Effect of industrial induction process on acquisition of vocational skills during industrial attachment among TVET Trainees in Kakamega County, Kenya

Damaris Muthoka[1]
Eric Wangila[2]
Ohanga Karren Ongeti[3]

[1]dmuthoka@bukuracollege.ac.ke
[2]wwangila@mmust.ac.ke
[3]kongeti@mmust.ac.ke

[1,2,3]Masinde Muliro University of Science and Technology, Kenya

https://doi.org/10.51867/ajernet.6.3.49

ABSTRACT

Industrial attachment is an essential part of Technical and Vocational Education and Training (TVET), offering trainees practical experience beyond classroom learning. As a structured and credit-bearing element of the curriculum, it enables trainees to apply theoretical concepts in real-world professional environments. This hands-on training is vital for equipping trainees with the technical skills necessary to achieve Kenya's industrialization goals. This study sought to establish the effect of the induction process on the acquisition of vocational skills during industrial attachment among TVET trainees. This study was informed by Experiential Learning Theory (ELT). The study applied descriptive survey research with the study population comprising public TVC (Technical and Vocational Centres/College) trainees, TVC assessors and industrial attachment supervisors. Kakamega County had 9 public TVCs with a total of 5220 diploma trainees on industrial attachment, 570 TVC assessors and 500 industrial supervisors. Census sampling was applied to settle on all the public TVCs in each sub-county. The study exclusively focused on diploma trainees on industrial attachment within the Department of Applied Sciences. All TVC trainers involved in the assessment of trainees during industrial attachments were purposively selected. The study used a sample size formula developed by Yamane (Yamane, 1967) to calculate the appropriate sample size of 372 trainees needed and ensure the survey results were statistically significant and representative of the entire population. 10% of the supervisor's population and 10% of the TVET assessors' population were sampled for interviewing, leading to a sample of 50 and 57, respectively. A pilot study was conducted to establish the reliability and validity of the instruments. Cronbach's alpha coefficient of internal consistency was used as a reliability measure, where an alpha of 0.833 was obtained for the trainee's questionnaire. Data was collected using one questionnaire for trainees and two interview guides for industrial supervisors and TVC assessors. Data was analyzed using SPSS version 26. Qualitative and quantitative methods were used, where descriptive statistics of frequency counts, means, percentages and standard deviations were used. Simple linear regression analysis was used for hypothesis testing. Qualitative data from interviews was analyzed by employing narrative and thematic analytical approaches. The study found that induction is critical to vocational skill acquisition among TVET trainees during industrial attachment. Effective induction enhances trainee preparedness and confidence. The study recommends strengthening induction programmes, aligning curriculum with industry needs and implementing continuous monitoring of industrial attachment experiences. These measures aim to enhance workplace readiness, bridge the gap between theory and practice, promote professional skill development and improve the overall effectiveness of vocational training.

Keywords*:* Industrial Attachment, Induction Process, TVET Trainees, Vocational Skills Acquisition

I. INTRODUCTION

Industrial attachment is a very crucial part of the TVET curriculum, as it gives trainees firsthand experience and closes the theory-practice gap (Mwaura *et al.*, 2022). It prepares trainees with knowledge, skills and attitudes in the workplace and introduces them to technologies and routines and organizational protocols. To match industry developments and technological changes in the world, Kenya should improve industry-institution connections (Ondiek *et al.*, 2018).

Industrial attachments grant the trainees access to on-the-job activities in the area of their practice, for example, car repair or software creation, making them more employable (Dondofema *et al.*, 2020; Maingi, 2020; Nyongesa & Makokha, 2020; Meta, 2023; Musyimi, 2021). Successful attachments include organized training such as supervision, induction, performance assessment and evaluation (Kiriri, 2019; Jahonga, 2020). The National Industrial Training Authority (NITA), the Technical and Vocational Education and Training Authority (TVETA), the Curriculum Development, Assessment and Certification Council (CDACC), and the Kenya National Qualifications Framework (KNQF) regulate and standardize these processes (Makworo *et al.*, 2021).

The TVET Standard on Industrial Attachment (TVETS 09:2023) describes stakeholder roles and responsibilities and promotes quality experience in attachments that are in line with international best practice (Mwaura *et al.*, 2022). The Act of 2013 TVET is the legal frame that coordinates and requires industrial training. There have been efforts to bridge the practice-theory gap, which NITA has undertaken through programs such as the pilot project of the 1990s (Maingi, 2020). Policies on placement, supervision and assessment have been formulated in TVET institutions (Mutembei *et al.*, 2024).

The CBET Framework and Sessional Paper No. 14 of 2012 try to match the training with industry demands. The quality assurance and institutional compliance are guaranteed by the regulators such as TVETA and ESQAC. Training in industrial activities attains confidence in the trainees and makes it easy to join the workforce (Dondofema *et al.*, 2020). It also allows networking and self-evaluation (Anjum, 2020; Baynit & Ngussa, 2021). It is proven to have a good effect, but even then, its application unduly depends on the particular institution and country (Alao *et al.*, 2022; Musyimi, 2021).

Kenya aims at transforming its social and economic life through youth development of skills via TVET, which is the centerpiece of Vision 2030 (Republic of Kenya, 2019; Kenya Vision 2030, 2014). The government and development partners have set aside considerable resources (Musyimi, 2021; Mukhwana *et al.*, 2021).

TVET facilitates technical and vocational skills, accommodates the industry demands and enhances livelihoods (Olayo, 2022). The problem of labor integration into the labor market among young individuals has been associated with the mismatch of skills (Kiriri, 2019). The effectiveness of TVET programs depends on the demand-driven training and the possibilities of impacting SDGs (Olayo, 2022). A good industrial attachment will seal the gap between the training institutions and the industry, as Mwaura *et al.* (2022) note.

This research explored the influence of induction in the acquisition of vocational skills during industrial training of TVET trainees, identifying the enabling and limiting factors, and also provided recommendations based on the experience of the trainee, assessor and supervisor.

1.1 Statement of the Problem

Industrial attachment is a compulsory programme in TVET institutions designed to bridge theory and practice by providing trainees with hands-on experience and exposure to real-world work environments and the ever-changing workplace requirements. Despite this pivotal role of industrial attachment, a notable number of graduates churned out by TVET institutions have shown inadequacy in vocational skills and struggle to demonstrate adequate competencies during their first appointment (Makworo, *et al.*, 2021; Meta, 2022). Furthermore, Federation of Kenyan Employers (FKE) Skills Needs Survey Report of 2022, Mutembei *et al.* (2024) and Mwaura *et al.* (2022) points out the existence of skill gaps that necessitates further training before the graduates are able to perform and this costs employers valuable time and money. This disconnect has led to concerns about the employability of TVET graduates and their ability to effectively contribute to the workforce.

While literature attributes the lack of vocational skills to many factors including the entry behaviour of trainees, presence of facilities, trainer's capability and trainee commitment, the influence of industrial attachment induction process on vocational skills acquisition has not been documented. Lack of vocational skills may delay or even deter the attainment of African Agenda 2063, vision 2030 and Big Four Agenda if the situation is not corrected. It is against this backdrop that this study seeks to investigate the influence of industrial induction on acquisition of vocational skills among TVET trainees in Kenya.

1.2 Research Hypothesis

The study tested the following null hypotheses

Ho_1 Industrial attachment induction process has no effect on the acquisition of vocational skills among TVET trainees in Kenya.

