© Universiti Tun Hussein Onn Malaysia Publisher's Office

OJ-TP

http://publisher.uthm.edu.my/ojs/index.php/ojtp
e-ISSN : 2289-7410

Online Journal for TVET Practitioners

TVET Graduates Employability for Construction Industry: A Mixed-Method Study

Mohammed A. Auta[1*], Ijeoma M. Onwusuru[2]

[1,2]Department of Technology and Vocational Education,
Nnamdi Azikiwe University, Awka, NIGERIA

*Corresponding Author

DOI: https://doi.org/10.30880/ojtp.2022.07.01.009
Received 26 January 2022; Accepted 27 March 2022; Available online 31 March 2022

Abstract: Studies conducted in the past indicated that, there exist a gap between what the industries want and what the respective institutions especially TVET institutions of higher learning produced due to near absence of employability skills. This is a report on the study of employability skills that TVET graduate aspiring to work in the construction industry should acquire. The study adopted mixed-methods design and the participants comprises of 439 construction industry practitioner with varying roles and years of experience. Questionnaire and interviews were used to collect data, while mean, standard deviation was used to analyze the quantitative data. Thematic analysis was used to analyze the qualitative data. The findings of the study indicated that, personal qualities, teamwork skills, communication skills, problem solving skills, leadership skills, informational skills and technological skills were identified as essential skills TVET graduates are expected to possess to be able to work effectively in the construction industry.

Keywords: TVET, graduates, employability, skills, construction, industry

1. Introduction

> "Your education and experience may make you eligible to apply for a job but, to be successful in most roles; you will need skills that you are likely to develop over time. Some will be specific to the job, but the vast majority will be so-called 'soft skills' that can be used in any job or employment sectors: they are what make you employable" (Skillyouneed, 2021)

Employability issues have been a concern to present-day higher education all over the world. It has become more pronounced in recent time especially in developing countries where the need for rapid industrialization and infrastructure upgrade is being vigorously pursuit (Gurara, Klyuev, Mwase & Presbitero, 2018). Achieving that will require a number of competent workforces that will champion that cause. Institutions of higher learning especially universities and polytechnics have been churning out graduates into the ever changing labour market; hence, the yearning of success in the labour market is becoming an issue of survival (Rehman & Mehmood, 2014) especially with the dwindling economic condition of the world as well as the impact of COVID-19 pandemic on all aspects of our lives.

The term employability has been defined by different authors based on their individual perceptions; for instance, Askov and Gordon (1999) and Fugate, Kinichi and Ashforth (2004) defined employability as the act of preparing graduates to successfully secure jobs and progress in their career trajectory by proving their worth to their employers as a key factor to their survival on the job. The International Labour Organization (ILO) viewed employability as those

*Corresponding author: ma.auta@unizik.edu.ng

skills, knowledge and competencies that improve a worker's "ability to secure and retain a job, progress at work and cope with change, secure another job if he/she so wishes or has been laid off and enter more easily into the labour market at different periods of the life cycle" (Brewer, 2013).

It is pertinent to accept the fact that, acquisition of bachelor degree or other recognized certificates alone is not enough to survive the labour Market. This is because, there is a likelihood of abundance of equally competent and skilled candidates aspiring for the limited available vacancies (Rehman & Mehmood, 2014). Hence the need to be aware that, employers currently at the moment look out for other qualities that precede the certificate issued by higher education institutions prior to employment job placement.

There is a consensus among industry practitioners that for an employee to succeed on the job, such individual is expected to possess specific requirements which employers considered as the most important "raw material" in the employees' line of production. This assumption may be due to the fact that, employees are largely considered as indispensable assets since machines and tools may not become operational without human interventions. Their attributes contributes directly to the success or otherwise of their respective enterprises (Rao & Sivasree, 2015).

There exist a gap between what the industries want and what the respective institutions of higher learning produced (Rehman & Mehmood, 2014; Auta, 2016; Auta, 2017). No wonder, employers of labour always sought for assurances that graduates applying for jobs have at least strong foundation skills and the ability to deploy the knowledge they acquired in their respective institutions of higher learning to solve problems, take initiative and be able to communicate effectively with team members, instead of pursuing the normal job routines. These skills are not taught from a textbook, but can be acquired through good quality education (Brewer, 2013).

