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RESEARCH ARTICLE

Evaluation of the Development of Skills for Industry Project (DSIP) in the Ga East Municipality, Ghana

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Abstract
This study evaluates the effectiveness of the Development of Skills for Industry Project (DSIP), a structured intervention in Ghana's traditional apprenticeship system implemented by the Council for Technical and Vocational Education and Training (COTVET) in 2014. Despite the informal sector employing approximately 86% of Ghana's workforce (Aryeetey & Baah-Boateng, 2016), traditional apprenticeship models have lacked structured curricula and formalised training approaches. The research examines DSIP's impact in the Ga East Municipality through three dimensions: activities facilitating skills development, impacts on Master Craft Persons (MCPs) and apprentices, and post-programme progression of beneficiaries. Employing a mixed-methods approach, data were collected from 110 respondents—100 MCPs and apprentices through questionnaires and 10 officials from COTVET and the Ghana Education Service through semi-structured interviews. Findings reveal significant positive outcomes, with 94% of MCPs reporting substantial improvements in their trades and 94% of apprentices expressing high satisfaction with apprenticeship fee waivers. The study identified gender-specific challenges, particularly vulnerability among female apprentices due to socioeconomic factors. The research contributes to understanding effective interventions in vocational training

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by demonstrating DSIP's success in enhancing technical competencies and entrepreneurial capabilities. Recommendations include integrating reproductive health education into future programmes and developing land banks for trades requiring substantial workspace. This research highlights vocational training's potential as an economic empowerment mechanism within Ghana's informal sector, with implications for policy development in technical and vocational education systems across West Africa.

Introduction

Apprenticeship training has played a critical role in developing skilled labour in Ghana, yet traditional models often lack structured curricula and formalised training approaches. The informal sector, which utilises these apprenticeship systems, constitutes a significant portion of Ghana's economy, employing approximately 86% of the workforce (Aryeetey & Baah-Boateng, 2016). To address the gaps in traditional apprenticeship models, the Development of Skills for Industry Project (DSIP) was introduced by the Council for Technical and Vocational Education and Training (COTVET) in 2014. The DSIP aimed to enhance apprenticeship training by incorporating competency-based training manuals, financial literacy education, and toolkits for apprentices.

This study evaluates DSIP's effectiveness in the Ga East Municipality, focusing on skills development, programme impact, and post-programme apprenticeship progression. Specifically, the research seeks to address three primary objectives: (1) to examine the activities of the Development of Skill for Industry Project that lead to skills development; (2) to investigate the impact of the DSIP on Master Crafts Persons and apprentices; and (3) to appraise the beneficiary apprentices' progress after participating in the DSIP through tracer studies.

To achieve these objectives, the study addresses the following research questions: What are the activities of DSIP that lead to skills development? How have the DSIP-related activities impacted the activities of the Master crafts persons and Apprentices? How have the beneficiary apprentices of the Development of Skill for Industry Project progressed after the project? By exploring these questions, this research aims to provide valuable insights into the effectiveness of structured interventions in traditional apprenticeship systems and their potential for enhancing skills development in Ghana's informal sector. However, training in this sector is often unstructured, leading to skill gaps and limited economic mobility. By assessing DSIP's implementation and outcomes, this study contributes to ongoing discussions on vocational training as a tool for economic empowerment.

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Literature Review

Traditional Apprenticeship Systems in Sub-Saharan Africa and South Asia

Traditional apprenticeship systems have been a cornerstone for skills acquisition in many regions, particularly in Sub-Saharan Africa and South Asia. These informal systems often involve a Master Craft Person (MCP) training apprentices through hands-on, workshop-based learning. While this model provides invaluable real-world experience, it lacks theoretical instruction, formalisation, and standardisation (Adams, 2017). In many cases, apprenticeships are based on individual MCP methods, which can vary greatly from one trainer to another, resulting in inconsistent outcomes and sometimes inadequate skill development (Anokye & Afrane, 2014). These informal training systems are often the only viable pathway for individuals, especially school dropouts, to gain employable skills when access to formal education or vocational training centres is limited. Despite their challenges, traditional apprenticeship systems remain integral to skill-building and employment creation in developing economies.

In Ghana, for example, traditional apprenticeships are vital for individuals who have dropped out of school or are unable to pursue further education due to financial constraints. The apprentices are taught directly by the MCPs, who impart technical knowledge and practical skills related to their trades, such as carpentry, cosmetology, and welding. However, the lack of formal frameworks, certification, and standardisation in these systems often results in a gap between what apprentices learn and what is expected by the formal job market (Anokye & Afrane, 2014).

Research examining vocational training in West Africa has increasingly highlighted significant gender disparities that affect skills development outcomes. A comprehensive study by Akanbi and Nwachukwu (2020) reveals how deeply entrenched socio-cultural norms and institutional biases systematically influence trade selection and career trajectories in apprenticeship systems. Their research demonstrates that female apprentices predominantly enter traditionally gender-typed vocations such as hairdressing and dressmaking—trades characterized by lower income potential and reduced opportunities for formal business establishment.

This gender segregation in vocational training represents more than simple preference patterns; rather, it reflects systemic barriers that limit women's economic empowerment. Tsikata (2009) has documented how these limitations extend beyond initial trade selection to include restricted access to essential resources including tools, startup capital, and high-quality mentorship. Similarly, Okeke (2015) identifies how institutional structures within training programs often implicitly reinforce rather than challenge gender stereotypes, creating what she terms "opportunity ceilings" for female participants.

The gender disparities identified in these studies align with findings from contemporary research in Ghana's informal vocational sector. Female apprentices face compound disadvantages that significantly impact their professional development trajectories. As Akanbi and Nwachukwu (2020) argue, addressing these inequities requires deliberate policy

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interventions that promote gender-responsive training methodologies and actively encourage female participation in traditionally male-dominated, higher-income trades. Their research underscores the importance of reconceptualizing vocational training not merely as skills development but as a potential mechanism for challenging occupational gender segregation and advancing economic equity.

Effective interventions must address both the supply and demand sides of the training ecosystem. On the supply side, training programs need modifications to accommodate women's specific needs and constraints, while demand-side interventions must tackle employer biases and market discrimination (Akanbi & Nwachukwu, 2020). This multidimensional approach recognizes that meaningful change requires addressing both immediate practical barriers and deeper structural inequalities within Ghana's apprenticeship systems.

Structured Vocational Training Systems in OECD Countries

In contrast to the informal systems prevalent in developing countries, structured vocational education and training (VET) systems, particularly in OECD countries, integrate both classroom-based theoretical instruction and workplace-based practical training. A prime example of this is Germany's dual vocational education system, which combines rigorous academic learning with apprenticeships in various industries. This approach ensures that students not only gain the hands-on experience necessary for their trades but also develop a solid theoretical foundation, making them highly competitive in the job market upon graduation (Spurgeon & Moore, 1997).

The dual system is well-structured, leading to recognised certification, which helps to standardise training across sectors and improve the employability of graduates. Such programmes also benefit from close collaboration between educational institutions and industries, ensuring that the skills being taught are directly aligned with industry needs. This model represents an ideal of vocational training that combines academic rigor with practical relevance, producing highly skilled workers who are equipped with both theoretical knowledge and practical expertise.

Informal Training in Pakistan

Pakistan's informal training system, much like that of Ghana, is a significant route to skill acquisition. Informal training remains widely used due to its affordability and accessibility, particularly in rural areas where formal training centres are scarce (Janjua & Naveed, 2009). Similar to the traditional apprenticeship systems in other parts of the world, Pakistan's informal training largely takes place in small workshops where artisans, tailors, mechanics, and other skilled workers learn by doing, under the guidance of experienced trainers.

However, a major limitation of this model is the absence of formal certification for the skills acquired. This lack of official recognition hinders the upward mobility of workers and their ability to compete in the formal job market. Without certification, workers often remain in low-wage, informal jobs, unable to access opportunities that require recognised qualifications. The situation is compounded by the lack of standardisation in training, meaning that

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apprentices may not acquire all the necessary skills that meet industry standards. Therefore, while informal training is accessible and practical, it often limits economic advancement and job security for those who undergo it.

The Importance of Certification and Formal Recognition in Vocational Training

One of the key issues that arise from informal apprenticeship and training systems is the lack of formal certification, which can restrict mobility in the job market. The absence of recognised qualifications limits the ability of workers to secure higher-paying jobs or move into more formalised sectors of the economy. This is particularly problematic in regions such as Ghana and Pakistan, where the informal sector dominates but does not always provide opportunities for upward mobility or career advancement (Becker, 1962).

In contrast, structured systems like Germany's dual vocational education model offer a pathway to formal certification, which enhances employability and facilitates career progression (Spurgeon & Moore, 1997). Certification serves not only as a means of recognising skills but also as a tool for standardising training across industries, ensuring that workers are equipped with the knowledge and skills required by employers. As such, the introduction of certification into informal systems can significantly improve the quality of vocational training, boost the confidence of apprentices, and enhance their competitiveness in the labour market.

