TVET Lecturer Work-Integrated Learning Experience through Industry Meetings

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Abstract: The provision of Technical and Vocational Education and Training (TVET) education requires lecturers who possess the necessary prerequisite industry-relevant skills. Work-integrated learning (WIL) offers TVET lecturers an opportunity to receive training from industry professionals through work placement. This study examined how TVET lecturers' WIL experiences could be improved by attending industry meetings. An interpretivist paradigm, which employed a multiple case study design, informed this study. Purposive and convenience sampling was employed to select TVET colleges and industries hosting lecturers during WIL. Using face-to-face, semi-structured interviews, data were generated from nine industry personnel and eighteen purposively selected TVET college lecturers from the three selected TVET colleges. The instruments were piloted with three colleagues to eliminate ambiguity and ensuring the intended information is gathered. Bergami and Schuller's theoretical model on teacher placement in industry guided this study. The model helps to explain the kinds of knowledge gained during WIL. Data were analysed thematically. Findings revealed that lecturers experienced learning from discussing the requirements and conditions of tasks. Lecturers learnt from daily scheduled tasks, sharing artisans' feedback experiences, listening, communicating, and reflecting on previous experiences through different types of meetings. The study contributed to a unique way for TVET lecturers learning through WIL by presenting a learning platform during WIL.

Keywords: Industry, Lecturer, Meetings, Soft Skills Work-integrated Learning

Introduction

TVET lecturers play a significant role in South Africa by teaching various vocational courses. The lecturers received training at formal institutions, where they studied pedagogy and subject-matter content [1]. However, their education does not give them full exposure to the sector or opportunities for contact with industry experts [2]. This article seeks to fill that gap. The study focused on South African TVET lecturers who participated in work-integrated learning (WIL) placements over two years to gain expertise in their specific trades. Despite developing practical skills in the workplace, the engineering procedures entail human factors and personal traits that have been generally overlooked [3]. This neglect has made it impossible to gather in-depth information about how various personality traits connect to engineering skills, and this issue has made it difficult to learn new knowledge to enhance company operations. Despite the growing significance of soft skills, relatively few studies have examined how these skills develop through holding meetings [4]. A growing awareness revealed that technical skills alone are insufficient for success in engineering trades [5].

A meeting is an impromptu or planned occasion for purposeful communication, where a group gathers with a shared identity to discuss recent developments, task progress, obstacles, and how to tackle shared goals [6]. In this context, meetings included managers, engineers, supervisors, TVET lecturers, and artisans to ensure that tasks were carried out per the guidelines set forth in the working document of practice (job cards). To reduce or eliminate machine downtime, industry meetings typically covered breakdowns, successes and failures, action plans, and execution of the work plans. The research focused on various types of technical meetings held in industry to provide knowledge to employees.

In general, there are several meeting types where an agenda is sent beforehand so that attendees are aware of the time and location of the meeting, may confirm their participation, and, when required, can prepare the proper responses as outlined on the agenda. However, the industry meetings discussed in this paper were low-level gatherings held at

various company divisions. These routine meetings with a set agenda set them apart from official meetings requiring a scribe, reading prior minutes, and their adoption. Gorse and Emmitt [7] echo similar sentiments that construction progress meetings are held regularly throughout the construction period, and all parties meet to review the project's progress. Rogelberg, Scott [8] reiterate that meeting lateness implied job dissatisfaction, intent to quit and general discontent with meetings. Hence, lateness to work could have some meaning which may need to be explored further.

Vermaelen and Kovach [9] state that meetings are used to share information, gather ideas and make decisions. Hence, it is imperative for organisations to provide resources that promote productive meetings, which assist employees in being effective in performing their duties. The study focused on the following types of meetings: collegial section meetings, status update meetings, toolbox talk (stand up) meetings, action review meetings, and information sharing meetings. Each meeting addresses particular aspects which drive industry operations. Failure to conduct meetings may be catastrophic in some instances where employees fall into a trap because of a lack of safety updates. In this regard, Vermaelen and Kovach [9] posit:*"... having up-to-date information from meetings helps reduce uncertainty so that appropriate decisions can be made. As a result, it is important to distribute meeting minutes on time"*. Industry meetings are crucial in a communication structure where important operational details are disseminated through the line managers. The study explored how TVET lecturers learnt from artisans' feedback, reports on incidences, problem-solving, warnings and risk assessment, breakdowns and reflection through the meetings.