II. LITERATURE REVIEW

2.1. Theoretical Review

2.1.1 Experiential Learning Theory

This study was informed by Experiential Learning Theory (ELT) by Kolb (1984). The theory underlines the aspect of learning as the process of construction of knowledge that comes by transforming experience. It is especially relevant in the environment of vocational training which allows the trainees to take part in the activities of the real world, analyze their work, and employ the knowledge in new situations. Experiential learning refers to the first-hand observation of a phenomenon or experience in study as opposed to conceptualization of the same phenomenon or experience, or just imagining what it is that one can do about a situation.

The theory is relevant to the study because it offers a rudimentary foundation to the process of learning through experience particularly in practical and work-focused environment. According to Kolb (1984), experiential

learning is known to be a process through which knowledge is created through conversion of experience. According to this theory, active learning takes place in a circle defining transformation of concrete experience by reflective observation, abstraction of conceptualization and active exploration. Under the Management of Technical and Vocational Education and Training (TVET), industrial attachment gives the trainee the opportunity to be embedded in the real working environments, where he/she can apply theoretical learning to practice therefore, undergoing the four stages of the learning cycle as postulated by Kolb.

The Core tenets of the Experiential Learning Theory encompass a four-stage cycle of learning where desirable learning is achieved: Concrete Experience (CE) (Learning commences with direct participation in an activity or task). Reflective Observation (RO) (Trainees reflect on and observe their experiences in a new light), Abstract Conceptualization (AC) (Trainees make new ideas or alter existing concepts in light of reflection) and Active Experimentation (AE) (Trainees immerse their new understanding into the world, making tests of what is learned).

The programs are aimed at training the graduates in practical and employable skills with the industrial attachments as an important transitioning gap between theory and practice. Trainees undergo real challenges and tasks, which they get to study and conceptualize with the aim of increasing meaning (Kolb, 1984). This experiential tactic complements active learning and skill development in accordance with Experiential Learning Theory (ELT) established by Kolb that suggests the importance of learning concrete experiences and active involvement.

ELT offers a platform to design industrial attachments to give primacy to developing competencies in Kenya, a country where the demand of graduates with technical skills is high. Stringent trainee-centred explanations are reinforced with ELT, which resembles Kenya ability-based TVET curriculum that prioritizes practical results. Policymakers and educators are advised to come up with reflective, interactive, and developmental attachments.

The theory developed by Kolb details the learning process as a cyclical one, shaped by the personal interaction and surroundings. The paper examines the role of industrial attachment in vocational skills development starting with the induction process in which trainees are exposed to norms of the workplace and safety. Relevant work enables them to exercise scholastic lessons, facilitating abstract thinking and practical testing, so boosting proficiency in the work place. Supervision is extremely important and is used to structure reflective observation that assists trainees in processing experiences, learn how to avoid making a mistake and gain some professional insights. ELT indicates how orderly exposure, meaningful work and directed reflection foster vocational competence.

Trainees encounter practical work (concrete experience), retrospect (reflective observation), pattern new ideas (abstract conceptualization) and experiment (active experimentation). There is diversity in learning preferences with people having different tendencies to do (diverging) versus thinking (assimilating) which influences the way learners approach attachments. Engagement, questions and the desire to seek feedback are critical components of more effective learning. The learning is continuous and the attachment to industries helps in developing skills throughout life. Failure is brought back as a learning process by assisting trainees to mature out of the experience. The vocational skills accrued are rated in terms with industry relevance and help of employability.

Nevertheless, although ELT (Kolb, 1984) offers a very good model of allying experience-based learning, it is limited. It does not accommodate social and cultural learning environments, forgets about equal motivation and reflectiveness of trainees, and disregards the power relationships that supervisors have with their trainees, which will not allow full engagement.

2.2 Empirical Review

Industrial attachment programs usually help in the transition process of the trainees within TVET between the classroom and workplace. Constant induction is another important element of this shift, since it helps the trainees to become better accustomed to the expectations and operations in the workplace. Induction usually includes safety procedures, a deconstruction of an average workday, the expectations of the job and its culture, expectations of the attachment period, assigning supervisors and the number of hours of attachment, which is paramount to cognition and operating within a work environment. Induction not only involves the initial orientation, but also frequent guidance, evaluation and cumulative exposure to the newly recruited work and the new work environment as the attachment continues.

According to Ondiek *et al.*, (2018), in most instances, institutions that host trainees during an industrial attachment tend to conduct thorough induction to the trainees to make them fit into the world of work. How well trainees are prepared and oriented to the experience of attachment may influence their performance since induction and preparation sessions may enable trainees to feel more confident and demonstrate their better performance. An effective, well-organized, and systematic induction process has a positive relationship with how the TVET trainees are inducted into the workplace environment in the form of industrial attachment. When trainees are well taken through an all-encompassing induction process; they will demonstrate stronger dimensions of adaption to job culture orientation mood, increased knowledge about job roles and responsibilities and confidence in manoeuvring their work affairs than those who go through partial or sub sufficient induction (Jahonga, 2020).

The association of attachment has never been without adversity, most especially, sexual harassment of trainees, extortion and intimidation of trainees by workers, negative attitude of supervisor, and unreasonable expectation by firms, among others (Mwaura *et al.*, 2022). After induction, the trainees are hence equipped mentally, psychologically and physically. According to the research conducted by Mchete and Shayo (2020), there was evidence that early preparation of TVET trainees levelled the playing field to compete with the others in the universities and other training institutions, the initial orientation that was provided at the host institutions is not lost as a result. According to research conducted in Tanzania by Baynit and Ngussa (2021), it was attested that type of attachment programmes with a well inducted framework structures makes a significant difference in the technical preparedness and career preparation of trainees. On the same note, the literature of the continuous professional development (CPD) emphasizes that frequent induction and appraisal is synonymous with vocational excellence.

Jahonga (2020) pointed out that the majority of trainees spend a lot of time in acquiring places of attachment. Missing initial induction and late reporting into the industry are closely related since failure to report on time leads to failure to attend initial programs. The lack of important information may indicate itself in a longer adjustment time, decreased readiness to complete the work, deterioration of performance and the loss of the possibility to establish positive relations with the colleagues and the bosses. In order to overcome these hurdles, it might become an option that the industries might want to utilize, flexible, structured or recurring induction.

Kapareliotis *et al.*, (2019) determined that when trainees participate in well-designed attachment induction sessions, they progress to characterize a positive view of all the aspects of work preparedness and are well aware of the expectations of the supervisors in the industry. This underlines the importance of induction in forming trainee attitudes as well as expectation. Failure to conduct induction properly or failing to conduct it correctly can prompt false impression regarding the situation of the attachment programme (Ndile, 2018). Consequently, this might make some trainees think that the experience will be a holiday. Also, negative induction has been attributed to the fact that the attitude towards attachment is perceived as financial and not learning (Geda, 2021). Tumba and Shaibu (2016) noted that not all trainees consider the possible financial gains in the industry; they overlook the fact that the programme should provide invaluable learning experiences based on specific experiences. Based on the view, the author can endorse these findings and attest to the fact that there is an urgent need to put in place sound, transparent and consistent induction procedures, to put the trainee attitudes back in line with the desired learning goals of industrial attachment programmes.