The Role of Vocational Training in Economic Development

The need for vocational training that equips individuals with relevant, marketable skills is crucial to economic development, particularly in developing countries. As noted by Adams (2017), skills training is a key driver of economic growth, especially in regions where unemployment rates are high, and formal education systems may not adequately address the needs of the workforce. Effective vocational education systems can help bridge the gap between the supply of skilled workers and the demand for such workers in the job market, contributing to poverty reduction and increased economic productivity.

In many developing countries, including Ghana and Pakistan, vocational training serves as a key means of integrating school dropouts and unskilled workers into the workforce. By equipping them with practical skills, vocational education can provide individuals with the tools to secure employment, start their own businesses, or contribute to local economic development (Forkuoh, Afrane, & Osei, 2014). In Ghana, for example, the Development of Skills for Industry Project (DSIP) has sought to address some of the challenges faced by traditional apprenticeship systems by providing formal training and certification, enabling apprentices to gain employable skills and reducing the barriers to entering the formal job market.

Theoretical Foundations

Apprenticeship learning draws from several foundational educational and psychological theories that explain how individuals acquire knowledge and skills, progress in competency, and contribute to economic development.

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Human Capital Theory

Gary Becker's Human Capital Theory (1962) underpins much of the rationale for vocational and apprenticeship training. The theory posits that individuals and societies derive economic benefits from investing in education and training, much like investing in physical capital. In this framework, apprenticeships serve as a strategic investment that increases the productivity, employability, and income-generating potential of individuals. On a macroeconomic level, countries with effective skills development systems can experience enhanced innovation, reduced unemployment, and sustained economic growth (Adams, 2017).

Motor Skill Acquisition Theory

Schmidt (2004) advanced the Motor Skill Acquisition Theory, which is especially relevant in technical and vocational contexts where physical tasks and hands-on proficiency are core to learning. The theory outlines three progressive stages:

- Cognitive stage, where the learner understands what needs to be done;
- Associative stage, where the learner practices and refines the skill; and
- Autonomous stage, where the performance becomes automatic and efficient.

Apprenticeships naturally align with this model, as learners begin by observing and imitating their Master Craft Persons, then practice under supervision, and eventually perform tasks independently with increasing confidence and precision.

Dreyfus Model of Skill Acquisition

Developed by Dreyfus and Dreyfus (1980), this model identifies five stages of skill development:

- Novice – rigid adherence to taught rules;
- Advanced beginner – situational awareness begins to develop;
- Competent – planning and decision-making emerge;
- Proficient – intuition guides actions;
- Expert – deep understanding and fluid execution.

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This model captures the typical trajectory of apprentices, who start with basic exposure and gradually internalise complex skills and judgements through practical engagement over time.

Situated Learning Theory
The Situated Learning Theory (Lave & Wenger, 1991) is also highly relevant to apprenticeship. It emphasises learning as a social process that occurs within a specific context, particularly through legitimate peripheral participation in a community of practice. Apprenticeships embody this by immersing learners in real-world working environments where they acquire knowledge not only through instruction but also by engaging with peers, mentors, and the tools of the trade.

Experiential Learning Theory
David Kolb's Experiential Learning Theory (1984) also supports the apprenticeship model, proposing that effective learning occurs through a cycle of concrete experience, reflective observation, abstract conceptualisation, and active experimentation. In apprenticeships, learners continuously cycle through this process as they try tasks, reflect on feedback, adjust techniques, and improve their performance.

Together, these theories affirm that apprenticeships are not merely about skills transfer, but are also complex cognitive, social, and experiential processes. They validate the structure of apprenticeship as a legitimate and effective educational approach, especially when supported by mentoring, feedback, and progressive skill development.

Relevance of DSIP in Ghana
The Development of Skills for Industry Project (DSIP) in Ghana reflects global best practices in vocational education reform. By incorporating competency-based training (CBT) manuals, financial literacy sessions, and start-up toolkits, DSIP helps bridge the gap between informal training and structured vocational education. This approach enhances both the quality and employability of apprentices. The study of DSIP in Ga East Municipality contributes to ongoing efforts to formalise and improve traditional apprenticeship systems, making them more responsive to labour market needs and socio-economic development goals.

Methodology
Research Design
This study adopted a mixed-methods research design, combining both quantitative and qualitative approaches to provide a comprehensive understanding of the impact of the Development of Skills for Industry Project (DSIP). Specifically, a descriptive survey design was employed to facilitate the collection of both numerical data for statistical analysis and narrative data for deeper contextual insights. This approach enabled triangulation of data, improving the reliability and validity of the study findings.

Sampling and Data Collection

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A non-probability sampling method was used, with purposive sampling serving as the primary technique. This ensured that all key stakeholder groups involved in the DSIP were adequately represented. The target population comprised 110 individuals: 50 Master Craft Persons (MCPs), 50 apprentices, 5 officials from the Council for Technical and Vocational Education and Training (COTVET), and 5 officials from the Ghana Education Service (GES). A purposive sample of 105 participants was selected—50 MCPs, 50 apprentices, and 5 COTVET officials—based on their direct involvement in the project. Additionally, five GES officials were selected using simple random sampling to ensure impartiality. Data collection involved administering questionnaires to 100 MCPs and apprentices, while in-depth interviews were conducted with 5 COTVET and 5 GES officials, all of whom had supervisory or implementation roles in the DSIP.

Ethical Considerations

The research followed standard ethical protocols throughout the study. All participants were informed about the study's purpose and procedures before their involvement. Informed consent was obtained from each participant, with clear communication that participation was voluntary. Confidentiality was maintained by using identification codes instead of names, and all collected data were securely stored. Interviews were conducted in settings that ensured privacy and comfort for the participants. Special attention was given to ensuring that apprentices did not feel pressured to participate due to their relationships with MCPs or programme officials.

Data Analysis

Quantitative data were processed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics; frequencies, percentages, and graphs were used to summarise and present the data clearly. Qualitative data from the interviews were analysed thematically, allowing for the identification of key patterns, perceptions, and recommendations. This dual approach provided a well-rounded evaluation of the DSIP's implementation and impact in the Ga East Municipality.

DATA PRESENTATION AND ANALYSIS

The data collected from the respondents were based on these research questions;

1. What are the activities of DSIP that lead to skills development?
2. How has the DSIP related activities impacted the activities of the Master crafts persons and Apprentices?
3. How has the beneficiary apprentices of the Development of Skill for Industry Project progressed after the project?

Group of Respondents	Master crafts person (MCPs)	Apprentices	Total	Percentage
Garments	17	17	34	31%
Cosmetology	24	24	48	44%

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Welders	9	9	18	16%
COTVET Officials			5	4.5%
GES Officials			5	4.5%
			110	100%

Table 1: Distribution of Sample size

Break down shown in Table 1 shows the distribution of respondents for the study. As indicated in Table 1, 31% of the respondents were made up of both MCPs and their apprentices from the Garments subsection, while 44% of the respondents comprised both MCPs and their apprentices from the Cosmetology subsection, the Welders subsection comprised of both MCPs and apprentices contributed 16% of the respondents. The COTVET and GES officials contributed 4.5% each to the total sample size of 110.

DESCRIPTIVE ANALYSIS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cosmetology	24	48.0	48.0	48.0
	Garment Making	17	34.0	34.0	82.0
	Welding	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

Table 2: Trade Area

Source of data: [DataSet1] C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

In Table 2, Cosmetology has the bigger chunk of respondents, constituting 48% of the MCPs who responded to the questionnaire, Garments MCPs constituted 34% of the MCPs and the Welders constituted 18% of the total number of the respondents who are MCPs.

This data is represented by the pie chart.

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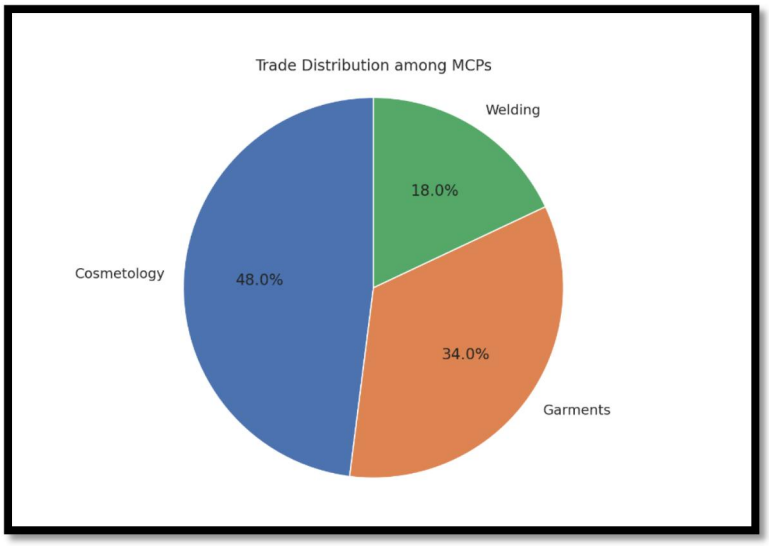

Figure 2: trade distribution pie chart

Table 3: Number of years of experience in Trade

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6-10 years	9	18.0	18.0	18.0
	11-15 years	20	40.0	40.0	58.0
	16 years and above	21	42.0	42.0	100.0
	Total	50	100.0	100.0	

Source: [Data Set1] C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav.