Review of Literature

Meetings in organisations aim to communicate information so that a collective decision is passed. Meetings are learning arenas and crucial means for reflective dialogue-relations in an organisation [10]. The kind of meetings under discussion occurred daily in industries where instructions on plant operation and maintenance were given, shared and solutions discussed. Literature was sought to outline how meetings occurred in different industries and weigh it against the findings of this study. Kennel and Reiter-Palmon [11] suggest that meetings are an organisational tool with the following desired outcomes: Effective communication and sharing of information; Problem-solving; Decision making; Education and training; Action planning; and Socialising. Effective communication, which enhances team decision-making, is essential for industry to deliver a service that satisfies customers' performance demands.

Tropman [12] provides thorough coverage of American gatherings and their efficacy. Meetings were criticised for being inefficient, but it was thought they filled a void left by the absence of skill-based training for corporate jobs. Skills and knowledge were improved through meeting participation and learning from meeting "dynamics" and "mechanics" [12], while the tasks in industry are not psychologically prepared, which is crucial for actualising skills learning. In support, Kim and Rudin [13] reinforce the importance of meetings and acknowledge their challenges, as they require understanding social signals and complex interpersonal dynamics. The meeting leader should understand the membership and interpret any signs that may reflect through the meeting proceedings. For instance, an observant supervisor may not assign a task that needs concentration to a person who may be showing signs of a restless mind as it may lead to low productivity or disaster, such as damage to machines or humans.

Foley and Macmillan [14] noted that different communication patterns occurred in different types of meetings. For instance, the problem-solving meeting provided a richness of interaction largely missing from progress meetings and technical meetings. Team members showed greater satisfaction with problem-solving meetings through enriched exchanges of information. In another study, Kyllonen [15] showed that soft skills for the workplace included teamwork, communication, ethics and integrity, planning and organisation, knowledge and creativity, and resilience. It implied that good teamwork practices depended on a complex interchange of relationships and dependencies in the team. There is a value added when meeting supportive, open-minded and interactive participants as they share constructive information.

Gorse and Emmitt [7] reported that some meeting members feel comfortable in the group and meeting environment, where they listen and interact. During meetings, some members were comfortable listening and interacting in meetings, while others felt intimidated by the more dominant contributors. Interaction in meetings varied depending on the topic of the discussion. Negative emotional interactions, such as disagreements, expressions of frustration and conflict, threaten the relationships of team members. It suggested that each topic received contributions from people with relevant responses and knowledge of the subject under discussion. Gorse and Emmitt [7] alleged that the informal positive emotional exchanges on the weather, partying and sport before the meeting started provided a mechanism for understanding individual characteristics and interpersonal relationships. These relationships paved the way for the formation of networks and connections, and hence, more exchange of information on a personal level. Nisbet, Dunn [16] support that informal interprofessional learning has been recently considered through involvement in work activities and team meetings.

Adamson, Way [17] investigated using job meetings in Canada, Indiana and Indonesia as a teaching tool for construction technology within a project-based learning environment. The study introduced job meetings into the classroom to relay information quickly and deliver the course content. The study revealed that the industry meetings gathered and sorted out valuable and relevant information for effective learning. Similarly, Gorse and Emmitt [7] explained the importance of meetings as essential mechanisms for sharing information and facilitating decision-making.

Meetings aim to achieve objectives, including problem-solving, decision-making, and information sharing [18]. Personal experience showed that industry meetings commonly occurred in the waiting, changing or artisan room, an assembling place where a roll call occurred, and duties were assigned. Leach et al. reported that routine issues and special problems formed the basis of daily meetings in industry. In other words, this industrial exposure nullifies the notion posited by Leach et al. that key characteristics like appropriate meeting facility and taking minutes were paramount to meeting conduction. Mansfield, Hall [19] proposed that a meeting venue should be conducive for attendees and provide comfort and minimum distractions. Meeting attendees are obligated to adhere strictly to the decisions and instructions shared at meetings because they constitute the backbone of the industry's manufacturing process.

