colleges possessed an ERD section that offered NC (V) NQF level 4. To achieve a total of 50 students, the proportionate allocation per college was calculated using Equation 1, where: (1) College A hi = 36, ni= (36/198) x50, ni = 9; (2) College B hi = 58, ni = (58/198) x50, ni = 15; (3) College C hi = 44, ni = (44/198) x50, ni = 11; and (4) College D hi = 60, ni = (60/198) x50, ni = 15.

Research Procedures

Questionnaires were distributed following a predetermined methodology and delivered to the campuses. The study generated several data forms throughout four distinct phases. Phase one involved an extensive review of published data and literature, including policies, theses, government publications, reports, books, and journals relevant to Work-Integrated Learning (WIL) at TVET. Phase two consisted of a questionnaire administered to fifty (N=50) students, who provided quantitative responses regarding WIL at TVET colleges. Phase three involved a focus group interview with lecturers, while phase four consisted of a semi-structured interview with WIL coordinators. According to MacIntosh and O'Gorman (2015), quantitative data typically requires pre-processing before any analytical analysis can be conducted, which includes steps such as data entry, data cleaning, and data formatting. To facilitate easy identification and linking with relevant sites, a unique numbering system was developed for the questionnaires.

The questionnaire was developed using a Likert scale consisting of five response options: 1 - Strongly agree, 2 - Agree, 3 - Neutral or Undecided, 4 - Disagree, and 5 - Strongly disagree. The questionnaires were administered with the assistance of WIL coordinators and Heads of Department in the ERD sections. The completed questionnaires were collected from the colleges by the researcher. The quantitative data were statistically analyzed using Excel Statistical analysis software. Qualitative data analysis involved exploring the relationship between categories and themes of data in order to enhance understanding of the phenomenon (Hilal & Al Abri, 2013). However, due to the small sample size, this study utilized narrative analysis to capture the essence of what the WIL coordinators expressed. Although innovative and engaging, this method can be disorderly, challenging, and time-consuming. In this study, recorded interviews were transcribed as the initial step. The researcher then coded the transcripts through repeated reading to identify important segments. Lastly, the qualitative data were analyzed by utilizing verbatim quotes from the participants' responses. WIL coordinators were assigned codes, such as WC A for WIL coordinators in college A, etc.

Ethical Considerations

The research conducted adhered to rigorous ethical standards, placing utmost importance on respect, privacy, and informed consent. All participants, including students and WIL coordinators, were thoroughly briefed on the study's objectives, methodologies, and potential risks and benefits, ensuring their comprehension of the right to withdraw from the research without facing any consequences. Measures were

taken to safeguard participants' data privacy, such as anonymizing or removing personal identifiers and imposing strict data protection protocols, limiting data access solely to the research team. Participation was entirely voluntary, with the assurance that decisions to participate or decline would not impact participants' relationships with TVET colleges or the research team. The study design was carefully drafted with the aim of minimizing risks, crafting questionnaires and interviews in a manner that ensured participant well-being by avoiding any discomfort or distress. The reporting of findings was transparent, unbiased, and accurately reflected participants' perspectives and experiences. Throughout the study, ethical considerations were paramount, fostering integrity, trust, and valuable insights, while always respecting the rights and welfare of the participants.

RESULTS AND DISCUSSION

Frequency Distribution of Respondents

This section provides the frequency distribution of participants' responses to the statements used to identify the challenges faced by students in WIL. A 5-point Likert scale was employed, with options ranging from "strongly disagree" (1) to "strongly agree" (5) for each question. To simplify the presentation of findings, the percentages for responses (1) and (2) were combined, as were the percentages for responses (3) and (4). Most of the respondents (68%) agreed by stating that they had previously attended WIL. A minority (20%) disagreed with the statement, while a small percentage (12%) indicated uncertainty or indecision. The p-value of 0.02535 further confirms the statistical significance of the respondents' responses. These findings highlight the existence of gaps in the management of WIL, as not all students have been exposed to it. The detail result provided in Table 2.