Table 3, indicates the number of years that MCPs have been in that particular trade over a period of time. The category of MCPs who have been in their trade area spanning a period of 16 years and above formed 42% of the respondents and those that had been in their trade area for a period of 11-15 years formed 40% of the respondents and the rest comprising those in the age category of 6-10 years, constituted 18% of the respondents. This data is relevant because it indicates the experience of the MCPs in making an informed judgment about the relevance or the lack of it, of the intervention programme.

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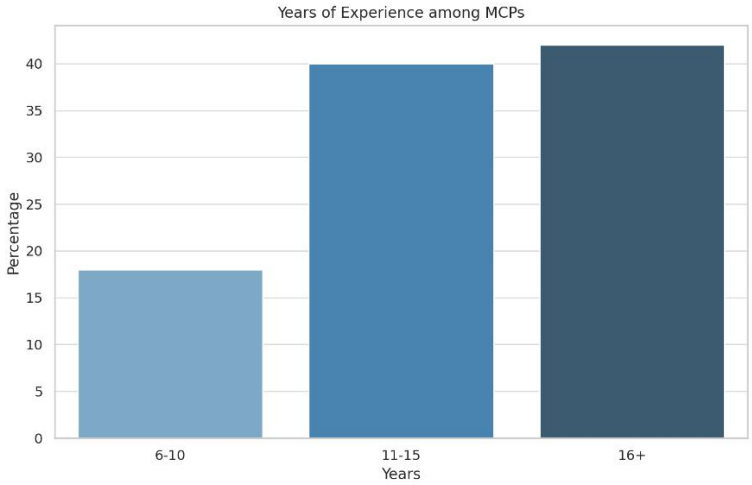

Figure 3: Number of years of experience in the trade

Table 4: Age distribution of MCPs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30 years	4	8.0	8.0	8.0
	31-40 years	13	26.0	26.0	34.0
	41-50 years	21	42.0	42.0	76.0
	50-60 years	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

Source: [DataSet1] C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav.

Table 4, indicates the various age categories that the MCPs fall into, with those aged between 41-50 years making up 42% of the total number, with those aged between 20-30 years contributing 8%, but the table also indicates that there is quite a number of the MCPs that are quite youthful, because the cumulative percent of the youthful age range is 76%.

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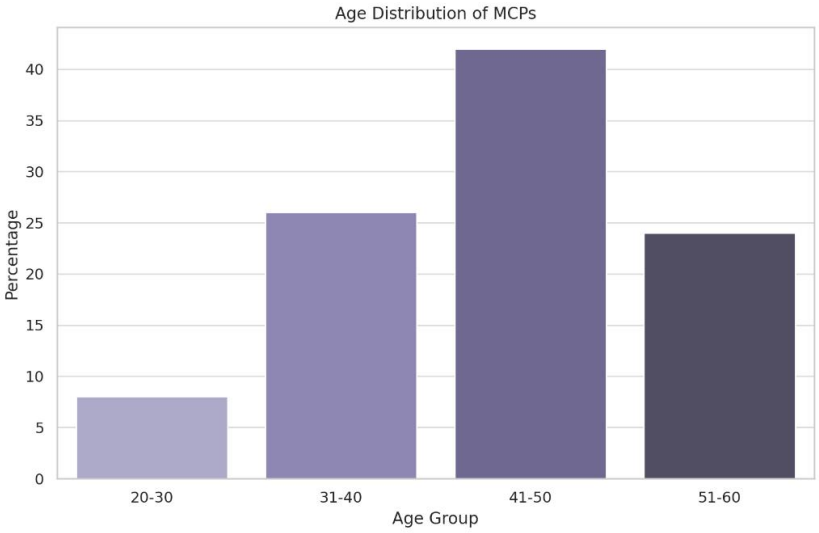

Figure 4: Age distribution of MCPs

Questions were posed to the MCPs, that sought to elucidate information that related to activities of the DSIP that led to skills development and it sought to rate their opinion on these activities and their relevance to their trade area.

Table 5: Role of the DSIP in Customer service training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	3	6.0	6.0	6.0
	strongly agree	47	94.0	94.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

From Table 5, 6% agreed that the introduction of customer service has been a good feature of the project, with 94% of the MCPs, agreeing overwhelmingly that, the introduction of customer service training as part and parcel of the project helped a great deal with its consequent impact on their customer base and sales.

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Figure 5: Customer Service Training feedback

Table 6:: Role of the DSIP in Safety mechanism training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	1	2.0	2.0	2.0
	strongly agree	49	98.0	98.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

Table 6, indicates that**,** 2% of the MCPs agreed that, training on safety mechanism as a feature of the project was good, with 98% strongly agreeing to the help such a training has had on their total development.

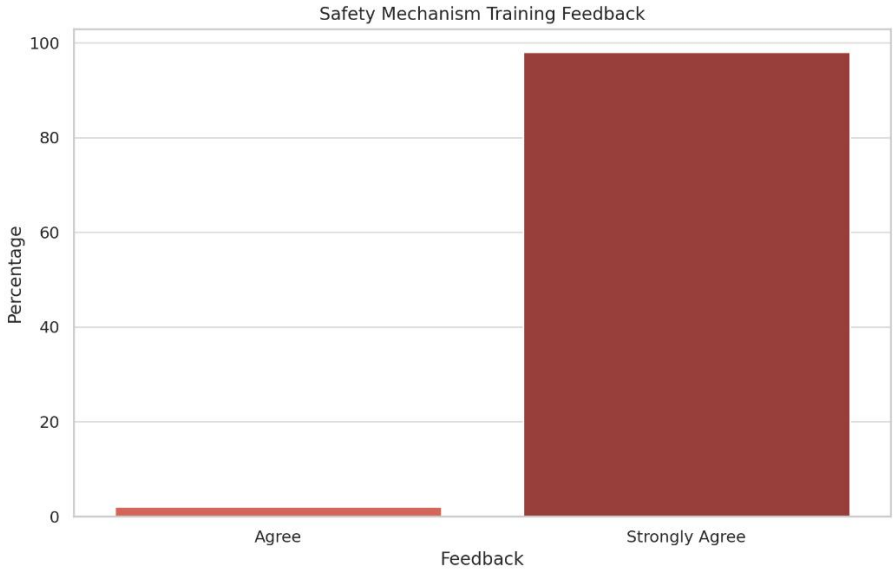

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Figure 6: Role of DSIP in Safety Mechanisms Training

Table 7 : Role of the DSIP in Cash book management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	50	100.0	100.0	100.0

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

Table 7, indicates that there was a strong agreement from the MCPs on the importance of the skill of cash book management and its consequent impact on both their personal funds and funds in the name of the enterprise.

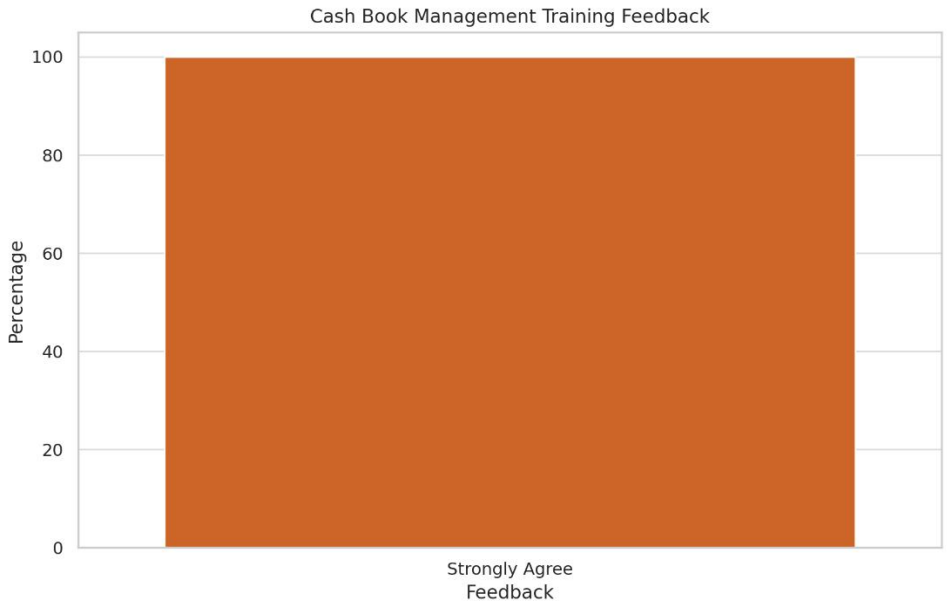

Figure 7: Role of the DSIP in Cash Book Management

The graph above depicts a total acceptance and admittance of the help that financial management, particularly cash book management has had on their enterprises, and this is coming for people who have been in the trade for years as indicated in Table 3.