The implication to the overall preparation of the trainees to the training programme of the industry is that preparation of the trainees to the industrial training programme must be sufficiently-induced to prepare the trainees mentally, psychologically, and physically to face the requirements of the industrial training programme (Maingi, 2020). This statement is something that I can agree with as an effective induction will form the basis of a positive experience during training. Additionally, it has been established that exposing the trainees to the goals can increase intrinsic motivation, as well as their confidence and can make them more prepared in terms of facing the industrial setting. Nevertheless, a more attentive position, though the focus here is on early preparation, is manifested in Mutembei *et al.* (2024) that mentions that the host organizations conducted a general induction that lacks the orientation to a specific trade. In my opinion, this speaks of the lack of connection between aspirations of the policy and actual implementation.

Recent reports point to the intense effect on structured induction about the acquisition of vocational skills. As examples, Mwaura *et al.*, (2022) concluded that formal pre-placement and the continued orientation interventions allowed TVET trainees to fit well into their workplace settings so that they could acquire the pertinent skills and competencies. In a similar manner, Musyimi (2021) showed that the links between induction activities and gain of employability skills amongst TVET trainees were statistically significant. These results confirm the greater thesis that continuous induction is not only administrative, but pedagogical and directly related to learning.

According to the TVET Authority (2020), coordinated orientation and long-term mentorship are new normative requirements of industrial attachment activities by all institutions and host organization that participates in the industrial attachment exercise. TVETA also requires the host firms to go beyond fixing trainees by ensuring that they get continuous induction, assign trained supervisors, and carry out regular evaluations in an effort to support vocational skill development. This perpetuation of ever boarding process makes sure that the trainees receive technical and behavioural support on day one.

According to literature about competency-based TVET in Kenya, the induction process is used to speed up the acquisition of competencies by becoming acquainted with workplace equipment and safety measures and practices and procedures during work. When there is a continuous guidance of trainees the associated hands on learning of the skills becomes more effective and industry based.

As compared to theoretical underpinning of sound induction, experienced-based learning model developed by Kolb (1984) accurately illustrates that trainees learn better when they apply abstract reasoning skills first before practical experience. To me, this sequence provides that trainees do not take industrial training as a form of practice but a chance of applying structured knowledge to real life problems. On the same note, when induction happens, the

Social Learning Theory by Bandura in 1977 emphasizes the necessity of using modelling and expectation-setting, meaning trainees perform better when they see role models and understand workplace norms. Moreover, this idea is supported by the Organizational Entry Theory developed by Wanous in 1992, which holds that entry-related anxiety is diminished as a result of such training and thus has greater readiness to handle the job an observation that is consistent with what most trainees encounter.

III. METHODOLOGY

The study applied descriptive survey research design. The study population comprised of public TVCs trainees, TVC Assessors and Industrial attachment supervisors. Kakamega county had 9 Public TVCs with a total of 5220 diploma trainees on industrial attachment (Kakamega County Director Technical Vocational Education Office Report, 2024), 570 TVC Assessors and 500 Industrial supervisors according to Kakamega TVET Institutions' Annual Returns, of 2024. Kakamega County had a total of 9 public TVCs spread across the 12 sub-counties. Census sampling was applied to settle on all the public TVCs in each sub-county. The study exclusively focused on Diploma trainees on industrial attachment within the Department of Applied Sciences. All TVC trainers involved in the assessment of trainees during industrial attachments were purposively selected. This is predicated on the notion that each participant had the ability and capability to furnish distinctive and valuable information for the study. Purposive sampling aims to focus on individuals with specific qualities that will enhance the acquisition of pertinent study information. The study used a sample size formula developed by Yamane (Yamane, 1967) to calculate the appropriate sample size of 372 trainees needed and ensure the survey results were statistically significant and representative of the entire population. 10% of the supervisor's population and 10% of the TVET assessors' population were sampled for interviewing leading to a sample of 50 and 57. A pilot study was conducted to establish the reliability and validity of the instruments. Cronbach alpha coefficient of internal consistency was used as a reliability measure where alpha of 0.833 was obtained for trainee's questionnaire. Data was collected using one questionnaire for trainees and two interview guides; for industrial supervisors and TVC assessors. Data was analysed using SPSS version 26. Qualitative and quantitative methods were used where descriptive statistics of frequency counts, means, percentages and standard deviation were used. Simple Linear regression was used for hypothesis testing. Qualitative data from interviews was analysed by employing the narrative and thematic analytical approaches.

IV. FINDINGS & DISCUSSSION

4.1 Descriptive Analysis

The study sought to establish the effect of induction process on acquisition of vocational skills during industrial attachment among TVET trainees. A five-point Likert scale was used to collect Likert type data on the study variables. The scale was Strongly Agree (SA), Agree (A), Not Sure (NS), Disagree (D) and Strongly Disagree (SD).

The "disagree" cluster consisted of strongly disagree and disagree responses; "not sure" cluster comprised of the not sure responses; while "agree" cluster consisted of agree and strongly agree. The descriptive statistics were presented by way of means and standard deviations. The results were presented in Table 1 as follows;

Table 1

Analysis of Effect of Induction Process on Acquisition of Vocational Skills during Industrial Attachment among TVET Trainees

INDICATOR	SD	D	NS	A	SA	Mean	SD
Induction prepared me for practical tasks encountered during attachment	0%	0%	41(14%)	64(22%)	187(64%)	4.51	0.725
Induction gave guidance on my responsibilities	15(5%)	9(3%)	0%	73(25%)	196(67%)	4.45	1.009
I was oriented on workplaces mission, values and culture	0%	6(2%)	26(9%)	67(23%)	193(66%)	4.25	0.748
Induction effectively familiarized me with the workplace environment	6(2%)	0%	26(9%)	82(28%)	178(61%)	4.47	0.818
Induction helped me understand how my role contributes to the overall goal of the organization	0%	76(26%)	0%	62(21%)	155(53%)	4.21	0.978
Induction helped me understand the key skills required for my attachment	0%	0%	41(14%)	64(22%)	187(64%)	4.51	0.725
Orientation sessions during induction process were relevant to attachment	12(4%)	18(6%)	32(11%)	47(16%)	184(63%)	4.45	1.009
I felt adequately prepared to begin working independently after completing the induction process.	0%	6(2%)	26(9%)	67(23%)	193(66%)	4.25	0.748
Induction process included opportunities to ask questions and receive feedback	9(3%)	18(6%)	0%	35(12%)	231(79%)	4.7	0.84
Induction materials provided (manuals, videos, etc.) were helpful	0%	0%	0%	128(44%)	164(56%)	4.52	0.577
Induction process included practical activities	6(2%)	0%	0%	82(28%)	204(70%)	4.64	0.692
Induction helped me gain confidence in executing tasks	15(5%)	0%	12(4%)	70(24%)	196(67%)	4.48	0.943
Induction program introduced me to necessary tools and equipment	0%	6(2%)	50(17%)	96(33%)	140(48%)	4.25	0.88
Practical demonstrations during induction enhanced my ability to perform job-specific tasks.	9(3%)	6(2%)	0%	35(12%)	242(83%)	4.7	0.84

The study sought to evaluate the effectiveness of the induction process in preparing trainees for practical tasks during their attachment. The findings reveal that 251 (86%) respondents affirmed the adequacy of the induction with a mean of 4.51 and a variation of 0.725, on the other hand 41(14%) were not sure on the importance of induction. Notably, from interview,

> *"…though the trainees can accomplish some tasks, there is still some problems with handling of hydraulic machines after induction"* – Supervisor 1

This is echoed by Kolb (1984) who stressed that learning works best when one acquires conceptual knowledge (induction) before proceeding to practical activities during the attachment or internship period. Following this school of thought, this research aimed at determining the effectiveness of induction process in preparing trainees to handle practical activities during attachment. The results indicate that 92% participants assured the sufficiency of the induction, 8% disagreed, and no one was uncertain with high mean score of 4.51 and standard deviation of 0.725. These findings are overwhelming evidence that besides being thorough, the induction process is well accepted by most of the trainees, and this is one area where it is working to empower the trainees to overcome the short assignment they are to perform.