Table 2. Attendance of the wil programme

Statement 1	Description	College A	College B	College C	College D	Total	Pearson Chi-Square	df	p-value
I did attend WIL	Strongly agree	3	3	0	4	10	23.291a	12	0.02535
		6.0%	6.0%	0.0%	8.0%	20.0%			
	Agree	5	4	4	11	24			
		10.0%	8.0%	8.0%	22.0%	48.0%			
	Uncertain	3	0	3	0	6			
		6.0%	0.0%	6.0%	0.0%	12.0%			
	Disagree	3	1	2	0	6			
		6.0%	2.0%	4.0%	0.0%	12.0%			
	Strongly disagree	1	3	0	0	4			
		2.0%	6.0%	0.0%	0.0%	8.0%			
Total		15	11	9	15	50			
		30.0%	22.0%	18.0%	30.0%	100.0%			

Following reports were obtained regarding the presence of a briefing for students prior to WIL, as shown in Table 3. It is a matter of great concern that 68% of the respondents were never provided with any information regarding workplace dynamics before graduating from their respective colleges. This presents a significant challenge as it indicates that students are entering the workforce without a clear

understanding of what is expected from them. This lack of awareness can potentially create hazards related to workplace safety, which should be the foremost priority. Additionally, it is worth noting that only 14% of the respondents received any briefing on workplace dynamics, while 18% were uncertain about the matter. The obtained p-value of 0.04087 further confirms the high significance of the responses provided.

Table 3. The knowledge of workplace dynamics by the students

Statement 2	Description	College A	College B	College C	College D	Total	Pearson Chi-Square	df	p-value
I was never briefed about the workplace dynamics	Strongly agree	4	3	1	5	13	21.712a	12	0.04087
		8.0%	6.0%	2.0%	10.0%	26.0%			
	Agree	4	6	2	9	21			
		8.0%	12.0%	4.0%	18.0%	42.0%			
	Uncertain	2	2	5	0	9			
		4.0%	4.0%	10.0%	0.0%	18.0%			
	Disagree	3	0	1	1	5			
		6.0%	0.0%	2.0%	2.0%	10.0%			
	Strongly disagree	2	0	0	0	2			
		4.0%	0.0%	0.0%	0.0%	4.0%			
Total		15	11	9	15	50			
		30.0%	22.0%	18.0%	30.0%	100.0%			

The aforementioned statement (Table 4) indicates that 82% of the respondents concur that workplace training enhances their understanding, while 14% hold a contrasting view. It is also worth noting that 4% of the respondents expressed uncertainty regarding the value of workplace training. However, the fact that 20% of the students claimed to have never attended Work-Integrated Learning (WIL) reveals inadequate management on the part of those responsible for overseeing it. This could potentially have severe implications for students' comprehension of workplace training. Furthermore, the p-value of 0.075 confirms the statistical significance of the findings.

Table 4. The understanding that the workplace has on students

Statement 3	Description	College A	College B	College C	College D	Total	Pearson Chi-Square	df	p-value
Workplace training increased my understanding	Strongly agree	5	5	1	8	19	19.595a	12	0.075
		10.0%	10.0%	2.0%	16.0%	38.0%			
	Agree	5	5	5	7	22			
		10.0%	10.0%	10.0%	14.0%	44.0%			
	Uncertain	0	0	2	0	2			
		0.0%	0.0%	4.0%	0.0%	4.0%			
	Disagree	4	1	1	0	6			
		8.0%	2.0%	2.0%	0.0%	12.0%			
	Strongly disagree	1	0	0	0	1			
		2.0%	0.0%	0.0%	0.0%	2.0%			
Total		15	11	9	15	50			
		30.0%	22.0%	18.0%	30.0%	100.0%			

Table 5 illustrates that 82% of the respondents believed they were aware of their employer's expectations in the workplace. This indicates that upon their arrival at the

workplace, they were not provided with a clear understanding of what their employer expected of them. Conversely, only 8% of the respondents were knowledgeable about their employer's expectations, while 10% were uncertain. The recorded p-value of 0.04604 demonstrates the statistical significance of the data.