In a study conducted by Australian Council for of Education Research (2008), certain skills were identified to contribute to employability. They are: communication skills, learning skills, thinking skills, skills in managing projects and priorities, skills in applying and using information technology, personal and inter personal skills and attributes, and leadership skills. The Employability Skills Profile (ESP) developed by the Conference Board of Canada (1996) had earlier categorized employability skills into three groups, academic skills, teamwork skills and personal management skills.

In a more recent study conducted by Haron, Hussain, Zulkifli, Nashir, and Ma'arof (2019) to determine Employability skills needed by vocational college graduates, their findings indicated that communication, thinking and problem-solving skills were perceived as very important by industrial employers. From the literature reviewed in the preceding paragraphs, it's apparent that studies on employability skills need of graduates in different study areas were carried out in the past, however, the big question is: what are the employability skills employers needed from fresh TVET graduates for employment specifically in the construction industry?

There appears no empirical evidence indicating employability skills specifically needed from fresh TVET graduates for construction industry. Hence the need to study employability skills considered essential to be acquired by TVET graduates before working in the construction industry as perceived by employers.

RQ: What are the employability skills considered essential to be acquired by TVET graduates before working in the construction industry as perceived by employers?

2. Methodology

2.1 Design

This is an exploratory study which adopted mixed methods design. According to Johnson, Onwuegbuzie and Turner (2007), Mixed methods research is the type of research which requires a researcher or group of researchers to combine some elements of both qualitative and quantitative researches in order to broaden the purposes, breadth and depth of understanding and corroboration. Therefore, in this study both quantitative and qualitative data were collected from the participants independently before the data were combined in order to triangulate the findings obtained from the quantitative analysis.

2.2 Participants

Employers in south eastern Nigeria who engaged the services of at least one TVET graduate participated in the study. South eastern Nigeria is made up of five states- Abia, Anambra, Ebonyi, Enugu and Imo states. In view of the fact that it would not be possible to contact the entire participants, an "appropriate sampling" method was utilized in this study. In appropriate sampling method, only participants that are easily accessible and willing to participate in a study are selected (Gokcek, 2019). Therefore in this study, 439 participants comprising Chief Executive Officers (CEO), Chief Operating Officers (COO), Project Managers, General Foremen and Trades Foremen from the five states were used in this study. The demographic characteristics of the participants are presented in table 1.

Table 1 - Demographic characteristics of participants

Variable	Category	f	%
Roles	Chief Executive Officers (CEO)	34	7.74
	Chief Operating Officers (COO)	34	7.74
	Project Managers	53	12.1
	General Foremen	53	12.1
	Trades Foremen	265	60.32
Gender	Male	402	90.57
	Female	37	8.43
Experience	0-5 Years	52	11.85
	6 years and above	387	88.15
Qualifications	PhD	2	0.46
	M.Sc./M.Tech/M.Eng	27	6.15
	B.Sc./B.Tech./B.Eng	188	42.82
	OND/NCE (Tech.)	32	7.29
	Trade Test	17	3.87
	SSCE/NTC	104	23.69
	FSLC	51	11.62
	Others	18	4.10
Total		439	

The data presented in Table 1 show the demographic characteristics of the 439 participants. The data shows that, 34 participants (7.74%) each were CEOs and COOs respectively; while 53 participants (12.1%) each were Project Managers and General Foremen respectively. The data also indicated that 265 participants (60.32%) who constitute the bulk of the subject of this research were in the Trades Foremen category. This may be due to the variety of trades involved in the construction industry and the fact that routine interaction with entry level graduates in a construction site often formed part of their schedules.

The data also indicated that 402 participants (90.57%) were male while 37 participants (8.43%) were female with 52 of them (11.85%) having 0-5 years work experience while 387 representing (88.15%) had work experience above 5 years. Two participants (0.46%) had a PhD, while 27 (6.15%), 188 (42.82%), 32 7.29%), 17 (3.87%), 104 (23.69%), 51 (11.62%) and 18 (4.10%) participants had M.Sc./M.Tech/M.Eng, B.Sc./B.Tech./B.Eng, OND/NCE (Tech.), Trade Test, SSCE/NTC, FSLC and others respectively.