The literature revealed that most meetings had an agenda, start and end time, minute taking, an appropriate meeting place and a chairperson. An appropriate meeting place applies to lecturers at institutions, unlike in the construction industry, where a meeting has to be held on-site while members are standing. Meetings are a neglected social form in organisational studies that have been utilised as a methodological tool to study other issues, such as decision making but are rarely empirically explored in their own right [20]. From an academic and theoretical perspective, there is a dearth of empirical research that this study attempts to cover.

Problem Statement

Literature is scarce on lecturer WIL, particularly learning through meetings in industry. Further, there is an increasing awareness that technical skills alone are insufficient for success in industry [5]. The study explores what lecturers learn in industry through meetings. Despite some interest in studies on lecturers in the TVET sector, their personal characteristics in engineering processes have been largely overlooked.

Purpose of the Study

The study explored TVET lecturer learning through conducting meetings in industry during their WIL experience. This research sought to justify that job performance can be linked with soft skills and personality traits as they define the work attitude of an individual.

Theoretical Framework

The theoretical model on teacher placement in industry by Bergami and Schuller [21] explains the kinds of knowledge gained by TVET lecturers during WIL. The model is described in six boxes showing placement steps in industry. The six steps include industry placement, industry placement skills, industry placement experience, theory development (from reflection on practice), classroom teaching and theory into practice. The engagement between TVET lecturers and industry personnel should enable forming of a group of individuals with different interests, making diverse contributions, and have various ideas [22]. In this case, even though lecturers were the primary beneficiaries of WIL, the company also likely benefited from the lecturers through their ideas and participation in different processes during the industry processes. Both industry personnel and TVET lecturers on WIL contributed to industrial production processes.

Figure 1: The theoretical model of teacher placement in industry.
Source: Bergami and Schuller [23].

Methods

The qualitative research was positioned in the interpretive paradigm, employing a multiple case study design. The study population involved all TVET lecturers in KwaZulu-Natal province who participated in WIL. From that population, a manageable sample was drawn within the means of the researcher due to time and financial constraints.

Sampling

Convenience and purposive sampling were employed to select three TVET colleges and industries that hosted lecturers during WIL. Eighteen TVET lecturers were sampled purposively from a population of lecturers in three selected TVET colleges. Nine industry personnel from companies hosting lecturers during WIL were conveniently selected to participate in the study. It was assumed that industry personnel had hands-on experience with lecturers in industry during the WIL exposure.

Research Instruments and Data Generation

Data were gathered using face-to-face, semi-structured interviews with TVET college lecturers who completed WIL and those on WIL during this study. The interviews were audio-recorded to allow the researcher to stay focused and capture the full details of the proceedings. Pseudo-names Lecturers 1 to 18 were used to protect participant anonymity and confidentiality. Industry personnel was classified as Training Managers 1 to 3, Training Officers 1 to 6. The interview schedule tool was tested through a pilot to confirm the 45 minutes of interview time, which assisted in eliminating ambiguity and grammatical errors. Access to research sites was granted through gatekeepers, and participants acknowledged by signing the consent forms. Participants were notified about their right to withdraw during the research process and that they were not coerced to respond to questions. Voice recordings were transcribed verbatim immediately after each interview. The research data files were stored as per university guidelines and accessible to participants on request.

The study used thematic and narrative analysis to analyse data. Qualitative data analysis is an inductive process of organising data into categories, identifying patterns and relationships among the categories, and asking questions about those patterns [24]. Data analysis broke up the data into codes, themes and patterns. Themes are summaries or overviews of the most frequent things that participants said in relation to a certain data collection question [24]. The thematic analysis steps included inductive analysis to identify patterns, verbatim transcription of the voice recordings, organising and indexing data, coding data, developing themes and juxtaposing the relationships among the themes.

Results

Five dominant themes were identified in response to the sparsity of literature on TVET lecturer learning through industry meetings: communication, reflection, teamwork, problem-solving and networking. Table 1 shows the types of meetings and corresponding themes. The themes identified turned out to be soft skills.