Table 5. The knowledge of the employer's expectations of me

Statement 4	Description	College					Chi-square results		
		College A	College B	College C	College D	Total	Pearson Chi-Square	df	p-value
I thought I know the employer's expectation	Strongly agree	5	4	0	10	19	17.175a	9	0.04604
		10.0%	8.0%	0.0%	20.0%	38.0%			
	Agree	5	5	7	5	22			
		10.0%	10.0%	14.0%	10.0%	44.0%			
	Uncertain	2	2	1	0	5			
		4.0%	4.0%	2.0%	0.0%	10.0%			
	Disagree	3	0	1	0	4			
		6.0%	0.0%	2.0%	0.0%	8.0%			
Total		15	11	9	15	50			
		30.0%	22.0%	18.0%	30.0%	100.0%			

Table 6 presents the responses obtained regarding whether students were assigned a mentor during their workplace placement. Seventy percent (70%) of the respondents agreed that they were assigned a mentor upon their arrival at the workplace, while only 14% claimed that they were not assigned a mentor. Sixteen percent (16%) of the respondents were uncertain about the assignment of a mentor, with a recorded p-value of 0.33152 for statistical significance. These findings highlight gaps in the organization of the whole work-integrated learning (WIL) placement. Statements 4 and 5 provide figures that may have an impact on each other. In statement 4, 82% of the respondents indicated that they were unaware of their employer's expectations in the workplace, while in statement 5, 70% of the respondents had a mentor who may have found it challenging to work with the students.

Table 6. The assignee of a mentor at the workplace

Statement 5	Description	College					Chi-square results		
		College A	College B	College C	College D	Total	Pearson Chi-Square	df	p-value
A mentor was assigned to me	Strongly agree	3	4	1	5	13	13.533a	12	0.33152
		6.0%	8.0%	2.0%	10.0%	26.0%			
	Agree	4	5	4	9	22			
		8.0%	10.0%	8.0%	18.0%	44.0%			
	Uncertain	3	1	3	1	8			
		6.0%	2.0%	6.0%	2.0%	16.0%			
	Disagree	4	1	1	0	6			
		8.0%	2.0%	2.0%	0.0%	12.0%			
	Strongly disagree	1	0	0	0	1			
		2.0%	0.0%	0.0%	0.0%	2.0%			
Total		15	11	9	15	50			
		30.0%	22.0%	18.0%	30.0%	100.0%			

WIL Coordinators' Interview Findings

The Work-Integrated Learning (WIL) coordinators are individuals responsible for placing students at workplaces. They are located at each TVET college. The biographical data of the WIL coordinators in this study consisted of males from four different colleges, with one representative from each college. The data obtained from these WIL coordinators was collected through semi-structured face-to-face interviews. The interviews aimed to (1) Gain an understanding of the process by which students are placed for WIL; and (2) Develop strategies to align the TVET college students' WIL programs with industries.

When asked about the process of placing students for WIL, the WIL coordinators provided the following responses: "*We have a significant collaboration with stakeholders, representing various companies, as a college. We regularly communicate with them regarding the number of students who meet the eligibility criteria for placement in their industries.*" Conversely, WC C added: "*At our college, we successfully place our students in a variety of companies with whom we work closely. This not only enhances our efficiency in coordinating and monitoring students during the placement period, but also improves our overall performance.*"

When asked about the extent to which research is conducted to determine the relevance of workplace training for skills development, the following responses were provided by WIL coordinators: WC B stated: "*We seldom evaluate the changes occurring in industries, as long as we adequately prepare our students for the workplace. We believe that they will naturally bridge the gap between theoretical knowledge and practical application in the industry.*" On the other hand, WC A expressed doubt regarding the responsibility of assessing industry relevance, stating: "*I question whether it is our obligation to determine industry relevance. If companies accept our students, we assume that they consider our students to be relevant to their needs.*" This sentiment was echoed by WC D who stated: "*We rely on the companies that accept our students. If we inform them that we have 10 Automotive Repair and Maintenance students and they agree to host them, that is the extent of our involvement.*"