2.3 Instrument for Data Collection

Two instruments were used for data collection: A structured questionnaire and Interview. The 29 items structured questionnaire was adapted from Rasula, Abd Raufb, Mansora, Yasina, and Mahamoda (2013) while the structured interview was done to triangulate, complement and expand the findings obtained from the quantitative data analyzed (Schoonenboom & Johnson, 2017).

The validity and reliability of the adapted instrument was known, however, it was revalidated after minor modifications through experts' judgment. According to Wynd, Schmidt and Schaefer (2003) and Kimberlin and Winterstein (2008), expert judgement is an informed opinion from individual or group of persons with trusted track record in the field understudy who are considered by their peers or others as qualified experts with the potentials to provide information, judgements, evidence. This approach requires asking a number of individuals to express their opinion or to pass their judgement on an instrument either as whole or on its particular aspect; consequently, it may require the instrument developer to clarify, add, or modify some parts of the instrument.

In this study, five experts drawn from both industry and academia re-validated the instrument. Consequently, some additions, clarifications and subtractions were made on the instrument. The "clean copy" of the instrument was used to collect data.

2.4 Method of Data Analysis

As customary with a mixed research design, both quantitative and qualitative data obtained were analyzed. In this study, the procedures used in the data analysis are detailed below:

Quantitative data: Descriptive statistics of Mean and Standard Deviation (SD) and Ranking were used to analyze the quantitative data generated from the participants. Mean is a tool that shows the average value of a group of numbers; while SD provides insight into how much variation exist within a group of values. It also measures the deviation (difference) obtained from the group's mean (average). Table 2 shows the interpretation of mean levels score as suggested by Nunnaly (1978). Nunnaly's interpretation was utilized in determining employability skills considered

by construction industry practitioners as essential to be acquired by TVET graduates before working in the construction industry.

Table 2 - The levels of essentiality of employability skills

Level	Scale	Limit (Mean)
High	4	4.01-5.00
Medium High	3	3.01-4.00
Medium Low	2	2.01-3.00
Lowly	1	1.00-2.00

In this study, a mean ≥3.01 was considered as an indication of the essentiality of the employability skill under consideration. This is to ensure that only skills that attained a "Medium High" level were selected.

Qualitative data: Thematic analysis was used to analyze data obtained through the interview. Thematic analysis is a method that is applied in analyzing qualitative data that require searching across a data set so as to identify, analyze, and report repeated patterns (Clarke & Braun, 2017; Kiger, & Varpio, 2020). Thematic analysis was considered appropriate in this study because it is a powerful method to use especially when seeking to understand a set of experiences, thoughts, or behaviors across a data set (Braun and Clarke 2012). The following stages were followed in analyzing the qualitative data obtained from the interview (Yildirim & Simsek, 2016):

Coding: Data obtained were divided into two parts and shared with a Researcher Assistant. The researcher and the research assistant coded the data independently. The codes generated by the researcher and the research assistant were brought together, compared and discussed, thereafter, the final codes were determined.

Finding themes: Based on the codes determined, themes and sub-themes were formed.

Arranging of codes and themes: In view of the fact that it is a normal scenario that a large number of themes and sub-themes may likely cause information and meaning confusion, the codes were further reviewed in order to simplify the themes and sub-themes earlier obtained.

Identifying and interpreting the findings: After the analysis, findings that emerged from the qualitative data were used to triangulate the findings obtained from the qualitative data.

3. Results and Discussions

The collective results of both qualitative and qualitative data on employability skills considered essential to be acquired by TVET graduates before working in the construction industry as perceived by employers are presented in this section. The discussions of findings are also presented under this section.

3.1 Quantitative Findings

Table 3 presents the findings from the quantitative data obtained from construction industry practitioners.

Table 3 - Employability Skills for Construction Industry

Employability Skill Clusters	Employability Skill Elements	Mean	SD	Cluster Mean	Remarks
Personal Qualities	Responsibility to job	3.42	0.74		
	Self-esteem	3.54	0.62		
	Sociability	3.75	1.01	3.67	Medium High
	Honesty and high integrity	3.91	0.42		
	Commitment towards goal attainment	3.87	0.65		
	Adaptability to working environment	3.53	0.32		
Team Work Skills	Participates as a member of a team: works cooperatively with others and contributes to group with ideas, suggestion and effort.	3.57	0.63		
	Guiding/Coaching team members: help others in learning necessary knowledge and skills	3.54	0.35		
	Engaging: Discussion that involves exchanging specific resources or resolving divergent interest	3.61	0.37	3.63	Medium High
	Work with cultural diversity: works well with people from multi-ethnic, different social or educational backgrounds.	3.80	0.53		
Communication Skills	Read and interpret written information in documents (etc. manuals, graphs, and schedules)	3.86	0.73		
	Write to communicate thoughts, ideas,	3.91	0.45		