In addition, the research sought to answer the question of whether the induction had offered sufficient instructions on the obligation of trainees. This data indicated that, by far, a strong majority (196 (67 percent) of all the respondents strongly agreed that induction had assisted them to know their responsibilities and another 73 (25 percent) agreed making the total number of those who agreed to 269 (92 percent). This response that is almost exclusively positive supports the view of the researcher that the induction program has been more than successful in clarifying the roles and expectations. It is important to note that none of the respondents used the neutral option to imply that participants were strongly convinced whether the program actually worked or not. Nine (3%) disagreed and 15 (5%) strongly disagreed, which may be some signs of dissatisfaction. But the average score is 4.45 with the standard deviation of 1.009, which indicates that the overall sentiment is rather positive. This summarizes that, although some criticisms exist, induction process usually achieves its aims set of equipping the trainees with what is expected of them

when they are effectively at the attachment stage. A suspicion of not sure reactions suggests compelling feelings according to college evaluators, whether they found the program useful or it was insufficient to a small fraction. The 24(8%) dissatisfaction may be telling of point of improvement as one of the supervisors reported,

> *"…. induction could be bettered by working on content, mode of delivery, consistency between sessions and perhaps provide tailored advice."* Supervisor 2

This can be backed up by Musyimi (2021) who carried out a study which discovered that well-structured on-boarding and induction plans effectively led to the trainees understanding of their duties and obligations. Similarly, Mchete and Shayo (2020) emphasized that induction training will successfully orient new employees about their work setting and company expectations.

This research aimed at determining the effectiveness of the induction in softening the trainees to the mission, values and culture of the work place. The results indicate that 260(89 %) respondents were oriented positively with a mean score of 4.25 and standard deviation of 0.748 implying that there was a high level of agreement amongst the respondents demanding a successful communication of the mission, values and culture of the organization. 26(9%) are not sure possibly because some of the trainees received partial or unclear orientation and 8(2%) of the respondents feel that they have not been oriented highlighting that efforts of orientation at the organization are generally effective. This confirms the findings of Cahya and Firdaus (2024) stating that organizational culture has a strong impact on employee engagement as well as organizational performance and therefore suggests that conceptualization of strong mission, values and culture orientation in the workplace is an important factor.

This is contrary to the analysis provided by Alao *et al.* (2022) who found a negative but significant correlation between the adaptability dimension of organizational culture and the productivity of trainees. This observation implies that, in some situations organizational culture aspects like adaptability do not necessarily lead to increased productivity of trainees as the Denison Organizational Culture Model maintains.

The study evaluated the effectiveness of induction to ensure that trainees were oriented to the workplace. According to the findings, 260 (89%) respondents indicated that they had been effectively familiarized. The mean score was 4.47 with a range of 0.818 when 26 (9%) were not sure and 6 (2%) disagreed. The analysis demonstrates that there is a great degree of agreement and uniformity in the respondents. This implies that the trainees were acclimatised successfully in the workplace. This was however contradicted by a TVET assessor who through in-depth interview confirmed that indeed some of the trainees were not acclimatised to their places of attachment when assessed. He affirmed that;

> *"…I have been an assessor for more than five years and when I visit some institutions some trainees are not able to tell me the name of the head of the institution and explain to me the organizational structure. So I wonder, do they know where they are attached well?"* Assessor 5

The research sought to observe whether induction programs could significantly create opportunities to make trainees appreciate the ways in which their functions are important to the organization. The results indicate that a big majority 214 individual representing 74 percent felt that the induction has been effective on this. It is worth noting that none of the respondents had remained indifferent thus supporting the view on the strength of the opinions collected. There was however a critical minority, 76 respondents (26%) who disagreed with this on the fact that there are negative or rather non converging experiences with the current induction practices, and this implies that current induction practices cannot be universally effective. These results are an indication that even though the majority of the trainees felt sufficiently informed but there is still a very visible chance to make the whole induction information clearer and more pertinent. Specifically, more importance should be attached to individualizing induction sessions to show the variety of different roles that trainees perform in the company. One can infer a positive attitude to the influence of the program on a large scale due to the overall average of 4.21 and a relatively low standard deviation (0.978), which indicates to the consistency of the responses.

These findings are consistent with what is already in the literature. To give an example, a study by Makworo *et al.* (2021) revealed that in the case of well-designed induction programs, role clarity and organizational commitment increase. Their studies underline that new workers who obtain particular instructions about how their personal job contributes to the overall organizational goals are more inclined to be informative, inspired, and eventually efficient. The present study gives additional empirical support to this claim hinting at the fact that induction remains to be a significant element of early professional socialization.

This was further analysed to examine how far induction assisted the trainees to understand the essential skills that they needed in their attachment period. In this case, the figure indicated a further high level of agreement with 251 (86%) respondents confirming that the induction program did a very good job in elucidating these critical skills. With a high mean score of 4.51 and a reasonably close standard deviation of 0.725, the concept of the usefulness of the induction in this area has a great and consistent perception. Interestingly 41 respondents (14) were unsure.

Ambivalence can be indicative of an erratic presentation or not matching training offered with what is really expected on the job. Notably, none of the respondents clearly disagreed on the program meaning that it was beneficial to every participant. This result indicates that although the information on major skills is effective widely, the

presented content can be balanced and better used. The 14 percent neutral could have been getting the impression that the program was too general or no specifically addressing their position as supervisor reported saying,

> *"…So many trainees need to be inducted; thus the inducting process is not specific to various paths of vocation but is generic in nature"* -Supervisor 7

The outcomes of a study by Ndile (2018) confirm the findings and remark that the structured on- boarding and ever-boarding induction programs result in increasing the skills of the employees, their confidence, and job outcomes. When viewing these results, one concludes that the availability of the properly developed induction programs is a key element in determining the preparation and performance of this individual in the organizational context. This is consistent with the information gathered in the present research and supports the hypothesis that strategic orientation is not some mere formality; it is a prerequisite for pre-career achievement and adjustment.

The statistical analysis showcased a subtle situation when considering the applicability of orientation sessions given during induction process to the industrial attachment. Nearly a tenth of respondents 30 (10%) disagreed, which shows that not all the participants saw the sessions as helpful in their attachment experience. Nevertheless, a significantly higher percentage 262 (79%) indicated agreement indicating that most people are finding such sessions purposeful and hence valuable in their training practice. The 32 respondents (11%) who could not make justly decisions might be an indicator of a variation in orientation delivery in different departments or the completeness of orientation that responds to role expectations in detail. The average result of 4.45 proves that there is a high level of consensus in response to the question of the relevancy of orientation sessions, but with a standard deviation of 1.009, there is a medium level of variation in perception. These findings are a favourable sign that orientation is mainly successful, but not uniformly across the board, which suggests that there exists a chance to enhance content customization to the area of interest of attachment.