Table 8: Role of the DSIP in Budget training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	50	100.0	100.0	100.0

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

A feature of the DSIP project, was the transfer of bursary funds to the accounts of MCPs, the relevance of the budget training was to equip them with the know-how and skill in planning a budget on the usage of these funds and with the knowledge that auditors will be coming

around to verify their expenses, this training was essential to their trade, their person and for accountability purposes.

Figure 8: Role of the DSIP in Budget Training

The second objective of the study sought to "investigate to ascertain the impact of the development of skill for Industry Project (DSIP) on Master Craft's persons and Apprentices (MCP) and apprentice). In addressing this objective, the following findings were made.
The question was posed to see what impact the DSIP Competency Based Training manual has had on the MCPs on one hand and what impact it has had on the apprentices on the other hand. The MCP's view were different from what the apprentices sought to portray or felt, and this was expected since I was dealing with separate constituents of the same project. Inbuilt into the DSIP was the Competency Based Training manuals (CBT), this manual contained topics, sub-topics, processes and procedures for executing an activity or task at the various shops.

Table 9: Usefulness of DSIP in the Provision of training manuals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	7	14.0	14.0	14.0
	strongly agree	43	86.0	86.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

It can be inferred from Table 9 that, 86% of the respondents who are MCPs, strongly agreed with the issuance and the usefulness of the training manual, which sought to formalize their training methods.

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The histogram indicates this distribution

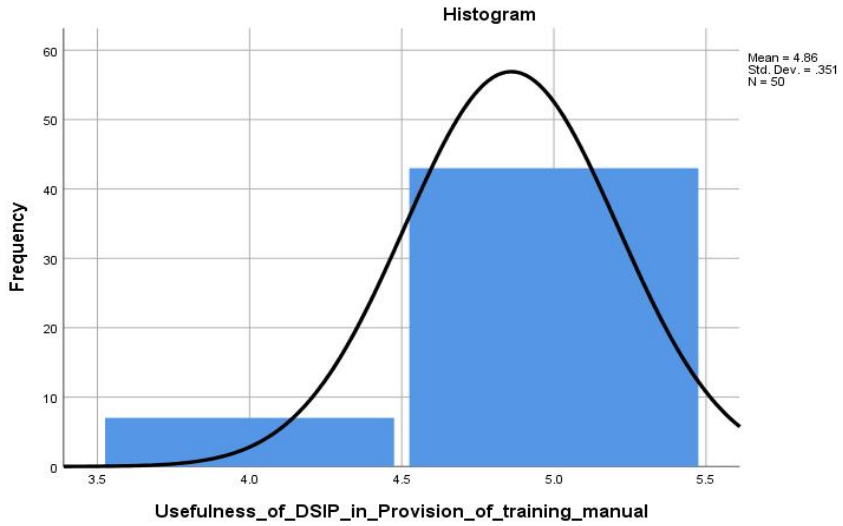

Figure 9: Usefulness of the DSIP in the Provision of Training Manual

Also, another question posed was the impact of waiving the apprenticeship fee that would have mandatorily been paid by the Apprentices to the MCPSs, and which has rather been borne by the project, the impact of that is seen below.

Table 10: Usefulness of DSIP in Reducing apprenticeship cost

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	3	6.0	6.0	6.0
	strongly agree	47	94.0	94.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

The apprenticeship fee has tended to be a stumbling block to the efforts at skills acquisition, so this has been largely applauded and it is evidenced in the 94% that strongly agreed to it.

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Figure 10: Usefulness of the DSIP in Reducing Apprenticeship Cost

In the area of capacity building, the MCPs were asked about the impact that it has had on them, table 11, indicated that 82% of respondents had been in their various trade areas for 11 years and above, and none of them had been a beneficiary of any form of upgrade, In-service training, workshop or capacity building of any form, that will seek to enhance their skills set, that was one of the innovations of the DSIP project and their response to that questions was indicative of their position.

Table 11: Usefulness of DSIP in Building capacity of MCPs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	neutral	1	2.0	2.0	2.0
	agree	3	6.0	6.0	8.0
	strongly agree	46	92.0	92.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

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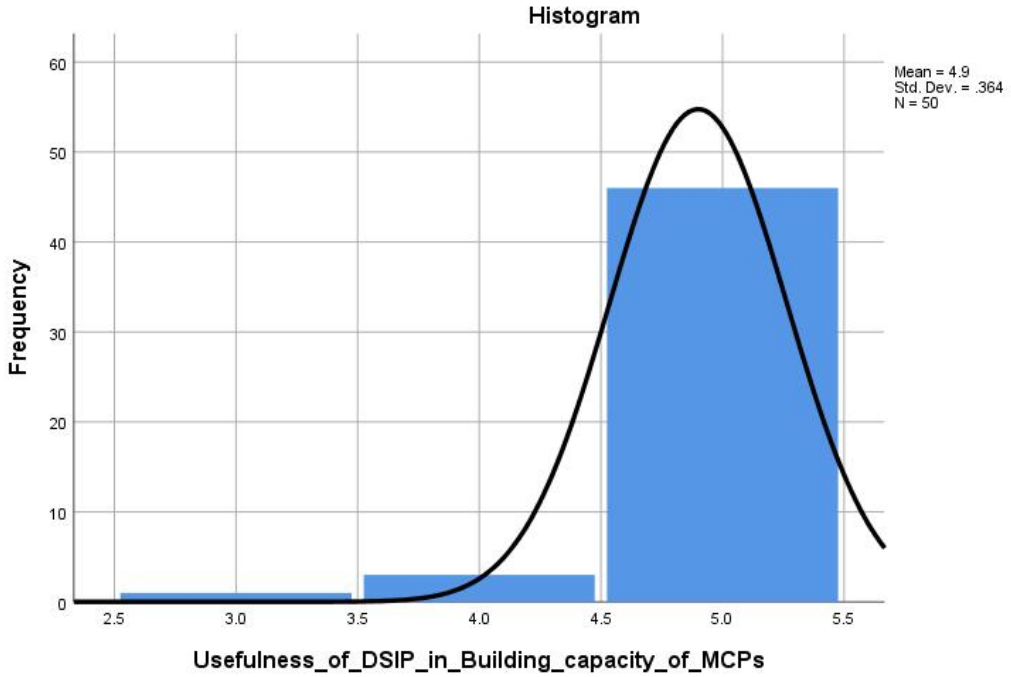

Figure 11: Usefulness of the DSIP in Building Capacity of MCPs

Workshops with industry professionals, training them on new methods, new products, testing before executing has been very beneficial to them, and some of them have now become facilitators on behalf of COTVET.

Hitherto, funds to purchase training inputs were the responsibility of the apprentice, failure to provide them meant training stalled, these funds were also absorbed by the project, the MCPs being those responsible for training, were asked of their opinion about such a provision.

Table 12 : Usefulness of DSIP in Provision of funds to purchase inputs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	3	6.0	6.0	6.0
	strongly agree	47	94.0	94.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

The table reveals that 94% of respondents who are MCPs, strongly agree with this provision, because of the numerous frustrations they have witnessed themselves when particularly training brilliant but needy apprentices.

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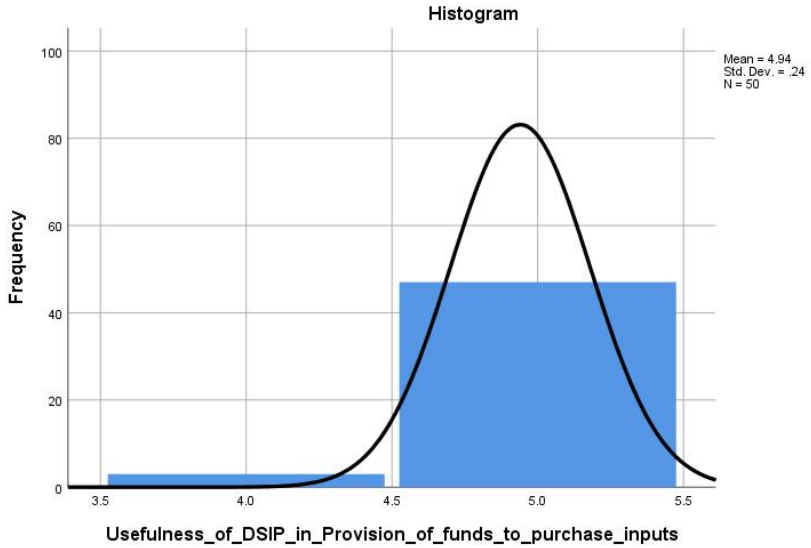

Figure 12: Usefulness of DSIP in the Provision of Funds to Purchase Inputs

Views from Apprentices

Questionnaires were administered to apprentices or beneficiaries under the project, concerning their opinion on the impact of activities of the DSIP on their training and the impact it has had on them.

Table 13: Rating of provision of toolkits

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	highly satisfactory	46	92.0	92.0	92.0
	Satisfactory	4	8.0	8.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS APP\SPSS-APP.sav

From Table 13, 92% of responses from the apprentices indicates that, they were highly satisfied with the provision of tool kits, which they would have purchased themselves at a cost. With 8% of the apprentices' being satisfied with the provision of the tools.