Table 1: Type of meetings and themes

Type of meeting	Skills gained
Collegial section	Communication, Teamwork, Networking, Problem-solving
Status update & Action review	Listening, Problem-solving, Communication, Time management, Teamwork, Reflection
Information Sharing	Analytical skills, Listening, Responsibility, Problem-solving, Communication, Reflection, Teamwork, Trustworthiness, Networking
Toolbox talk	Listening, Problem-solving, Teamwork, Reflection

Notes: The table shows that communication and teamwork as the most common in all meetings, followed by problem-solving.

A meetings discussion revealed "*learning to communicate with colleagues and supervisors, sharing ideas and exchange information. It is inspiring from a meeting to hear how someone finished a difficult job. You get to be known by supervisors*" (Lecturer 7). Lecturer 7 indicated communication, sharing information and networking, which assisted in getting noticed by the supervisors. A mechanical workshop lecturer reported learning "*communication, sense of belonging and openness from the meetings*" (Lecturer 15).

An electrical lecturer shared skills learnt during meetings:

> *We share work experiences as colleagues and help each other improve on* integrating theory with practice*. I got experience in* listening, communication, reporting skills and problem-solving techniques*. I learnt to follow instructions and do the job correctly (Lecturer 18).*

Lecturers 7 and 18 highlighted soft skills like communication, listening, reporting, and problem-solving. Explaining meetings, Lecturer 10 commented:

> *Meetings* promote relationships *and* unity *in the organisation through interaction. In a meeting, you* share knowledge and skills and coordinate activities t*o be done. We pass and receive information and* reports clarifying areas of importance.

The skills to interact and share knowledge were revealed. Training Manager 2 supports that a "*meeting is a good platform to hear what people have to say*". Training Manager 1 reported that meetings were reported to "*give personal support to each other when meeting and exchanging ideas*". A group can analyse and improve ideas through a meeting. Training Manager 4 pointed out that the "*meeting discusses job cards, and the foreman explains how tasks were accomplished*". Meetings were helpful because "*they allowed feedback and to air out views on WIL* (Lecturer 12). Lecturer 8 from the civil engineering industry reported on information-sharing meetings:

> *We meet daily for a toolbox talk. A supervisor addresses and shares daily tasks and discusses safety hazards or incidents during the previous shift to prepare us for the day. You get feedback, share information and experience and air grievances.*

Lecturer 14 commented that "m*eetings provide direction on how things should be done*". Lecturer 12 explained an opportunity to receive and share knowledge and ideas. Lecturer 1 that "*morning meetings discussed the daily scheduled tasks*". Similarly, Lecturer 14 echoed: "*I attend site meetings daily, do the inspection and issue job instructions" (Lecturer 14)*. The frequency of meeting attendance is stressed when meetings discuss work plans.

Networking and Teamwork

Training Manager 2 reported that "*lecturers received the most valuable skills through discussions with colleagues, mentors and networking with qualified artisans. They build good work ethics and follow the rules and protocols*". Lecturer 9 confirmed learning from others and said: "*Yeah, I meet with other staff to discuss what was happening in the plant*". Training Manager 2 agreed that "*lecturers got industry connections that updated them on industry technology developments*". Training Manager 3 reported having "*a 'buddy-buddy system' to work together when*

looking at safety to check if a person is correctly carrying out the task". Similarly, Lecturer 13 attested to teamwork and *"needed two or three labourers for assistance …. Other tradespersons form part of the team to finish a good job"*.

Reflection

Lecturer 3 *"had to look back and think of possible causes and find ways to improve the system"*. Similarly, Lecturer 7 had to "*looked back in terms of reflection and asked what was the cause of a particular part to fail"*. Reflection was also evident in the morning meetings*, "...in terms of the meetings we consider what was done the previous day and if those tasks were accomplished without hardships, then we start on new tasks" (Lecturer 7)*. Through reflection, learning was revealed when lecturers took time to stop and think and challenge their practice to improve operational methods and understanding. Lecturers could recognise their strengths and weaknesses and apply them in their ongoing learning.