These results have been complemented by Anjum (2020) whose research has proved that successful orientation programs improve the knowledge of the trainees in their roles and also goes a long way to ensuring engagement, performance, and job satisfaction. They present the significance of making sure that not only the induction process is an informative process but also the process is aligned strategically with organizational goals. This relationship between quality of orientation and employee confidence suggests the necessity of making investment in extensive on boarding experience and this conclusion is similar to the findings of the current study.

This paper set out to investigate whether trainees believed that they were well prepared to work autonomously following the induction process. The findings revealed that the highest percentage of the respondents 263 (89.07%) answered in the affirmative stating that they were actually prepared and the mean score was 4.25 with quite a small standard deviation of 0.748. Such high agreement implies that the induction programs performed their intended purpose of instilling feeling of competence in the trainees. Just 26 (9%) were in doubt and only 6 (2%) disagreed giving limited dissatisfaction. Such findings confirm the worth of systematic and applied induction content. In cases where induction is properly implemented, it has the capability of broadly aiding in the transition process of the trainees into autonomous persons with increased confidence and effective output at their onset.

The study aimed to evaluate how the induction process was opened to communication specifically by providing a chance to ask questions and providing feedback. The results indicated that 231 (79 percent) of the participants strongly agreed with the following that the induction process embraced the following opportunities. Another 35 (12%) did, and they reached 91 percent of the people with a positive perception. In comparison, there were 9 respondents (3 per cent) who strongly disagreed and 6 per cent disagree with it and none of the respondents were uncertain. Such distribution indicates that employees were not only familiar with the feedback mechanisms instilled into the induction procedure itself but also became largely content with how they worked. This has a superlatively positive agreement supported by the mean score of 4.70. Also, the comparatively low standard deviation (SD = 0.840) indicates that the perceptions of the participants were closely related, making it easier to identify the uniform recognition of the inclusiveness of the induction environment. These results indicate that the company focused more on the two ways communication that is one of the best practices in contemporary human resource management when it comes to induction process.

Also, the study examined the usefulness of the available induction kits given to new employees e.g. manuals and videos. The information offers quite univocal result: 164 (56 %) people strongly agreed, and 128 (44 %) people agreed that the materials were helpful in the survey, which present the 100 percent positive result. This consensus is worthy of notice and signifies that not only the favourable resources existed, but are also well constructed to reach the information needs of new employees. This high approval is reinforced by the average (4.52), that indicates the mean score, and the small standard deviation (SD = 0.577) indicates the moderate agreement within the sample population. Such results strike a chord with the fact that the induction material of the organization has been well structured and therefore has served the purpose of fostering early competence and belief in the recruits. This degree of consensus highlights the importance of both the clear and accessible and practical materials in strengthening the learning curve in the course of being orientated.

Information was also sought on the degree to which the induction process engaged relevant active activities as a way of engaging new workers in real life learning situations. The findings were also found to be very good as 204 respondents (70%) strongly agreed, while 82 (28%) agreed with the statement that the induction process included practical elements. This equates to an impressive 98% of respondents who confirmed such existence of the hands-on experiences, 6 (2%) being strongly disagreeing. No neutral or moderate disagreements were reported, so it proves that this point of the program is clear and has no contradictions. The standard deviation (SD = 0.692) is relatively small, whereas the mean score equals 4.64, which shows a high level of consensus and the lack of variability in the answers. This falls closely in line with Geda (2021) findings whose study on Workplace Learning focused on the success of practical in increase staff participations and staff retention. The concurrence of the results of the current study with those in the existing literature justifies the importance of experiential learning as a pillar of effective induction practice. This kind of approach will not only lead to learning but will speed up the socialization and role definition of the new employees.

The discussion of the answer to the question whether induction facilitated confidence on the trainees in undertaking the tasks shows that there is sufficient evidence that induction courses played an instrumental role in instilling assurance among the participants in their ability to complete the required tasks. Using the data, 196 (67 percent) of the respondents strongly agreed and 70 (24 percent) agreed that the positive influence of induction on enhancing their ability to execute tasks was widely recognized. This extremely positive reaction means that properly designed induction procedures are key in orienting new trainees to the challenges of their jobs. It is interesting to note that the number with strong disagreement was just 15 (5%) and those unsure about their answers was 12 (4%) which indicated slight absence of dissent or uncertainty. An average 4.48 on a 5-point Likert indicates the presence of a high level of satisfaction of the participants, and a standard deviation of 0.943 shows moderate deviation, which is prompted by the fact that a vast majority of the experiences were positive, yet possible variation in individual contexts and backgrounds might have slightly impacted the perceptions. The results correspond with Kiriri (2019) who discovered that Teacher Induction Programs (TIP) created a positive impact on the confidence and performance of beginner teachers. This congruence, as a researcher, I can therefore view it as concrete validation of the existing induction framework, in its ability to influence readiness and self-efficacy among new recruits in professional environments.

Moving on to the exploration of whether or not the induction program succeeded at familiarizing the trainees with the essential tools and equipment, the answers further support the program being seen as effective. Interestingly enough, no respondent appeared to disagree strongly with this point either, and this is a rather interesting detail which is indicative of the fact that all of the interviewees admitted to having at least some positive essence in the exposure of tools and equipment. This agrees almost universally, at least 95 percent of the respondents (6 respondents or 2 percent) disagree but this may be indicative of some isolated instances where maybe trainees already found out or were challenging when it came to property induction. In the meantime, 50 respondents (17%) were not even sure, meaning that although they did not dismiss the handy nature of the induction, they may have had some inconsistencies and/or lack of the depth in some aspects.

The high levels of strong agreement, with the 96 respondents (33%) who strongly agreed and 48 percent, who strongly agreed, however, paints a clear picture of general contentment with and appreciation. This perception is supported by the mean score of 4.25. The reflection on these outcomes shows that the induction program does not only satisfy fundamental expectations but also more than that a sizeable percentage of participants. This is an approval of the relevance and practicality of the program in giving the trainees the much-needed tools to enable them to make a smooth transition into their new role. The standard deviation of 0.880 shows moderate variability, that is, the majority of the respondents shared a similar opinion which further proves the quality of the findings. This was backed by a supervisor who reported,

> *In fact, when trainees are provided with proper guidance on the tools and equipment used during initial induction, they possess less job anxiety and better performance. When they conduct their duties, difference can be felt. We understand that certain tools have been out-dated but we attempt to demonstrate to trainees how to use them to circumvent confusion and mishaps"*- Supervisor 13

Analysis of whether practical demonstrations as part of the induction process contributed to the performance of job-related tasks by the trainees give meaningful results. Most respondents strongly agree, as 242 (83%) of participants would attest that realistic demonstrations contributed immensely to their skills in job-related actions. The other smaller proportion, 35 (12%), agreed regardless, and there were no indecisive participants (0%). But a small proportion, 6 (2%), disagreed, and 9 (3%) strongly disagreed. These numbers point to a widely shared opinion towards the efficacy of hands-on demonstrations during induction. Mean rating of 4.70 further supports this and suggests a high degree of consensus among the participants. The standard deviation value of 0.840 also indicates that, based on the survey responses, there is some variability but the overall opinion is quite strong. Through this, it can be seen that practical training during induction is not just an added virtue but also an imperative responsibility in ensuring improved job performance. The overwhelming positive consensus with the slight negative consensus indicates the

definite advantage of including realistic demonstrations in induction programs. These findings, therefore, lend credence to scholarly concept that practical demonstrations play a critical role in making those training successful employees. A significant number of supervisors confirm that they showed trainees certain tasks and only after that left them on their own. A supervisor described,

> *I then Strip off a small quantity of milk in each teat to test for abnormalities and initiate milk output as the trainees look keenly and elaborate on the necessity of attaching the milking machine to the teats within 60-120 seconds after stimulation in order to optimize the milk-let down. I then allow one or two to repeat, before I can leave them to attempt by themselves."*- Supervisor 10

The response is however contradicted by assessor 5 who said,

> *…. there are supervisors who are absent in their workstations and leave the trainees unaccompanied thinking that they have all the required knowledge. I heard in institution X the manager only reports on Mondays and leave trainees to do nothing and be summoned when the college assessors come."*- Assessor 5

From my analysis, it is clear that hands-on training during induction is not only valued but also critical in enhancing job performance. The strong agreement, combined with the minimal disagreement, points to the clear benefit of incorporating practical demonstrations into induction programs. Therefore, these results support the notion that practical demonstrations are a key factor in preparing trainees for successful job performance.