	information, and messages				
	Listen and respond to verbal messages and other cues such as body language	3.65	0.32	3.73	Medium High
	Speak and participate in conversation, discussion, and group meeting	3.51	1.44		
Problem Solving Skills	Creative/Innovative thinking to generates new ideas	3.66	0.56		
	Decision Making ability in choosing best alternatives	3.85	0.83		
	Problem solving ability to identify and analyze problems	3.93	0.32	3.77	Medium High
	Seeing things in the mind's eye through ability to visualize and interpret various type of information.	3.62	0.93		
Leadership Skills	Ability to lead team members	3.64	0.64		
	Ability to motivate team members	3.76	0.49		
	Ability to resolve conflict	3.86	0.54	3.69	Medium High
	Taking responsibility for one's self and others	3.50	0.34		
Informational Skills	Acquire relevant information from various sources	3.55	0.67		
	Manage acquired information	3.62	0.75		
	Share ideas and willing to share new ideas	3.71	0.59	3.61	Medium High
	Learn independently	3.56	0.57		
Technology Skills	Select and applies technology related to task	3.77	0.87		
	Have basic computer skills	3.89	0.91	3.73	Medium High
	Ability to maintain basic technological devices	3.52	1.06		

The data presented in Table 3 shows the mean response of construction industry practitioners on employability skills they considered essential to be acquired by TVET graduates before working in the construction industry. The means across the eight employability skill clusters range from 3.61 to 3.77 indicating that all the employability skills presented had a mean >3.50 (Medium High). Based on this, it can be concluded that personal qualities, teamwork skills, communication skills, problem solving skills, leadership skills, informational skills and technology skills are the essential employability skills to be acquired by TVET graduates before working in the construction industry.

3.2 Qualitative Findings

The qualitative findings were grouped into eight categories in line with the employability skill clusters presented in Table 1- personal qualities, teamwork skills, communication skills, problem solving skills, leadership skills, informational skills, technology skills and entrepreneurship skills.

Personal Qualities

The participants acknowledged the personal qualities a potential construction worker is expected to posses in order to function effectively on and of the construction site. According to them:

> "…we deal with human lives here; therefore our employees are expected to be honest in their dealings and should not allow room for doubt especially as it affects their integrity"

> "The truth is that, construction work is a time-bound endeavour, with many often unrealistic datelines. So, ones commitment to goal attainment is sacrosanct in this job"

Personal qualities such as honesty, integrity and commitment to ones job have been recognized as attributes that TVET graduates aspiring to work on construction sites should possessed. These findings are in line with the Hanapiyah, Daud, and Abdullah (2019) who emphasized that personal qualities such as integrity is an attribute that is very important to individuals, groups, companies, and society, this is because, it drives the workability of workplace. According to Milton (2015), integrity relates to the concept of morality which entails telling the truth, being honest and just in all situations. In an organization, it encompasses everyone including the employer, employees, policy makers, supplier, customer and even the government. It is therefore, an important attributes that should be required of an employee.

Team Work Skills

Ability to work as a team has been identified as a necessary tool to achieve success in a construction endeavour. The results that emerged from the participants' interview supported this finding:

> "Construction site operates like a system, no part is expected to be left alone, if that happens, the objective may not likely be achieved. That's why you can see that a lot of consultations among the different operatives go on iteratively on site"

> "Based on my experience, a construction site is a mini country where we have people from diverse backgrounds speaking different languages. So, a construction workers ability to work along with these multi-religious, multi-culture and multi-lingual set of people is critical to achieving the desired goal…"

Galbraith and Webb (2013) reported that, "Two heads are better than one, the whole is more than the sum of its parts, there is no 'I' in team", or "TEAM - Together Everyone Accomplishes More" are phrases that people often used to emphasized the importance of collective responsibility. According to Breslow (2012), there are many benefits of that shall accrue when individuals work as a team, they include: "higher-quality decisions, increased diversity of views, lower levels of stress and destructive internal competition, increased commitment to solutions and changes, and improved flexibility and responsiveness". When considered from the workplace perspectives, teamwork can assist a firm to save money, make better use of resources, improve processes, and increase productivity (Robbins & Finley, 2000). It is therefore an important requirement for engagement in a construction firm, hence the need for TVET graduates to acquire such skills for seamless engagement.