One of the questions posed was related to the measurement implemented to assess if students have gained sufficient relevant experience during their time in the workplace. This is what the WCs had to say: "*We provide students with logbooks to bring back from their workplace. These logbooks clearly outline the tasks that students must complete during their placement. If these requirements are satisfactorily fulfilled according to the rubric, then we consider the experience to be sufficient*" (WC A). In contrast, WC D added: "*We collaborate with reputable companies that are known for producing skilled professionals who are highly regarded in the corporate world. Therefore, we assess the students based on this criterion.*" WC C stated: "*No, we do not measure the students' experience. Our primary objective is to ensure that students complete the designated tasks during their workplace duration. We do not interfere with the practices of the companies.*"

When asked how the college's WIL programs can be effectively managed and aligned with industry needs, the following perspectives emerged: WC C suggested: "*We should invite industry representatives to serve on advisory boards, but unfortunately, financial constraints often prevent us from doing so.*" On the other hand, WC A stated: "*Our curriculum is fixed, which limits our flexibility in preparing students. If we could regularly review our programs to reflect the impact of technological advancements and other relevant factors on industries, we would do so.*" WC D expressed: "*Aligning our practices with the industry is impossible due to the fixed nature of our college curriculum. We were given this curriculum without any knowledge of its development, so we continue to prepare*

our students in the same manner every year."

Discussion of Findings

The findings from the students' questionnaire revealed a range of responses. While it is positive that 68% of students are placed at workplaces for their Work-Integrated Learning (WIL), this is overshadowed by the fact that the same number of students (68%) go to these workplaces without being adequately briefed on workplace dynamics. This indicates poor management of WIL at the college level, as it is concerning to have students embarking on experiential training in industries without sufficient information about what is expected of them. This creates a gap resulting from the college's inadequate management of WIL. As a result, students may be placed without being informed about safety protocols, expected output, and other relevant aspects of the WIL program. This lack of preparation undermines the students' ability to develop a deeper understanding of the integrated experience in the work setting, hindering their ability to connect course content to their chosen profession through reflection (Jones et al., 2017). Consequently, students may not acquire the necessary practical knowledge to contribute effectively to an economy that is currently facing challenges. This aligns with the assertion made by Mabunda and Frick (2020) that vocational education is meant to be a cornerstone of the national economy, providing skilled artisans who can drive economic growth and sustainability in the production and service sectors. However, when students return from WIL with gaps in their knowledge and experience, the anticipated economic contribution may not materialize. Interestingly, although 82% of students reported that workplace learning enhances their understanding in the classroom and facilitates a quick understanding of employers' expectations, it is evident that upon returning to college, their knowledge and experience are negated by the prevailing practices at their respective institutions.

This is primarily due to poor management of WIL activities starting from planning and placement at the college level. Given that many TVET colleges lag behind in technological advancements, students' return to outdated infrastructure hampers their progress. Furthermore, the absence of technological advances may prevent students from meeting industry expectations (Keane et al., 2023). Additionally, the fact that 68% of students are not briefed on workplace dynamics paints a bleak picture of the relationship between TVET colleges and industries. The interaction with employees in the workplace plays a crucial role in connecting theoretical knowledge acquired in the classroom with the practical realities of the work environment (Van Der Bijl & Taylor, 2020). Without this interaction, gaps are likely to emerge in WIL, potentially hindering developments driven by 4IR practices in industries. Technological advancements have become increasingly vital in today's rapidly changing workplaces that rely more on mechanized and digitized interfaces rather than human interaction and demand flexible employees (Mabunda & Frick, 2020).