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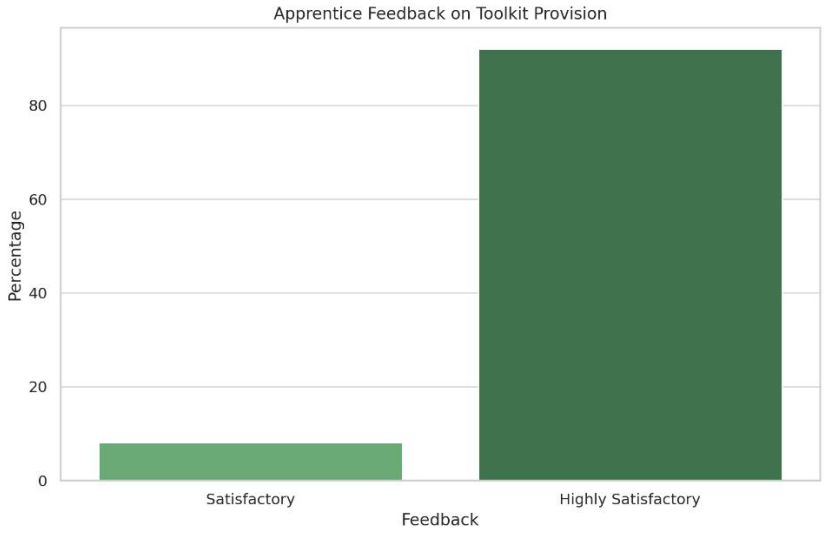

Figure 13: Rating of the Provision of Toolkits

Beyond the provision of tool kits for the apprentices, there was also another important contribution to their training, and this was the waiving of apprenticeship training fee.

Table 14: Rating of Apprenticeship fee waived

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	highly satisfactory	47	94.0	94.0	94.0
	Satisfactory	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS APP\SPSS-APP.sav

Table 14, shows that 94% of apprentices were highly satisfied with the waiving and absorption of the apprenticeship fee, with 6% saying that they were satisfied with that provision. This is depicted by the bar chart below.

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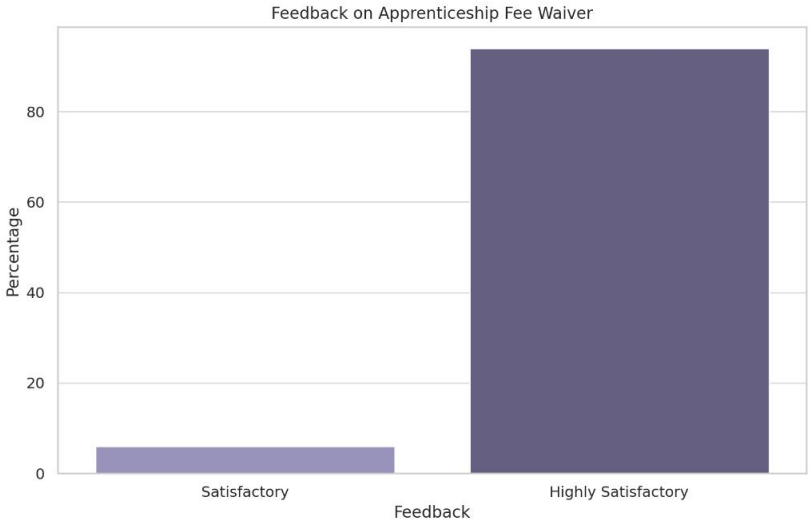

Figure 14: Rating of Apprenticeship fee waived

The provision of an attendance book at the various shops with the view or intention of monitoring the regularity and punctuality of apprentices during the training period, rather drew interesting responses, this is seen in the table below.

Table 15: Rating on the use of the Attendance book for apprentices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	highly satisfactory	20	40.0	40.0	40.0
	Satisfactory	14	28.0	28.0	68.0
	Neutral	16	32.0	32.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS APP\SPSS-APP.sav

In rating the attendance book, 40% of respondents were highly satisfied with the issuance and use of the attendance book, 28% were satisfied with it and 32% were not sure whether they were in favour of it or not, it underlined the feeling that, they didn't want to be monitored. This is shown graphically

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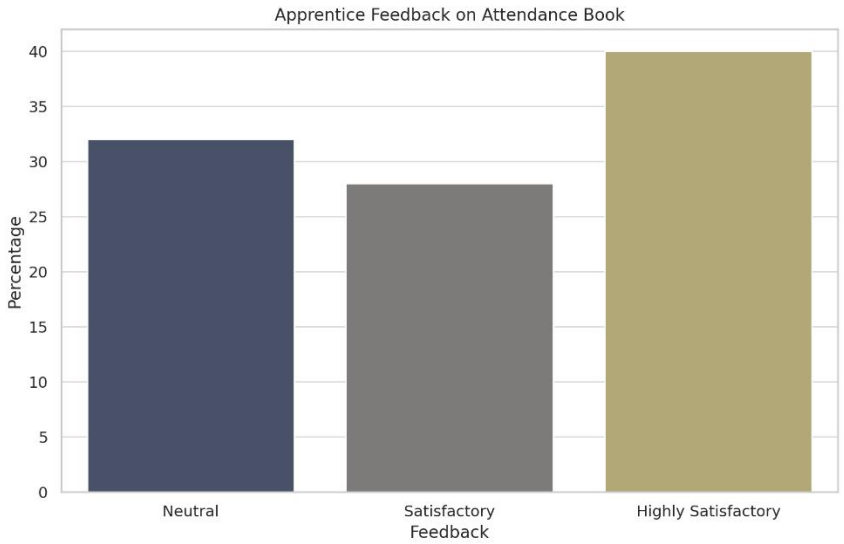

Figure 15: Rating of Attendance Book

The last phase of the DSIP sought to empower the apprentices through equipping them to setup their own startups, this was to be accomplished by providing them with tools and equipment, their views on this was sought.

Table 16: Rating of Tools for startup

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	highly satisfactory	45	90.0	90.0	90.0
	Satisfactory	5	10.0	10.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS APP\SPSS-APP.sav

The rating in Table 16, indicates that, 90% of the respondents were highly satisfied with that provision or arrangement, 10% were satisfied with the arrangement. This is represented below.

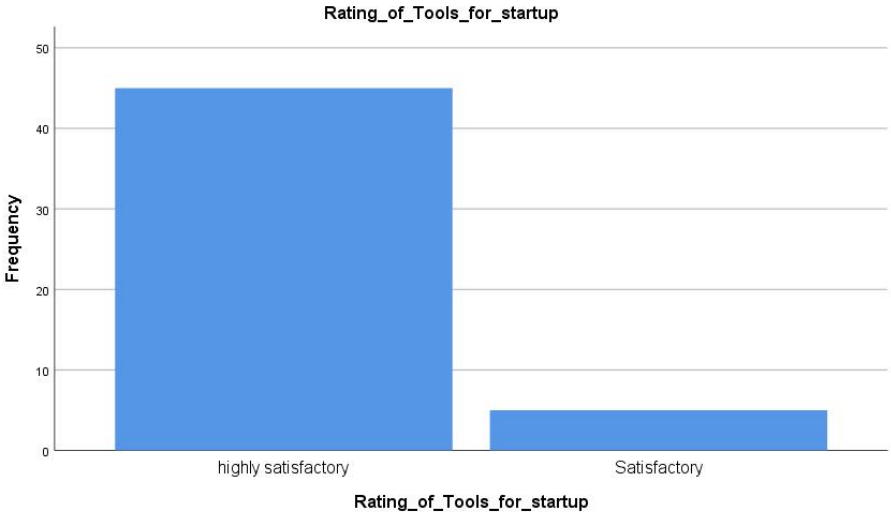

Figure 16: Rating of Tools for Startup

Limitations to the effective training encountered by the apprentices during the training period, from the perspective of the MCP came up, parental neglect and prowling men were the main factors the MCPs raised.

Table 17 : Risk factors to female apprentices (parental neglect)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	3	6.0	6.0	6.0
	strongly agree	39	78.0	78.0	84.0
	Not applicable	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

Source: field survey. C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

Table 17, indicates that 78% of respondents strongly agree to the issue that parental neglect was a factor to contend with, this risk factor was not applicable to 8% of the respondents, because those apprentices were males.