Communication Skills

Based on the quantitative data analyzed, communication skills emerged as one of the key attribute a TVET graduate trained to work in a construction industry should posses. This was further buttressed by the construction industry practitioners interviewed thus:

> "…a construction worker must have the ability to communicate effectively within and outside his team. It is only through that that a consensus can be reached and decision taken. Because in what we do, there are a lot of interactions and that will require effective communication,"

> "…communications, especially written communication is an integral part of our jobs. We write reports, instructions, and even messages to our clients, consultants and other interested parties. So, a potential construction worker must not only have the ability to communicate, the individual must have the ability to communicate effectively."

> "How can we carry out our tasks without communication? Remember, we deal with drawings, and these drawings and the accompanying bill of quantities and specifications are our means of communication because they must be read and interpreted correctly. So communication ability is non-negotiable in this job."

The importance of communication in the operations of an institution cannot be overemphasized; the reason may be attributed to the importance employers attached to effective communication skills which will enable the employees to establish good rapport with co-workers thereby enhancing their task accomplishment ability (Goutam, 2013). It is a fact that a skilled communicator will naturally have good manners of approach which will enable the individual to ask the right questions and skillfully mediate in case of conflict among construction workers.

Problem Solving Skills

The quantitative data analyzed and presented in Table 1 show that, problem solving skills had the highest mean (3.77). This is an indication that construction industry practitioners recognized problem solving skills as the most essential skill that a TVET graduate aspiring to work in a construction industry must possessed. The participants explained:

> "I cannot do my work, and do your work. You have to solve your problems"

> "How can I work with a person that cannot find solution to problems? The issue is that, a construction site is a place where decisions are taken either individually or collectively. A good construction worker is not expected to refer all matters to his superior; he is expected to find creative solutions to problems, at least basic problems that may come up in his line of duties."

> "…a task can be handled in different ways and still produce the desired outcome; in construction site we need people who can handle a task using the most simplest of all the approaches. In most cases, it saves time, money for the firm."

These findings are in agreement with Zaharim, Yusoff, Mohamed, Omar, Muhamad, and Mustapha (2010) who emphasized that employees' ability to identify and apply appropriate solution without necessarily recourse to the higher authority in the workplace should be a basic requirement for employment. In a study conducted by Prinsley and Barayan (2015), 80% of the respondents who are employers of labour rate problem-solving skills as either very important or important qualities that employers from their new recruits.

Leadership Skills

The success or otherwise of whatever endeavour will depend on leadership, where the leadership is not responsible the chances of success may be slim. Instructively, this assertion was aptly recognized by the industry practitioners which led to Leadership skills earning a mean score of 3.69 based on the quantitative data analyzed. The industry practitioners explained thus:

> "…a construction site comprises of people from diverse background, some of the people are illiterates while others are semi-illiterates especially the non-skilled labour. Therefore, an individual's ability to provide leadership by bringing these groups of people together and working harmoniously is a vital ingredient for every would-be construction worker."

> "Ability to resolving conflict among team members should be a number one duty of a team leader. When there is absence of peaceful-coexistence among team members, productivity declines and that will affect the operations of the firm."

These findings are consistent with the view of Muteswa (2016) who opined that leadership skills are desirable skills that individuals are expected to possessed, for the reason that it enables an individual to use their skills and knowledge to lead a group of individuals especially subordinates in the desired direction. This is with the overall aim of achieving the desired goals and objectives of the organization. According to Hao and Yazdanifard (2015), industry leaders with adequate leadership skills should also have certain attributes, such as, passion, consistency, trust and vision; according to the authors, only leaders who are in possession of the qualities can build trust in their subordinate. Therefore, leadership skills are indispensable attributes that a TVET graduate aspiring to work in the construction industry should possess.

Informational Skills

Acquiring relevant vital information has been identified as a skill that every TVET graduate aspiring to work on a construction site should posses. According to the industry practitioners:

> "…let me give you an instance, prices of goods and services vary on daily basis, a construction worker must keep himself/herself abreast with these changes. That's the power of information."