Discussion

Learning Through Meetings

During the meetings, lecturer learning emanated from interacting and sharing experiences and ideas among the teams. Data shows that TVET lecturers on WIL gained soft skills during experiential learning through meetings, where they learnt to follow correct procedures. The soft skills were described as non-cognitive skills which drive workplace success [15]. Ahmed, Capretz [3] support that the soft skills required in carrying out workplace activities are communication, analytical and problem-solving, interpersonal skills, the ability to work independently, and organisational skills. These skills were highly desirable for a job. TVET lecturers were placed in different companies, communicating with their supervisors on how to solve problems, showing accountability and dependability. Communication

Meetings are the primary communicative practice used to accomplish goals, make changes, and develop innovative ideas in industry [19]. In meetings, plans were made, problems were solved, and critical organisational decisions were taken [8]. A typical division would include people with similar background knowledge to speak the same technical language and resolve issues arising in the division. Language and vocabulary were essential to verbalise and discuss what lecturers perceived and understood about their experience [25]. Literature confirms that the TVET lecturer fully integrates the language of the field [26]. Ramamuruthy, Alias [27] showed a lack of technical language communication skills by trainees who failed to communicate using appropriate technical terminologies. A lack of communication skills paused challenges where wrong instructions could be conveyed. Ahmed, Capretz [3] confirm that "*if the employee has good communication skills and technical expertise, the likelihood of success in a job is higher"*.

This was signified by the phrase "*communicate with colleagues and supervisors*" in the results excerpt. In this instance, the model presents the social aspect of industry where one must effectively communicate with team members or other role players. Kolb explains that learning involves transactions between the lecturer and the environment [28]. Through communication, lecturers created a collective understanding of their teams and shared their opinions about industry processes. Ahmed, Capretz [3] support the need to communicate effectively with internal team members, thereby building skills to communicate with external stakeholders. If a TVET lecturer acquires effective communication skills, he is more likely to disseminate crucial information during teaching and learning sessions.

The discussion shows evidence that lecturers on WIL interacted and shared experiences, information, and ideas through meetings. The model describes the social aspect, which describes individual characteristics to interact with colleagues, thereby developing interpersonal skills. Across all companies, lecturers learning through section meetings during WIL maintained relationships and unity in the divisions, which could be extended to their TVET workplaces. Lecturers received tips on how tasks were accomplished.

Information Sharing

Lecturers learnt from information sharing, where artisans clarified vital working details. Bergami and Schuller [21] confirm that a lecturer on WIL placement accesses various networks and channels of information that provide valuable insights and feedback about new or improved industrial processes and other forms of organisational knowledge. Meetings, therefore, lead to a productive 'give and take' (sharing) of ideas. Information sharing-sharing prevents unwarranted conflicts and builds teamwork.

TVET lecturers had a platform to share information in industry. The meetings were planned and structured evaluation or debriefing sessions that discussed what happened, why it happened and what could be improved in future [28]. Lecturers compared what they did and what they already knew from textbooks and prior knowledge [29]. The lecturer

was also concerned with abstract concepts and excelled in inductive reasoning [30]. In this instance, a review of a completed task was carried out, which promoted lecturer learning through information sharing. Information shared was documented on the job cards, describing the completed tasks' specifications and details. The status of outstanding tasks was discussed, and TVET lecturers experienced learning from how artisans outlined possible procedures and solutions to incomplete jobs.

TVET lecturers reported learning from the feedback shared with colleagues, where they also had an opportunity to share their views. Feedback provided a platform for lecturers to receive comments and criticism from artisans on their performance and had a chance to air out views and express their viewpoints on how to solve tasks. In this case, Kolb in McLeod [31] refers to people who listen with an open mind to receive personal feedback in their line of duty. Such meetings often enabled TVET lecturers to build confidence and the ability to state their opinions without fear of criticism from experienced artisans, managers, and other colleagues.

The status update meetings involved evaluating work done as reflected in the working documents. An evaluation occurred by reflecting on the experience, which assisted the lecturer in acquiring a more profound understanding of the experience from it [28, 32]. The meetings were frequent in civil engineering and mechanical maintenance industries, where job cards and specifications were a constant referent. Through the review meetings, lecturers had an opportunity to put forward their views, learn from feedback on their performance, and explain tasks to charge hands. The nature of lecturer learning through meetings during WIL was also experienced in information-sharing meetings explained below.