4.2. Acquisition of Vocational Skills during Industrial Attachment among TVET Trainees

This section presents the opinions of trainees on the effect of tasks assigned on acquisition of vocational skills during industrial attachment among TVET trainees. A five-point Likert scale was used to collect Likert type data on the study variables. The results were presented in table 2 as follows;

Table 2

Acquisition of Vocational Skills

INDICATOR	SD	D	NS	A	SA	Mean	SD
I generate innovative solutions to challenges	0%	0%	22(8%)	88(30%)	181(62%)	4.47	0.796
I can analyze real-world problems	0%	20(7%)	50(17%)	61(21%)	161(55%)	4.23	0.977
I collaborate with others to brainstorm & implement problem-solving strategies	0%	15(5%)	0%	39(13%)	239(82%)0	4.69	0.849
I demonstrate resilience when facing obstacles	0%	0%	0%	131(45%)	161(55%)	4.51	0.571
Skills acquired have prepared me for future employment	6(2%)	0%	0%	79(27%)	207(71%)	4.64	0.676
Have become more responsible for tasks assigned to me	0%	0%	23(8%)	88(30%)	181(62%)	4.47	0.796
Attachment experience helped me improve my ability to meet deadlines	0%	20(7%)	50(17%)	61(21%)	161(55%)	4.23	0.977
I developed a better understanding of workplace ethics and professionalism during my attachment	0%	15(5%)	0%	38(13%)	239(82%)	4.69	0.849
I gained hands-on experience with tools, equipment and software relevant to my field	0%	0%	0%	131(45%)	161(55%)	4.51	0.571
Attachment experience improved understanding of industry standards and practices	6(2%	0%	0%	79(27%	207(71%	4.64	0.676
Have become more adaptable to new tasks and environments	12(4%)	3(1%)	12(4%)	70(24%)	196(67%)	4.49	0.927
My communication skills improved as a result of interactions with colleagues and supervisors	0%	0%	50(17%)	96(33%)	146(50%)	4.28	0.864
I developed better time management skills	0%	3(1%)	12(4%)	50(17%)	228(78%)	4.70	0.617

The respondents were required to rate their opinions on whether they generate innovative solutions to challenges encountered during industrial attachment. A large proportion, 269 (92%), of the respondents agreed with this assertion, while 22 (8%) remained undecided, and notably, none disagreed. This overwhelming agreement suggests a strong perceived link between industrial attachment and the development of innovative problem-solving skills among trainees. The calculated mean score of 4.47, although slightly below the composite mean of 4.50, still reflects a generally positive perception. This implies that the experience of industrial attachment fosters a mind-set geared towards innovation and creativity.

Furthermore, the standard deviation of 0.796, which was above the composite standard deviation of 0.145, indicates a wider range of responses. This variability may reflect differences in the quality of industrial attachment experiences, the nature of challenges faced, or the level of mentorship and support received during attachment. These

findings imply that while the majority of trainees recognize and report growth in innovation, the extent of this growth may be influenced by contextual factors within their respective attachment environments. Nevertheless, the data clearly underscores the role of industrial attachment in nurturing innovative capacity among trainees.

The results further reveal that 222 (76%) of the respondents agreed on being able to analyze real-world problems encountered during industrial attachment; 20 (7%) were not sure, and 50 (17%) of the respondents disagreed. The mean score was 4.23. The standard deviation was 0.971, which was above the composite standard deviation of 0.145, indicating more variability in responses, as well as a high level of satisfaction among the respondents.

On whether trainees feel adequately prepared to collaborate with others to brainstorm and implement problem-solving strategies, the analysis deduced that the majority of respondents, represented by 277 (95%), were in agreement with the statement; none remained neutral, and only 15 (5%) disagreed. The mean score was 4.69, which was above the composite mean of 4.50, indicating a positive influence on the composite mean. The standard deviation was 0.849, which was below the composite standard deviation of 0.145, indicating less variability in responses. The majority of respondents were in agreement with the statement.

The results further show that all the respondents (100%) agreed that they demonstrated resilience when facing obstacles. The mean score was 4.51, slightly above the composite mean of 4.50, indicating a positive influence on the composite mean. The standard deviation was 0.571, which was above the composite standard deviation of 0.145, indicating no variability in responses. All respondents were in agreement with the statement.

On whether skills acquired during attachment prepare trainees for future employment, the results clearly reveal that the majority of respondents, 286 (98%), were in agreement with the assertion, while 6 (2%) disagreed. The mean score was 4.64, above the composite mean of 4.50, indicating a positive influence on the composite mean. The standard deviation was 0.676, which was above the composite standard deviation of 0.145, indicating more variability in responses. This clearly indicates that trainees gain valuable skills that prepare them for employment.

The research further sought to find out whether trainees become more responsible and accountable for tasks assigned to them. Data analysis from the above Likert scale deduces that 269 (92%) of the respondents were in agreement, and 23 (8%) were undecided. The mean score was 4.47, which was below the composite mean of 4.50, indicating a negative influence on the composite mean. The standard deviation was 0.769, which was above the composite standard deviation of 0.145, indicating more variability in responses as well as a high level of agreement among the respondents.

Furthermore, on whether attachment experiences help trainees improve their ability to meet deadlines, the research clearly shows that the majority of respondents, 222 (76%), were in agreement with the statement; 50 (17%) were not sure, while only 20 (7%) disagreed. The mean score was 4.23, which was below the composite mean of 4.50, indicating a negative influence on the composite mean. The standard deviation was 0.977, which is above the composite standard deviation of 0.145, indicating more variability in responses.

The results further show that 279 (95%) of respondents were in agreement with developing a better understanding of workplace ethics and professionalism during attachment, and only 15 (5%) disagreed with the same assertion; 15 (5%) were not sure. The mean score was 4.69, which was above the composite mean of 4.50, indicating a positive influence on the composite mean. The standard deviation was 0.849, which was above the composite standard deviation of 0.145, indicating more variability in responses and a high level of satisfaction among respondents.

Regarding whether trainees gained hands-on experience with tools, equipment, and software relevant to their field, the research clearly shows that all respondents, 292 (100%), were in agreement with the statement. The mean score was 4.51, above the composite mean of 4.50, indicating a positive influence on the composite mean. The standard deviation was 0.571, which was above the composite standard deviation of 0.145, indicating a high level of satisfaction among respondents.