> "How can I employ a person who cannot tell me the current trend in the construction world? What if a material is found to be defective by a regulatory body and we continue to use it due to lack of information? A construction worker must be ready to be up-to-date with information especially those that affect the construction industry"

"Information is power" goes a popular saying; this is so, considering the fact that lack of adequate relevant information on issue can be regarded as a visible sign of ignorance. That position was aptly recognized by Adam & Alarifi (2021) who stated that the role of employees especially those in the supervisory role is to constantly seek for

information that will keep the individuals abreast on what is happening within and outside the industry. According to the author, this information will assist the individual to discover the current dynamics in the industry in order to spot problems, opportunities and realize when decisions need to be made.

Technology Skills

The data in Table 1 indicated that, sufficient knowledge of technology is required for an individual to function effectively in a construction industry. According to the participants:

> "A graduate entry-level construction worker must be knowledgeable about 21st century machines and gadget such as computers, printers and so on to enable him/her become competitive in the industry"
>
> "I can't hire a person who cannot manipulate at least three to four social media platforms. Such person is living in the past"
>
> "…for instance, why should I hire somebody to type reports or change a faulty laptop battery for a TVET graduate in my employment? These are things that should be handled by him/her."

Technological skills have been recognized as essential in today's knowledge society and appear to be critical to peoples' future life satisfaction. For example, the digital revolution the world is witnessing at the moment has made it nearly mandatory that individuals must be able to fill out an online applications, use e-commerce platforms for purchases, or make bank transactions through an the use of application. According to Rodrigues, Cerdeira, Machado-Taylor and Alves (2021), lack of possession of technological skills by an individual can have an adverse effect on persons overall life opportunities and including employability.

Currently, most of the available jobs are advertized through various social media platforms, hence, the need for an individual to be technologically competent in that regards. However, being technologically competent is about being able to use such digital technologies including social media in a critical, collaborative, and creative way. It is therefore an indispensable attributes for the 21st century workforce that must not be ignored.

4. Conclusion and Suggestions for Further Research

This study presents an insight into the essential skill that employers in the construction industry expect all TVET graduates aspiring to secure a role in the industry should posses. Findings from the study indicated that, Personal qualities, teamwork skills, communication skills, problem solving skills, leadership skills, informational skills and technological skills were identified as the essential skills TVET graduates are expected to possess to be able to work effectively in the construction industry.

One of the major strength of this study is that, it utilized a mixed-method design which enables the researchers to combined both quantitative and qualitative approaches. The use of interview as a tool for collecting the qualitative data enables the researchers to triangulate the results that emerged from the quantitative analysis. However, despite the merits of the methodology used there are some weaknesses that may lead to further r investigation. These includes: the size of the data and the scope among others. Overall, this study provides a groundwork for future research on employability skills in Nigeria and in other African countries in order to tackle the visible skill deficit among TVET graduates. These may include development of an instrument for assessing TVET graduates generic skills possession for industrial jobs.

Acknowledgement

The authors wish to thank all the TVET Lecturers who sacrificed their time to volunteer and participate in this study.

References

Adam, N. A., Alarifi, G. (2021). Innovation practices for survival of small and medium enterprises (SMEs) in the COVID-19 times: the role of external support. *Journal of Innovation and Entrepreneurship*, 10(15),1-22.

Auta, M. A. (2016). Stakeholders' perception of adequacy of technology education programme in Nigerian universities for acquisition of requisite employable skills by students. NAU Journal of Technology and vocational education. 1(1), 132-142

Auta, M. A. (2017). Adequacy of technology education programme in Nigerian universities in compliance with the Benchmark for Academic Standards (BMAS). Journal of Educational System 1(1), 1-5

Braun V, Clarke V. 2012. Thematic analysis. In: Cooper H, editor. *APA handbook of research methods in psychology*. Vol. 2, research designs. Washington (DC): American Psychological Association.

Breslow, L. (2012) Teaching teamwork for educational and professional success, Retrieved 10/28/2012

Chesney, T. (2003). *Competitive information in small businesses*. Dordrecht: Kluwer Academic Publichers.

Clarke V, Braun V. (2017). Thematic analysis. *J Posit Psychol*. 12(3), 297–298.