Teamwork and Networking

The TVET lecturers shared experiences through discussions and learnt through association with the team. Sharing experiences through meetings motivated and inspired the lecturers when they got tips to solve tasks. Lecturer 10 confirmed that meetings promoted working relationships through communication and knowledge sharing. Bergami and Schuller [23] contend that a TVET lecturer on placement will access networks that provide valuable insights and feedback about new or improved industrial processes and other forms of organisational knowledge. The information-sharing meetings included morning meetings, which were also conducted at any other time when information had to be disseminated. Morning meetings were held before the commencement of work to explain and share the daily work with team members. Lecturers learnt from the daily work discussions by artisans, which offered them insights and focus on the work ahead. Lecturers learning through meetings developed teamwork and networks which united employees to stay connected.

Learning through information sharing occurred at site meetings, as reported by participants in the civil engineering industry. Site meetings were planned gatherings at construction sites where lecturers learnt from stakeholders when they checked work in progress, addressed challenges about possible work hazards, and ensured compliance with building standards. Site meetings checked if all specifications were adhered to and that everyone working on-site used personal protective equipment. Research literature confirms that: *"Site meetings are an arena in which designers, engineers, technicians and managers co-create and develop new design solutions, provide feedback and discuss design-related issues together"* [33]. There is the element of teamwork as stakeholders meet with a common purpose to discuss and share feedback.

Information-sharing meetings in the industry included toolbox talks as indicated by the civil engineering Lecturer 8. A toolbox talk is generally an informal and quick method of sharing information with colleagues before starting work. Toolbox talks occurred while the staff was standing because it was a short briefing about important highlights of work to be done, conducted on-site before starting work. From the literature [34], safety talks are described as toolbox talks where an update is issued to everyone about incidences, warnings and risk assessment before the next shift starts work.

The finding is in tandem with literature [35] which suggests that toolbox talks conscientise workers to care for themselves and remind them to perform their tasks in line with company policy and safety standard practices [36]. The meetings aimed to share all hazards associated with specific tasks and discuss them according to on-site work. The study model presents work behaviour guided by a set of beliefs, values, and practices shaping and guiding the attitudes and behaviour of lecturers and team members in industry. A sense of belonging nurtured excellent communication and focus on the same goal. Communication in the industry was generally verbal during meetings and considered key since industry personnel had consensus during oral discussions, which created engineering knowledge [37]. Lecturers had personal contact with experienced artisans, thus tapping knowledge from their expertise. The

nature of learning for the lecturers, as revealed by Lecturer 18, was based on experiences and getting advice from each other on improving the current operation methods. From a behaviourist viewpoint, learning is a change in the learner's behaviour due to interactions with the learning environment [38]. The research model describes work behaviour as a critical factor in job performance which represents a balance between the soft and technical skills of a job.

TVET lecturer learning through information sharing meetings involved teamwork in the workplace, combining their skills to accomplish a task. Lecturer 1, Lecturer 8 and Lecturer 14 support responses by Lecturer 15, which showed that lecturers experienced learning through information-sharing meetings during WIL. Consequently, TVET lecturers on WIL formed close professional and personal ties with industry personnel. There was freedom of expression where lecturers could express their thinking, consequently learning from a free exchange of ideas. Also, lecturers on WIL presented unresolved tasks they encountered while on duty, hoping for solutions from the rest of the team through verbal discussions. Through information-sharing meetings during WIL, there was learning from shared daily programmes with all team members. The responses are consistent with Bergami and Schuller [23], who emphasise collaborative engagement and industry networks. Lecturer 8 confirmed what Training Officer 1 mentioned about sharing ideas and information, suggesting that industry personnel shared productive information with lecturers during meetings. Kolb's theory is also applicable when people collaboratively work on a task, maintain relationships and dialogue to share, plan, problem-solve and agree on actions [28].

Training Officer 1 indicated that team members were free to air their views. At the same time, lecturers were given the relevant information they needed to guide their work. The results show that lecturers had a platform to question what they did not understand, so they updated their practical knowledge. This finding is in tandem with Bergami and Schuller [23], who state that a lecturer is exposed to industry activities to learn new or improved industry processes. The lecturers learnt to appreciate operational guidelines followed in completing duties. Training Manager 2 symbolically used a platform's image to portray an opportunity or space where they learnt and observed how the qualified artisans tackled tasks. The reports on what happened during the shift give feedback to others, and lecturers think through the experience and understand what happened [25, 32].