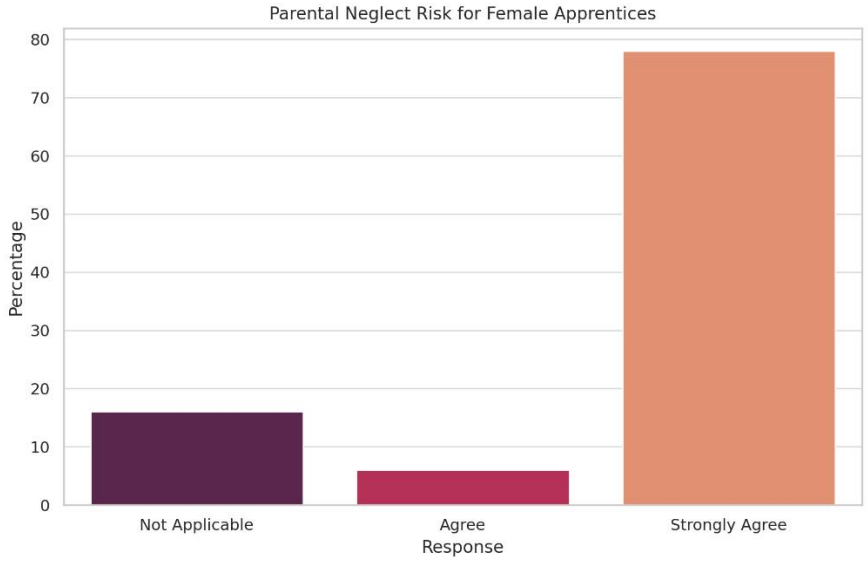

Figure 17: Risk factors to Female Apprentices (Parental Neglect)

Also, prowling men, was a bother to the MCPs.

Table 18: Risk factors to female apprentices (Men preying on them)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	1	2.0	2.0	2.0
	neutral	2	4.0	4.0	6.0
	agree	9	18.0	18.0	24.0

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	strongly agree	30	60.0	60.0	84.0
	Not applicable	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

Source: field survey 2019. C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS MCP\SPSS-MCP1.sav

Table 18, indicates that 60% of the respondents were of the view that, the apprentices were at risk of being enticed by men, this particular factor is closely related to the previous one. From the perspective of the apprentices, these were their risk factors.

Table 19 : Challenges encountered during training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	feeding	31	62.0	62.0	62.0
	transportation	7	14.0	14.0	76.0
	peer pressure	4	8.0	8.0	84.0
	None	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

Source. Field survey 2019. C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS APP\SPSS-APP.sav

Table 19, reveals that, 62% of respondents were of the view that, feeding was a major challenge to their training, especially where most of them are neglected by their parents as indicated in Table 18. 14% felt that transportation was a risk factor in commuting from their homes to the shops and 8% felt peer pressure was having a toll on them.

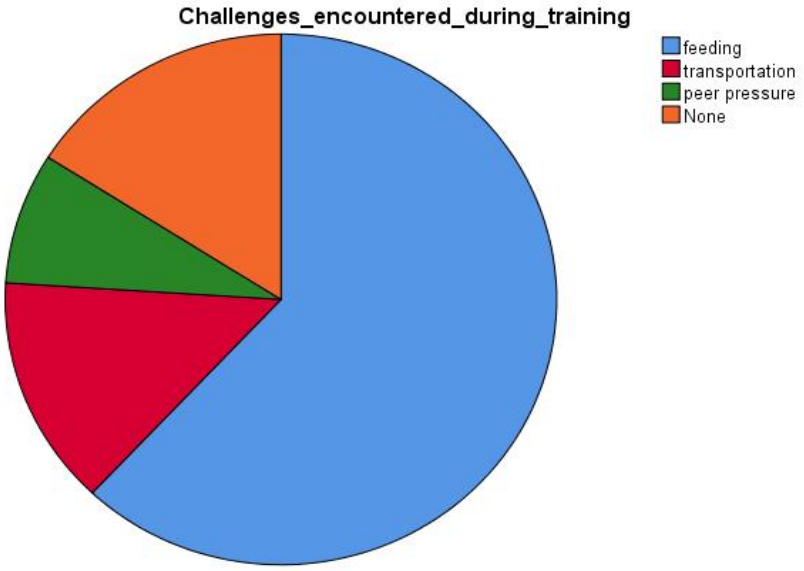

Figure 19: Challenges encountered during Training

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With regards to the third research objective "Appraising the beneficiary apprentices' progress after the Development of skill for Industry Project (DSIP) through tracer studies".
The training period span three years starting from 2015 – 2018, all the apprentices graduated and moved on. The phase 3 of the DSIP which was the transfer of tools and equipment to these apprentices, as a means of developing a certain mass of localised human capital that will also seek to make an impact on society while training others, has delayed, due to subtle political interference. The delay was as a result of a change in Government in 2016 and the subsequent change in Municipal Administration, led by a new Municipal Chief Executive, there was the need for the new team to acquaint themselves with the programme and accept to be part of it, since there was the possibility of past Government Officials claiming to have initiated the programme The quest was to conduct a tracer study of what these apprentices have been doing since passing out.

Table 20 : What have you been doing post DSIP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	work and pay	29	58.0	58.0	58.0
	self employed	7	14.0	14.0	72.0
	not practicing	14	28.0	28.0	100.0
	Total	50	100.0	100.0	

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS APP\SPSS-APP.sav
Table 20, reveals that, 58% of the **apprentices after passing out had gained employment with another enterprise, as a worker and paid on monthly basis**, this kind of work is called 'work and pay' in their parlance. 14% of the apprentices were self-employed and 28% were not practicing their trade, as a result of a multiplicity of factors that will be discussed, in the next paragraph. The data is represented graphically below.

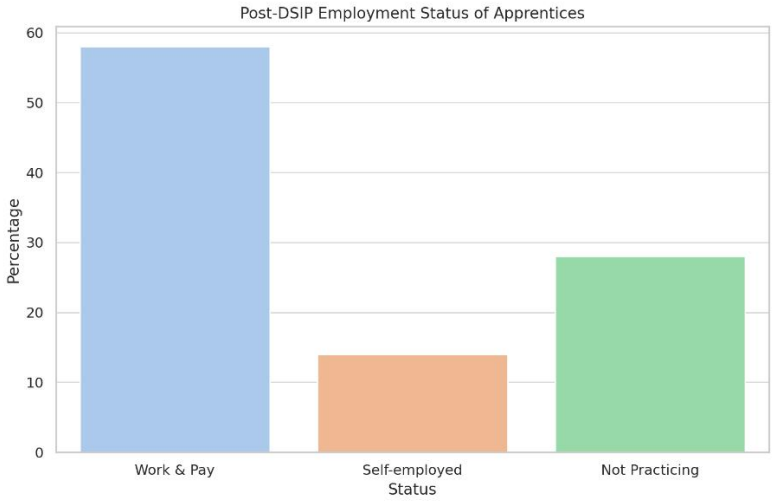

Figure20: What have you been doing post DSIP?

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The reason for the apprentice choosing work and pay and particularly those who are not practicing their trade after passing out are captured below.

Table 21: Why that option?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	delay in phase 3 of DSIP	13	26.0	30.2	30.2
	Work and save towards a startup	24	48.0	55.8	86.0
	Lack of MCP willing to accept workers and pay them	1	2.0	2.3	88.4
	Work and pay to save to pay land rent	5	10.0	11.6	100.0
	Total	43	86.0	100.0	
Missing	System	7	14.0		
Total		50	100.0		

Source: C:\Users\HP\Desktop\FINAL DRAFT\SPSS Q ANALYSIS\SPSS APP\SPSS-APP.sav

From the table above, it shows that 26% of the apprentices have not started practicing, because there has been a delay in presenting them with their tools and equipment, which is the final phase of the DSIP. 48% are engaged in work and pay, with the intention of working to earn an income and then saving towards setting up a startup. 2% are yet to secure employment, because they are yet to meet shop owners who are willing to pay them for their services or simply put, these shops cannot afford to pay them, because these shops don't make much. 10% of the apprentices that fall into this category are mostly welders, who have a challenge with siting their shops because of the high cost of renting a piece of land to mount his gadgets and equipment.

The table indicates that there are 7 apprentices, which translates into 14% of the total apprentice respondents, that have been declared missing in the table, that's because these are the apprentices who have been employed or are engaged in work and pay, as such this question was not applicable to these 7 apprentices.

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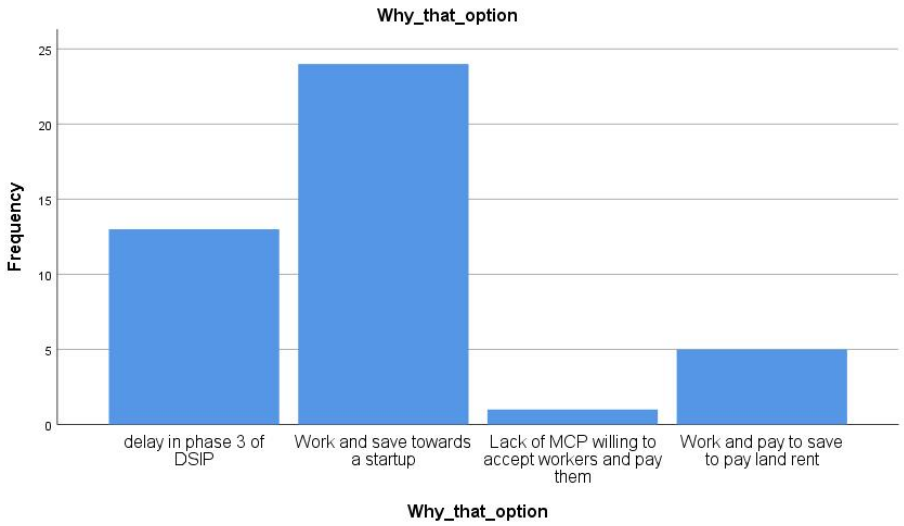

Figure 21: Why that Option?