Galbraith, D. D., Webb, F. L. (2013). Teams That Work: Preparing Student Teams for The workplace. American Journal of Business Education. 6(2), 223-234

Gokcek, T. (2019). Karma Arastirma Yontemi [Mixed Research Method]. In H. Ozmen & Orhan Karamustafaoglu (Ed.), *Research Methods in Education* (pp. 388-435). Ankara: Pegem Akademi.

Goutam, A. (2013). Effective Communication at Workplace. *IRC's International Journal of Multidisciplinary Research in Social & Management Sciences*.

Gurara, D., Klyuev, V., Mwase, N, Presbitero, A. F. (2018). Trends and challenges in infrastructure investment in developing countries. International Development Policy. 10(1) 22-29

Hanapiyah, Z. M., Daud, S. and Abdullah, W. M. T (2019). Maintaining integrity among employees through empowerment religiosity and spirituality. *International Journal of Business, Economics and Law,19(2), 38-46*

Hao, M. J. and Yazdanifard, R. (2015). How Effective Leadership can Facilitate Change in Organizations through Improvement and Innovation. Global Journal of Management and Business Research: A Administration and Management. 15(9), 1-6

Haron, M. A., Hussain, M. A. M., Zulkifli,R. M., Nashir, I. M., and Ma'arof, N. N. I. (2019). Employability skills needed by vocational college graduates: Feedback from industries. Journal of Technical Education and Training, 11(4), 86-94.

Johnson, R. B., Onwuegbuzie, A. J. and Turner. L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research* 1:112–133.

Kiger, M. E and Varpio, L (2020). Thematic analysis of qualitative data: AMEE Guide No. 131, *Medical Teacher*, 1-9. DOI: 10.1080/0142159X.2020.1755030

Kimberlin C.L., Winterstein A.G. (2008). Validity and reliability of measurement instruments used in research. *Am. J. Health Syst. Pharm*. 65, 2276–2284. doi: 10.2146/ajhp070364

Milton, C. L. (2015). Ethics and academic integrity. *Nursing Science Quarterly*, 28(1), 18-20

Muteswa, R. P. T. (2016). Qualities of a good leader and the benefits of good leadership to an organization: A conceptual study. European *Journal of Business and Management.* 8(24), 135-140.

Nunnally, J. C. (1978). *Psychometric Theory*. 2nd ed. New York: McGraw- Hill.

Prinsley, R. T., & Baranyai, K. (2013). STEM Skills in The Workforce: What do Employers Want?. Office of the Chief Scientist.

Rao, P. V., Sivasree, C. H. V. (2015). Employability skills and SMEs. *International Journal of Commerce.* 2(1), 135-142

Rasula, M. S., Abd Raufb, R. A., Mansora, A. N., Yasina, R. M. and Mahamoda, Z. (2013). Graduate employability for manufacturing industry. *Procedia - Social and Behavioral Sciences* 102, 242 – 250

Rehman, S. and Mehmood, A. (2014). Employability skills: the need of the graduates and the employer. *VSRD International Journal of Business and Management Research*, 1(1), 1-6

Robbins, H., and Finley, M. (2000). The new why teams don't work: What goes wrong and how to make it right. San Francisco: Berrett-Koehler.

Rodrigues, A.L.; Cerdeira,L.; Machado-Taylor, M.d.L.; Alves, H. (2021). Technological Skills in Higher Education—Different Needs and Different Uses. Education Sciences 11, 326-338 https://doi.org/10.3390/educsci11070326

Schoonenboom , J. and Johnson, R. B. (2017). How to Construct a Mixed Methods. Research Design. *Köln Z Soziol* (Suppl 2) 69:107–131

Wynd C.A., Schmidt B., Schaefer M.A. (2003). Two Quantitative Approaches for Estimating Content Validity. *West. J. Nurs. Res*.25, 508–518. doi: 10.1177/0193945903252998

Yildirim, A., & Simsek, H. (2016). *Qualitative research methods in social sciences.* Ankara: Seckin Publishing.

Zaharim, A., Yusoff, Y. M., Mohamed, A., Omar, M. Z., Muhamad, N., & Mustapha, R. (2010, April). Practical Framework of Employability Skills for Engineering Graduate in Malaysia. In EFucation Engineering (EDUCON), 2010 IEEE (pp. 921-927). IEEE.