Mechanical meetings were conducted indoors, while civil engineering meetings were conducted at the construction sites due to the nature of the civil engineering industry, where most building construction tasks are outdoor activities. The meetings represented a true reflection of the trades so that lecturers could apply the knowledge to students and prepare them appropriately. Information sharing created a conducive opportunity for lecturers' learning through WIL, according to the prescripts of the trade.

An analysis of the response by Lecturer 8 expressed the following: Firstly, there was an emphasis on lecturer learning through daily meetings. Secondly, it was said that a meeting was used to share vital information and get feedback on outstanding work issues amongst the team, giving rise to learning. Thirdly, lecturers learnt from sharing experiences and used the same platform to air grievances. As a result, challenges were addressed on the one side, while experiences, good and bad, were also shared on the other. Lecturers learnt skills to handle different situations and present or receive issues that need to be addressed. It helped them to be able to handle students who may present concerns that require them to solve.

A range of issues was addressed during information-sharing meetings suggesting that lecturers during WIL experienced learning from the requirements and conditions of tasks. Lecturers learnt from daily schedule discussions, sharing others' feedback experiences, and carrying out inspections and safety hazards procedures. There was a consensus among lecturers at all companies about learning through information-sharing meetings. Lecturers stepped back from work and reviewed what was experienced, and communication channels were opened to team members [25].

Problem-solving

Problem-solving was one of the most highlighted soft skills gained through all meeting discussions on how tasks were solved. Coordinating activities to be undertaken gave a platform for discussion on problem-solving procedures. Lecturers had an opportunity to tap from artisans on how tasks were approached. It followed that particular problem-solving techniques were discussed during morning meetings as artisans explained challenges they experienced and how they overcame them. Ahmed, Capretz [3] revealed the high demand and importance of problem-solving and expressed that teamwork was key to solving tasks. Lecturers learnt to understand and provide appropriate solutions to tasks. They also learnt the impact of "good" and "poor" solutions to tasks, making morning meetings crucial to their learning. Some problem-solving techniques require vast experience and application of relevant principles guided by engineering design principles. Lecturers understood different problem-solving techniques and participated in team

projects concerning forming technical solutions. TVET lecturers learnt to determine forms, procedures, and documents needed for equipment installation and maintenance.

Reflection

Reflection-on-practice is the process of looking back and learning from reflection on the experiences to effect improvements or uphold good acts in future decisions and programme implementation. Reflection refers to returning to the task's starting point and reviewing what was done [28]. Therefore, lecturers looked back on practical experiences, their strengths, weaknesses and whether they had used proper maintenance, installation or troubleshooting methods by analysing where challenges emerged, considering how to overcome them, and determining the future directions of their practical experience. New practical learning experiences appeared, leading to learning through reflection on what they could have done differently. During WIL, a lecturer has an opportunity to reflect, deconstruct and reconstruct the workplace processes, thereby gaining new insights [21, 23].

The lecturer reflects on the experience before judging, giving particular attention to inconsistencies between experience and understanding [28]. The response showed evidence of reflecting or reliving experiences on completed tasks to determine the reason for a part or machine failure and what could have been done to accomplish the task. Reflection-on-practice allowed TVET lecturers to stand outside their practice, see what they did from a broader perspective, and consider alternative ideas and practices. Lecturers reflected on practice during WIL, identified the flaws in their work, learnt what they could have done differently, and corrected them in their subsequent practices. Literature outlines that lecturers should reflect on becoming effective and professional [39].

The reflection raised an understanding of professional judgment that enabled lecturers to explain the 'what', 'how' and 'why' [40]. Similarly, reflection-on-practice involves identifying accomplishments within a situation to look forward to [41]. Thus, through reflection, lecturers learning during WIL would enable them to consider alternative ways of improving subsequent attempts.

Reflection-on-practice suggests learning from noting similarities and differences. Therefore, reflection increased awareness of experiences and allowed TVET lecturers to learn from the errors and make informed decisions. From reflection, lecturers tried to make sense of and understand practical experiences by thinking things through and assimilating knowledge [28]. During WIL, lecturer learning also involved reflection on practice on the experiences to effect improvements or uphold acceptable practices in future actions. Lecturers in different industries reflected on practical tasks, their strengths, weaknesses and whether they used appropriate methods by analysing where challenges emerged, considering how to overcome them and determining the future directions of their practical experience. They identified mistakes in their work and learnt what they could have done better. There was evidence of reliving experiences on completed tasks to determine the reason for the incomplete task.