Perspectives from the Ghana Education Service (GES) Officials

The Ghana Education Service (GES) served as the primary institution responsible for the monitoring, supervision, and training of Master Craft Persons (MCPs) during the implementation of the Development of Skills for Industry Project (DSIP) within the Ga East Municipality. According to the GES organogram, the researcher—charged with oversight of Technical and Vocational Education and Training (TVET) in the municipality—was directly responsible for field monitoring and coordination of the project.

GES's role extended beyond oversight to include technical support for MCPs and apprentices, recruitment of qualified beneficiary apprentices, and facilitation of financial literacy training for MCPs. The GES also managed the rigorous process of vetting hundreds of apprenticeship applications and ensured adherence to the guidelines and operational standards of the programme.

A key innovation in Ga East was the researcher's facilitation of the formation of an association for both electric and gas welders. This initiative was crucial, as COTVET's implementation strategy prioritised recognised trade associations due to past challenges faced during the National Apprenticeship Programme, which had relied on individual MCPs.

As evidenced in Table 2 and accompanying graphical illustrations, the population of welders in the municipality was relatively small compared to cosmetology and garment trades. However, with Ghana's emerging oil and gas industry demanding skilled auxiliary workers and the emphasis on local content development, a strategic decision was made to reduce intake from cosmetology and garment sectors in favour of trades aligned with the energy value chain, particularly welding.

Following DSIP implementation, participants were invited to share feedback, which was analysed thematically. Four key themes emerged: (1) activities that enhanced trade skills for MCPs and apprentices; (2) capacity building of MCPs; (3) challenges encountered during

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programme delivery; and (4) recommendations for future interventions. This thematic analysis contributes to a deeper understanding of the DSIP's local impact and informs best practices for scaling such initiatives in similar contexts.

There was a general consensus among respondents regarding the positive effects of the DSIP's various components on Master Craft Persons (MCPs). Notable improvements were observed in areas such as financial management, pedagogical practices, and the overall administration of apprenticeship training. Several interviewees highlighted that the introduction of competency-based training (CBT) manuals not only structured the delivery of skills but also had the potential to be expanded to other trade areas not initially included in the programme. Importantly, these manuals were viewed as essential tools for preserving technical and vocational knowledge—knowledge which, in the absence of documentation, is often lost with the passing of experienced MCPs.

Further insights revealed that many MCPs previously lacked basic financial literacy. Before the intervention, some had never owned a bank account or requested a bank statement, nor did they maintain simple financial records such as a cashbook. Through the programme's financial literacy training, they learned to differentiate personal from business funds—an important step that enhanced their financial credibility and attracted interest from financial institutions seeking to build partnerships.

Additionally, the capacity-building workshops organised in collaboration with industry players significantly boosted the confidence and skill sets of the MCPs. These sessions introduced modern techniques, promoted networking, and provided exposure to investment opportunities. As a testament to their growth, some MCPs have since been recruited as facilitators by COTVET to train other MCPs.

A critical issue raised was the vulnerability of female apprentices during the training. Some faced challenges such as teenage pregnancy, peer pressure, and exploitation by predatory men, which hindered their progress. These concerns highlighted a gap in inter-sectoral collaboration. It was suggested that future programmes should involve the Municipal Health Directorate to provide education on reproductive health and safety. Additionally, basic logistical challenges—such as lack of food and transportation for apprentices—emerged as significant barriers to effective training, as reflected in responses from MCPs in the administered questionnaires. Addressing these socio-economic issues is essential for improving the retention and success of apprentices, particularly female participants, in future interventions.

Perspectives from COTVET officials

The DSIP, funded by the African Development Bank and implemented by the Council for Technical and Vocational Education and Training (COTVET), was designed to provide bursary support to underprivileged apprentices who could not afford the cost of vocational training. These apprentices were assigned to Master Craft Persons (MCPs), who were paid in tranches to facilitate the training. The initiative was rolled out across 40 Metropolitan, Municipal, and

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District Assemblies (MMDAs) nationwide, with notable impact on communities previously burdened with school dropouts and limited training opportunities.

The provision of bursaries came with mechanisms to ensure accountability and value for money. MCPs received training in financial management to properly track and report fund usage. Additionally, they underwent customer service training to improve client relations—a significant step, given the negative perceptions surrounding reliability and time management among artisans.

Rather than disbursing bursaries as cash, funds were deposited into shop-specific bank accounts to enable financial tracking. MCPs were also offered refresher courses to upgrade their technical competencies to industry standards. Training delivery was structured, beginning with the identification and functional understanding of tools and materials.

Challenges encountered included low adherence to administrative timelines by MCPs unfamiliar with formal sector expectations, particularly in dealing with multinational institutions. Apprentice pregnancy, despite sensitisation efforts, disrupted learning, particularly among female trainees. Moreover, although apprentices were expected to train near their homes, many chose distant workshops, leading to transportation burdens, as DSIP did not cover commuting costs.

A critical issue arose during financial audits conducted by PricewaterhouseCoopers (PwC). Many MCPs failed to provide organised documentation such as receipts and bank statements or explain financial decisions made. This lack of preparedness undermined the credibility of the programme and led to concerns among officials of the African Development Bank.

This experience underscores the need for enhanced administrative training and intersectoral collaboration in future interventions, especially when working with informal sector participants.

DISCUSSIONS OF FINDINGS

Analysis of the data reveals that 82% of the respondents have been engaged in their respective trade areas for over a decade, with the majority falling within the 31 to 60-year age bracket. This highlights the significant depth of experience and expertise within this group, lending substantial credibility to their assessments of the DSIP initiative. Their feedback, consistently positive across both quantitative tables and qualitative interviews, underscores the perceived benefits and transformative impact of the programme. Apprentices also shared similar views, reinforcing the conclusion that the intervention was broadly effective and appreciated by all stakeholders.

Notably, within the past three years, a critical mass of tradespeople in the Ga East Municipality have successfully developed their skills to a level that qualifies them to be listed on COTVET's facilitator database. These individuals are now serving as focal trainers, responsible for mentoring and upskilling novice entrants into the trades—thus sustaining and expanding the technical skills base.

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To build on this momentum, there is a pressing need for improved cross-sectoral collaboration, especially given the multiple institutional stakeholders involved in Technical and Vocational Education and Training (TVET). Enhanced cooperation between education directorates, industry, financial institutions, and community development organisations can help streamline efforts and maximise outcomes.

A recent innovation that supports this agenda is the establishment of Business Advisory Councils (BACs) at the MMDA level. These councils aim to attract venture capital, create partnerships, and facilitate access to resources for local artisans and entrepreneurs, further strengthening the TVET ecosystem.

In sum, any strategic initiative aimed at building local human capital, reducing poverty, and creating employment through targeted, skills-based development programmes—such as DSIP—represents a forward-thinking and impactful approach to national development. Such interventions not only empower individuals but also enhance the resilience and productivity of local economies.

SUMMARY OF FINDINGS

Examine the activities of the Development of Skill for Industry Project that lead to skills development.

In the area of customer service, 94% of the MCPs agreed overwhelmingly that the training they have received in the area of customer service has had a positive impact on their enterprise and equipped them with soft skills that will serve them well.

Skills received in financial management, has been a real eye opener, 100% of the MCPs strongly agreed on the impact this has had on them. 86% of respondents strongly agreed on the impact the introduction of training manuals has had on their pedagogy.

The study sought to identify the activities of the Development of Skill for Industry Project, these activities were identified as, financial management training , 100% of respondents agreed strongly on the impact financial management has had on their activities, particularly cash book management, 94% of respondents agreed overwhelmingly that the training on good customer service practices has had a positive impact on their activities, waiving of apprenticeship fees, 86% of respondents agreed strongly on the impact the provision of competency based training manuals has had on the various trade areas, budgeting was also a feature of the programme, indicating how the MCP was to manage funds credited to the accounts of the MCPs, in three tranches to the tune of GHC2,000 or $400 (using current rates of exchange). Waiving of apprenticeship fee was also a feature of the programme.

Investigate to ascertain the impact of the Development of Skill of Skill for Industry Project on MCP and apprentices.

The study also sought to determine the impact of the activities of the Development of Skill for Industry Project, on the individual MCPs, and their apprentices as well. The study revealed that, the activities mentioned in 5.1.1, had a positive impact on the trade of the MCP on one hand and the apprentice as well. The tables and graphs generated indicate that, 94% of MCP spoke highly of the orientation and training received in customer service, 100% of the MCPs

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were glad about the changes they had witnessed in their management skills and approach to tuition, after the financial management training conducted by the researcher himself, the master crafts person are in a better position to manage their finances. The aspect of budgeting was essential, looking at the quantum of funds that some of the MCPs received, some of the MCPs, prior to this programme had not been making sales of a certain threshold, the budget session taught them how to account for funds that were to be transferred into their savings account, some MCPs had their accounts credited with as much as GHC 6,000, this was the amount for training three apprentices, there were varying ranges transferred to all MCPs.