The Likert scale data analysis deduces that a large proportion, 286 (92%), of respondents agreed, while only 6 (2%) disagreed, that attachment experience improved understanding of industry standards and practices. The mean score was 4.64, above the composite mean of 4.50, indicating a positive influence on the composite mean. The standard deviation was 0.676, which was above the composite standard deviation of 0.145, indicating more variation in responses. This implies that attachment experience enhances understanding of industry standards and practices.

Additionally, respondents rated their opinions on whether they become more adaptable to new tasks and environments during attachment. Data analysis clearly shows that 266 (91%) were in agreement; 12 (4%) were not sure, while 15 (5%) disagreed. The mean score was 4.49, which was below the composite mean of 4.50, indicating a negative influence on the composite mean. The standard deviation was 0.927, which was above the composite standard deviation of 0.145, indicating more variability in responses, but also a high level of satisfaction among respondents.

The study further sought to find out whether communication skills improved as a result of interactions with colleagues and supervisors. Data analysis from the above Likert scale shows that 242 (83%) of respondents were in

agreement with the assertion; 50 (17%) were not sure, and none disagreed. The mean score was 4.28, which was below the composite mean of 4.50, indicating a negative influence on the composite mean. The standard deviation was 0.864, which was above the composite standard deviation of 0.145, indicating more variability in responses. This suggests a high level of satisfaction among respondents.

Investigation on whether trainees developed better time management skills shows that the majority of respondents, 278 (95%), were in agreement; 12 (4%) were not sure, while only 3 (1%) disagreed. The mean score was 4.70, above the composite mean of 4.50, indicating a positive influence on the composite mean. The standard deviation was 0.617, which was above the composite standard deviation of 0.145, indicating more variability in responses and a high level of satisfaction among respondents.

4.3. Hypothesis Testing

The objective of this study was to establish the effect of induction process on acquisition of vocational skills during industrial attachment among TVET trainees. Linear regression test was employed to determine this. The study utilized the following null hypothesis which was tested at a 0.05 level of significance.

H_{01}: Industrial attachment induction process has no effect on the acquisition of vocational skills among TVET trainees in Kenya

The results are shown in Table 3

Table 3

Model Summary - Induction Process and Acquisition of Skills

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.837[a]	.700	.699	3.461	.700	676.531	1	290	.000

a. Predictors: (Constant), Induction process

b. Dependent Variable: Acquisition of vocational skills

It is indicated in Table 3, where the value of R-squared = 0.700. Such a statistical result indicates that the induction procedure was able to explain 70 percent of the differences that occurred in the acquisition of the vocational skills during the industrial attachments of the TVET trainees. Induction procedures were important in determining the quality and effectiveness of the trainees acquiring relevant work related skills at the workplace. This observation supports the need to have well organized orientation programs in order to establish a basis of shaping trainees to fruitful industrial experiences.

This finding confirms the hypothesis that a properly structured induction procedure is denoted as imperative in improving the applied skills of TVET learners. It implies that with objective orientation (clear expectations, safety requirements, culture exposure to the workplace, and guidance over executing their duties) the trainees have more chances to move successfully to the real working challenges and get valuable learning experience. Nevertheless, the rest part, that is 30 percent of vocational skill acquisition variation, might be attributed to other factors not discussed in the paper including degree of mentorship, individual motivation of the trainees, character of tasks being performed and type of supervision.

Table 4

ANOVA - Induction Process and Acquisition of Skills

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8105.519	1	8105.519	676.531	.000[b]
	Residual	3474.491	290	11.981		
	Total	**11580.010**	**291**			

a. Dependent Variable: Acquisition of vocational skills

b. Predictors: (Constant), Induction process

The results presented in Table 4 indicate that the independent variable induction process shows also that it has significant and considerable predictive ability on the acquisition of vocational skills during industrial attachment among TVET trainees. It is worth noting, therefore, that an efficient induction process does not only constitute a mere formality but plays a potentially significant role in the capacity of the trainees to achieve absorption and practice of the acquired skills in the actual workplace. This conclusion is based on the outcomes of analysis of variance (ANOVA) test, performed with the level of significance of 0.05. F = 676.531 falls considerably below the standard of 0.05 at (1, 290, 0.001), having the significance value (676.531, (1, 290) = 676.531, 0.001). Based on this, it is possible to

conclude that the model has captured much of the variability in vocational skills learning, thus, validating the importance of the induction process to determine the quality and quality of industrial training experiences within the TVET environment.

Table 5

Regression Coefficients - Induction Process and Acquisition of Skills

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.039	2.010		3.004	.003
	Induction process	.829	.032	.837	26.010	.000

a. Dependent Variable: Acquisition of vocational skills

The research results in Table 5 indicate that the induction process made an enhanced and considerable impact in creating potentials of vocational skills in trainee TVET during industrial attachment. The t-statistic obtained was 26.010 and the p-value was 0.001 that is below the traditional alpha test of 0.05. These findings confirm the fact that the correlation was real. The finding has both theoretical and practical relevance since it shows congruence with the theoretical expectation that well-designed induction programs equip trainees with the basic knowledge of workplace expectations, roles, and safety processes which must be prerequisites in ensuring effective skill development of the trainees.

The study rejected the null hypothesis considering that the statistical evidence was very strong as it stated that the acquisition of vocational skills had no significant influence of the induction processes. The implication herein is that the induction process is considered a determining factor in influencing the outcome of learning on TVET trainees undergoing industrial attachment. The standardized coefficient (beta = 0.829) also serves as evidence of the precision of such impact, as the improvement of induction process by one unit will cause the 0.829 units increase in the vocational-skill acquisition process. This implies that more emphasis should be placed on crafted and holistic induction programs by TVET institutions and host industries as one of the major strategies in making industrial attachment more effective and by extension, the entire vocational training program.

The positive correlation that is strongly established in this case shows clearly that intensive investment in preparing trainees to work in the industries is necessary. This should not just involve administrative procedures, but should be extended to giving orientation on the organizational culture, practical expectations as well as initial mentorship that can make the trainees more confident and willing to learn during the job.

Thus, the model equation is:

$$Y = 6.039 + 0.829X$$

Where,

Y- Acquisition of skills

X- Induction process

Ondieki *et al.* (2018) compared how long an individual was attached to an industrial setting with his employability skills development among the TVET trainees in the Nairobi County. According to the findings, although the length of the attachment is relevant, the quality of the induction process is more relevant in training the trainees with pertinent skills like teamwork, decision-making and problem-solving.

Although induction is not bad in itself, Mwaura *et al.*, (2022) noted that the period of industrial attachment is that factor that gives rise to employability skills among learners, rather than the actual process of induction. The researchers arguably indicate that the prolonged period of attachment enables the trainees to acquire closer and practical experiences and that is influential in the process of acquiring skills.

Likewise, a study by Maingi (2020) on Institutional Factors Influencing Acquisition of Vocational Skills by Trainees in Public Vocational Training Centres in Kakamega County, Kenya, also identifies factors like capacity of the instructors, financial resources, training facilities, and the training methodologies as having greater power to influence the acquisition of vocational skills than induction programs. The study was recommending that all these institutional factors should be improved so that the training processes are improved as merely investing in induction, might not pay any significant dividends.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The response of the trainees analysed indicates that induction process is very significant in imparting skills, knowledge and confidence on the TVET trainees as they prepare to undertake their tasks as part of the industrial attachment process. The fact that the induction programs were not only positively accepted but also able to prepare

trainees to the reality of the working environment is evidenced by the high mean scores in most indicators including aspects like opportunities of feedback, realistic demonstrations and incorporation of hand-on activities among others.