Toolbox talk

Toolbox talks are also called stand-up meetings because they are conducted while standing. The meetings alert staff to be conscientious about industrial safety and tasks to be performed. Results showed that the civil engineering industry used site meetings to check adherence to all specifications. From all companies, TVET lecturer learning involved exchanging information, ideas, and thoughts through discussion or writing. Furthermore, learning through discussions on daily tasks enabled them to understand those tasks and use the understanding in organising tasks in delivering TVET practical subjects.

In summary, the different types of meetings are shown in Figure 2 below. An illustration of a meeting taking place with discussions on how to solve an engineering problem is demonstrated. Each meeting shows possible outcomes and at the right side are the meeting benefits for the TVET lecturer.
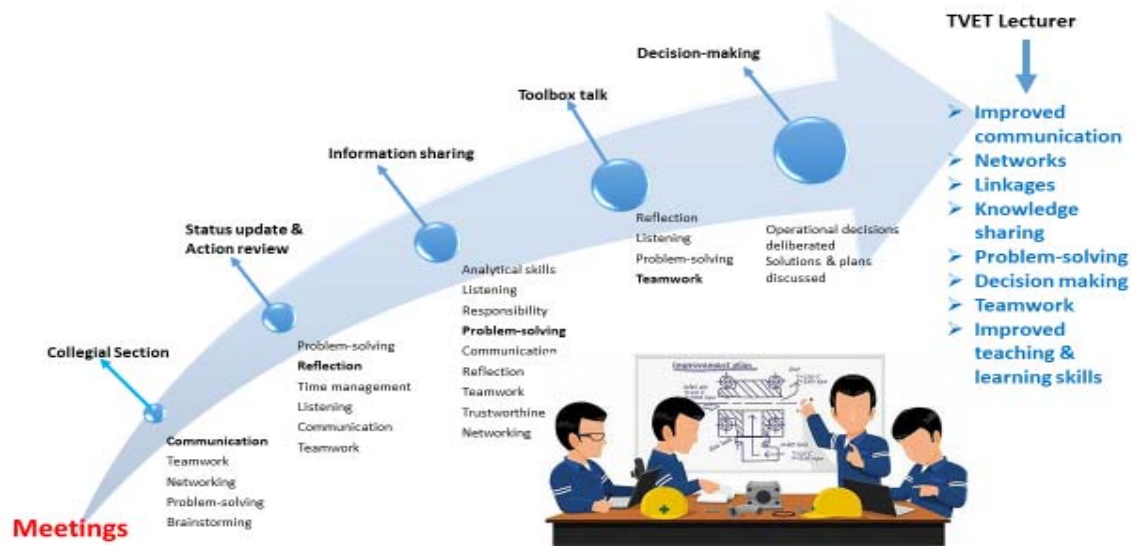
Figure 2: Summary of findings

Conclusion

Through meetings, TVET lecturers learnt from different forms: through the artisans' guidance, association, teamwork and listening to discussions. The study revealed that soft skills required in carrying out workplace activities were communication, teamwork, problem-solving, analytical skills, interpersonal skills, and the ability to work independently. Lecturers learnt from discussions with expert industry personnel. Feedback from colleagues provided a platform for TVET lecturers to learn from comments and criticism from artisans on their performance and had a chance to air out views and express their viewpoints on solving tasks. Sharing information in industry showed to be a vital exercise which pointed out crucial information around safety aspects. TVET lecturers learnt from reflection by looking back on particular practical experiences, their strengths, weaknesses and whether they had used appropriate maintenance, installation or troubleshooting methods by analysing where challenges emerged, considering how to overcome them, and determining the future directions of their practical experience. The study revealed that meetings consolidated practical skills by explaining how industry processes and procedures unfolded during maintenance and manufacturing. While skills are learnt through touching and doing, the study showed that there is learning through interaction and discussion with team members.

Ethics and Consent

The research has been approved by the Institutional Research Ethics committee.

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