The responses from the WIL coordinators also highlight some challenges that arise during students' placements. WC B noted that they rarely keep up with industry changes, which poses a risk because, as Maseko (2018) suggests, further research is needed to determine how the current industry culture affects the development and training of individuals. Although the WIL coordinators claim to collaborate with relevant stakeholders, there seems to be a disconnect between their efforts and the concerns raised by students who feel uninformed about industry dynamics. This

indicates that the WIL coordinators believe that mentors in the industries should take on the responsibility of experiential learning for students, resulting in a gap. Billet (2016) defines WIL as a pedagogical approach that integrates experience in educational and practice settings for students in learning institutions like TVET colleges. However, the WIL coordinators appear to work independently, focusing solely on college activities without considering the happenings in industries. This explains the gaps that students encounter during their time in industry placements. It is worrisome that WC C mentioned the lack of advisory boards to engage stakeholders. Conversely, WC D believes it is impossible to align college-level activities with industry practices. This contradicts Govender & Wait's (2017) assertion that WIL programs require participation from all stakeholders for effective implementation. The objective of the WIL program should be to establish connections between workplace knowledge and the academic curriculum, as well as to help students transfer academic knowledge to real-world contexts. Therefore, commitment from both academic and professional partners representing different knowledge fields is crucial for constructing effective WIL programs (Maseko, 2018). Maseko (2018) also emphasizes the importance of academic leadership in successfully managing WIL initiatives. He further suggests that the institution's department plays a significant role in ensuring accreditation criteria contribute to quality learning.

The challenges faced by students contradict Hasan and Kazlauskas' (2014) notion that the concepts of Activity Theory are interconnected and intertwined. According to Hasan and Kazlauskas (2014), the core of activity lies in the relationship between the subject (the individual or group engaging in the activity) and the object (the task being performed). The object of activity encompasses the focus and purpose of the task, while the subject incorporates various motives. Therefore, the disparity between the responses obtained through the closed-ended questionnaire and those expressed by WIL coordinators suggests that there are persisting gaps at the college level, leading to issues with WIL placements for students. It is recommended that the TVET college sector collaborates closely with industries to formulate coordinated efforts to improve the effectiveness of WIL. In smaller districts, such as the one where this study was conducted, it is feasible to identify industries that align with the programs offered at colleges and ensure that WIL coordinators and students are aware of industry developments. Since curriculum development is predominantly handled by academics in South Africa, involving industries in advising the TVET college sector about technological advancements and organizing excursions to industrial sites would help prepare students for the required skills. This would mitigate the existing gaps in WIL, ultimately reducing the number of students unable to complete their artisanal programs (Khoza, 2019). It is important to note that this study had limitations as it was conducted in a single province, primarily in the rural area of Limpopo. Conducting similar studies in different regions of the country would provide a more comprehensive understanding of the issues surrounding skill development and WIL placements that continue to hinder employment prospects for students.

CONCLUSION

The study's conclusion indicates that the management of Limpopo TVET College's Work Integrated Learning (WIL) program is inadequate. Students frequently find themselves placed in unfamiliar environments for which they are ill-prepared. Additionally, the study revealed a notable disparity between the

curriculum taught at the TVET colleges and the current practices within the industries, particularly concerning the integration of technology into NCV subjects.

RECOMMENDATION

Given the gaps in the management of Work-Integrated Learning (WIL) at Limpopo TVET colleges, it is imperative to establish a comprehensive system for TVET college managers to effectively oversee WIL. Collaboration between college curriculum planners and industries is essential to ensure alignment and synergy between the curriculum and students' WIL placements. Despite the challenges faced by TVET colleges in rural areas, such as limited resources and inadequate technology utilization, lecturers and WIL coordinators can still fulfill their responsibilities in managing students' WIL.

Author Contributions
The authors have sufficiently contributed to the study. All authors have read and agreed to the published version of the manuscript.

Conflict of Interests
The authors declare no conflict of interest.

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