The majority of trainees reported being able to acquire knowledge of their roles as well as become accustomed to the workplace environment and feel confident in performing the necessary job assignments thanks to the process of induction. Moreover, helpful materials and valuable exposure as part of the induction also helped to ensure preparedness of the trainees. Though slightly lower ratings were also met in regards to such aspects as learning about organizational goals and culture, they still represented rather good perceptions, which continues to indicate that most of the induction material was related and effective.

The results support the fact that an effective induction process is useful in helping to improve the trainee preparedness and performance during industrial attachment. This highlights the importance of TVET institutions and host organisations to still invest in thorough induction programmes as a building block of effective vocational training.

The null hypothesis (H01), which states that industrial attachment induction process would not affect learning the vocational skills by TVET trainees in Kenya was rejected. This implies that the induction process can be significantly improved to enhance the process of acquiring vocational skills.

5.2. Recommendation

On the basis of the results of this research, a few recommendations will be put forward to improve the effectiveness of industrial training and attachment programs.

One, TVET institutions must make the necessary efforts to ensure that trainees are properly equipped to face the realities in the workplace. This involves imparting the industry expectations, proper professionalism, and workplace behaviour to the learners. In addition, training curricula should be reviewed and revised by institutions on a regular basis, through close interaction with industry stakeholders. This will guarantee that the training offered is up-to-date and up to the provision of industry trends and technological improvement so as to better the ability of graduates to get jobs.

Secondly, the host organizations should be proactive in engaging and cooperating with the TVET institutions in the designing and implementing of structured induction programs to all incoming trainees. These programs ought to socialize trainees into the organizational culture, ways of operations, safety procedures, and performance requirements. This shall not only help in the transition of trainees into working environment, but also augment their capability of making meaningful contributions during their attachment period.

Finally, policies and regulators ought to establish elaborated and strong industrial attachment policy guidelines to clearly define roles, responsibilities and expectations of each party involved. Also, there should be robust mechanisms of quality assurance to track and assess the impacts of implementing these policies. It will make industrial attachment programs consistent and fair all over the country and effective.

REFERENCES

Alao, O. E., Osanyinro, J. B., & Alao, P. O. (2022). Achieving the effectiveness of the trainees' industrial work experience scheme for sustainability of the Nigerian economy. *International Journal of Work-Integrated Learning, 23*(3), 393.

Anjum, S. (2020). Impact of internship programs on professional and personal development of business trainees: A case study from Pakistan. *Future Business Journal, 6*(1), 1–13.

Baynit, M., & Ngussa, B. M. (2021). Effect of field attachment experiences on trainees' career preparedness in higher learning institutions: A case of selected universities in Arusha. *International Journal of Educational Policy Research and Review, 8*(2), 192–210.

Cahya, N., & Firdaus, M. R. (2024). Analysis of the influence of Denison's organizational culture model on employee engagement and organizational effectiveness. *Asian Journal of Management, Entrepreneurship and Social Science, 4*(3), 1969–1990. https://doi.org/10.63922/ajmesc.v4i03.1053

Dondofema, J., Mwenje, J., & Musemwa, L. (2020). The industrial attachment programme: History, benefits, challenges, and its adoption in Zimbabwe: A review. *Asian Journal of Education and Training, 6*(3), 412–420.

Geda, A. G. (2021). Challenges facing trainees in vocational skills acquisition: The case of some TVET colleges of Oromia Regional State, Ethiopia (Doctoral dissertation, Addis Ababa University).

Jahonga, W. M. (2020). Effectiveness of supervised industrial attachment programme in technical and vocational education training (TVET) institutions in the North Rift Region, Kenya (Doctoral dissertation, Moi University).

Kapareliotis, I., Voutsina, K., & Patsioti, A. (2019). Internship and employability prospects: Assessing trainee's work readiness. *Higher Education, Skills and Work-Based Learning, 9*(4), 538–543.

Kenya Vision 2030. (2014). *Vision 2030 flagship projects: Progress report*. Nairobi.

Kiriri, P. (2019). An assessment of the quality of a work-integrated learning internship program in Kenya. *International Journal of Work Integrated Learning, 20*(3), 257–271.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Maingi, J. M. (2020). Institutional factors influencing acquisition of vocational skills by trainees in public vocational training centres in Kakamega County, Kenya. *World Journal of Education and Humanities, 2*(1), 220–225.

Makworo, O., Muchiri, S. M., & Nyongesa, W. J. (2021). Linking TVET institutions and industry in Kenya: Where are we? *International Journal of Economy, Management and Social Sciences, 2*(3), 233–251.

Mchete, T., & Shayo, F. A. (2020). The role of induction training on performance of new employees at workplace: Case study of the Open University of Tanzania. *International Journal of Business Management and Economics Review, 3*(1), 101–115.

Meta, S. M. (2022). Critical literature review on bridging skills gap through development of professional courses: A remedy for unemployment crisis in Kenya. *Advances in Applied Sociology Journal, 12*(7), 415–422.

Mukhwana, E. J., Too, J., Kande, A., & Nandokha, H. (2021). Financing higher education in Africa: The case of Kenya. *African Journal of Rural Development, 5*(3), 53–64.

Musyimi, C. (2021). Developing skills to unlock Kenya's industrial growth: The influence of provision of modern training and learning equipment in TVET in Kenya. *Journal of Learning for Development, 8*(1), 182–191.

Mutembei, L. N., Kibaara, T., & Gichohi, P. M. (2024). Teaching-learning resources and employability skills development of TVET graduates in Meru County. *Journal of Education, 4*(6), 18–30.

Mwaura, A. N., Mugwe, M., Edabu, P., & Thinguri, R. (2022). Effectiveness of industrial attachment exposure in developing trainees' employability skills from TVET institutions in Nairobi County. *East African Journal of Education Studies, 5*(2), 275–285.

Ndile, L. M. (2018). The influence of competency-based technical training on youth employability: A study of technical training institutions in Nairobi County (Thesis). Strathmore University.

Nyongesa, C. L., & Makokha, L. (2020). Influence of technical, vocational education, and training on graduates' employability in Kenya: An inherent concern. *The Kenya Journal of Technical and Vocational Education and Training, 1*(1), 92–98.

Olayo, J. (2022). The future of technical and vocational education and training in Kenya: Analysis of the gaps between policy and its implementation. *The Kenya Journal of Technical and Vocational Education and Training, 5*. Published by Technical and Vocational Education and Training Authority, Kenya Literature Bureau Publishers and Printers.

Ondieki, C., Kimani, G. N., & Tanui, E. K. (2018). Industry-based learning improves skills and training of undergraduate engineering programmes in Kenya: Case study of the University of Nairobi. *Ira International Journal of Education and Multidisciplinary Studies, 4*(6), 34–39.

Republic of Kenya. (2019). *Sessional paper no. 1 of 2019 on a policy framework for reforming education and training for sustainable development in Kenya*. Ministry of Education.

Truxillo, D. M., Bauer, T. N., & Erdogan, B. (2015). *Psychology and work: Perspectives on industrial and organizational psychology*. Routledge.

Tumba, I., & Shaibu, H. (2016). Strategies for improving trainees' acquisition of vocational skills in electrical installation and maintenance work trade in technical colleges in Kano State. *The International Journal of Engineering and Science (IJES), 5*(10), 200–215.

TVETA (Technical and Vocational Education and Training Authority). (2020). *TVET quality standards manual*. Nairobi: Government Printer.