The impact on apprentices too was clear with the percentages recorded in the analysis carried out, 94% of the apprentices were highly satisfied with the waiving of apprenticeship fee which was absorbed by the programme, and in the process created a system of subtle envy in the shop between fee paying apprentices and DSIP apprentices or apprentices on bursary. The impact of this was, the burden of finding funds to pay for their tuition was resolved and the only issue at stake was, they were to cater for their transportation cost and feeding.

90% of the apprentices were highly satisfied with the provision of startup tool kits, as they were certain that, post the DSIP, provision had been made to enable them set up their own enterprises and this will consequently lead to developing a mass of human capital within that community, who can also take on apprentices with time, and gradually a chain reaction takes place where one MCP trains two, these two trains four, four trains eight, overtime that process can lead to a quantifiable reduction in poverty.

Assess the beneficiary apprentices' progress after the Development of Skill for Industry Project through tracer studies.

The study revealed that 58% were engaged in work and pay, 14% were self-employed, 11.6% were employed but working to save enough to rent a piece of land to mount their containers on, especially the welders and 28% were not practicing at all. For those who were not practicing, the follow up question was, why? And 30.2% said they were not practicing because of the delay in the phase 3 of the DSIP, 2.3% said they were not working because they were yet to meet any MCP willing to employ them and pay them at the going rate, the industry at that level charges for workers.

The study also sought to examine what the apprentices were engaged in post the implementation of the Development of Skill for Industry Project. Due to subtle political interference, the phase 3 of the Development of Skill for Industry Project delayed, as such apprentices had graduated and could not receive their tools and equipment because, the release of funds and the purchase of these items coincided with a change in political administration at the Municipal Level, the new administration put the handing over on hold, to obtain briefings as to the genesis of the programme, the beneficiaries, the committee responsible for administering the project, etc. as such there was a 9 months delay in the handing over process, it is based on this, that the study sought to enquire what the apprentices were doing during that period.

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Analysis of Findings

Data collected from the implementation of the Development of Skills for Industry Project (DSIP) reveals that the cosmetology sector comprised the largest proportion of Master Craft Persons (MCPs) who responded to the questionnaire, representing 48% of the total. This was followed by the garments sector with 34%, and the welding sector with 18%. Furthermore, a significant proportion—82%—of the MCPs reported having over 11 years of experience in their respective trades. Notably, 76% of these MCPs fell within the youthful age range of 20 to 50 years. This blend of experience and youthful energy highlights a workforce both knowledgeable and capable of adapting to modern vocational training reforms.

The depth of experience among these MCPs underscores the value of their feedback on the intervention programme. An overwhelming 94% agreed that the introduction of customer service training had a transformative impact, leading to improved customer relations and increased sales. This, coupled with positive feedback on the financial management training, indicates the practical relevance of these components, particularly as expressed by individuals with longstanding experience in their trade.

A critical feature of DSIP was the direct transfer of bursary funds into MCP accounts. To ensure prudent use of these funds, budget planning and financial accountability training was incorporated. This was not only essential for fund management but also helped MCPs prepare for auditing processes. The training enhanced personal and enterprise-level financial literacy, representing a shift towards formal business practices in the informal sector.

Additionally, 86% of MCP respondents strongly agreed on the importance of the structured training manual introduced during the programme. This manual sought to formalise training methodologies, making them more systematic and competency-based, thus ensuring consistency in the transfer of skills to apprentices.

The waiver of apprenticeship fees, which has traditionally been a barrier to entry for many young people seeking vocational training, received strong endorsement from beneficiaries. A significant 94% of apprentices expressed high satisfaction with the fee waiver, while the remaining 6% also viewed the initiative favourably. Moreover, 92% of apprentices reported being highly satisfied with the provision of tool kits—essential resources they would otherwise have had to procure themselves, often at prohibitive cost.

The final phase of DSIP focused on post-training empowerment through startup support, particularly by equipping apprentices with the tools necessary for self-employment. Upon graduation, 58% of apprentices had secured paid employment in existing enterprises, 14% had started their own businesses, while 28% were not practising their trade at the time of data collection. These outcomes reflect both the potential and the limitations of such interventions, underscoring the need for continued support, follow-up, and perhaps targeted entrepreneurship mentoring to ensure sustainability.

In sum, the findings demonstrate the positive reception and tangible benefits of DSIP interventions among MCPs and apprentices alike, reinforcing the need for continued investment in structured, skill-based, and financially supportive vocational training programmes.

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CONCLUSION

This study set out to evaluate the effectiveness of the Development of Skills for Industry Project (DSIP) in the Ga East Municipality by examining three key research questions. The findings provide compelling evidence of the project's significant impact on vocational training and skills development within Ghana's informal sector.

In addressing the first research question regarding DSIP activities that led to skills development, the study found that capacity-building workshops facilitated by industry professionals were instrumental in enhancing technical competencies among participants. These workshops strategically addressed previous challenges in national apprenticeship programmes by implementing more rigorous supervision and monitoring mechanisms. The structured training approach ensured that both Master Craft Persons (MCPs) and apprentices acquired skills aligned with current industry standards, representing a marked improvement over previous less structured apprenticeship models.

Concerning the second research question on DSIP's impact on MCPs and apprentices, the evidence demonstrates substantial positive outcomes for both groups. MCPs experienced a transformation in their businesses through enhanced technical and managerial capabilities. Their improved communication skills and deeper understanding of their trades—exemplified by cosmetologists' newfound ability to assess hair textures and select appropriate products—directly translated to improved service delivery. For apprentices, many from disadvantaged backgrounds, the waiving of apprenticeship fees removed a significant barrier to participation, eliminating the stress and discontinuity in learning that financial constraints typically cause. The study found that 94% of MCPs recorded substantial improvements in their trades, while 94% of apprentices expressed high satisfaction with the fee waiver component.

Regarding the third research question on post-programme progression, the phased toolkit provision proved particularly effective in facilitating apprentices' transition to self-employment. Phase 1 tools supported effective training completion, while Phase 3 tools enabled graduates to establish their own enterprises. This strategic approach to resource provision created a clear pathway from apprenticeship to entrepreneurship, addressing a critical gap in previous vocational training programmes.

The DSIP's comprehensive approach combining structured training, financial support, and resource provision has demonstrably enhanced the informal sector's capacity for skills development and enterprise formation in the Ga East Municipality. While certain challenges remain, particularly regarding gender-specific vulnerabilities among female apprentices, the overall success of the project highlights the potential of well-designed vocational training interventions to serve as powerful tools for economic empowerment and sustainable livelihood development in Ghana's informal sector.

Recommendations for Continued Development and Sustainability of the Programme

To ensure that the skills developed through the Development of Skills for Industry Project (DSIP) remain relevant and effective, it is critical that they are continually updated to meet the

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evolving demands of the industry. Skills, if left unchecked, can quickly become obsolete, and while the process of refreshing these skills may incur costs, it is essential that Master Craft Persons (MCPs) make provisions for such updates. While the MCPs received training in various technical and business areas, graduating apprentices who transition into MCP roles also require similar training to stay competitive in their respective trades.

A key recommendation is to foster better collaboration between the Education Directorate and the Health Directorate. The Education Directorate has a schedule Officer in charge of Girl child education, and the Health Directorate has Community Health nurses, both organisations could conduct workshops and community outreach programmes to educate and sensitise female apprentices on reproductive health issues. These awareness campaigns targeting female apprentices are crucial for informing them about their reproductive health choices, which can significantly impact their ability to continue training and stay engaged in their work. Addressing the health and well-being of apprentices should be an integral part of their training, as it will directly influence their success and long-term career sustainability.

Another important development is the fact that some MCPs have now become facilitators for the Council for Technical Vocational Education and Training (COTVET), helping to train other MCPs who are new to industry standards and modern techniques. Given their practical experience and knowledge, it is recommended that these experienced facilitators be considered for localized contracts. For example, they could be engaged in projects like sewing for schools and colleges under the Free Senior High School policy. These contracts would not only expand their business networks but also strengthen their capacity and improve their overall professional standing in the community.

Apprentices should also be continuously encouraged to handle their tools with care, maintain dignity in their conduct, and strive to develop expertise in emerging trends and techniques. Remaining adaptable and knowledgeable will ensure that they stay relevant and continue to thrive in their fields. Professional conduct, paired with technical proficiency, is essential for apprentices seeking to join the wider network of skilled tradespeople.

In industries like welding, which is increasingly important due to the expansion of the oil and gas sector, it is critical to train more welders locally. There is a growing demand for welders to support the oil and gas industry, and this sector presents a significant opportunity for skilled tradespeople. Rather than relying on imported workers for oil installations, local welders should be trained to meet the needs of the industry. National trade associations are encouraged to advocate for their members' involvement in these projects, either individually or collectively. By uniting as a block, they can increase their visibility and influence, and even push for contracts in the oil and gas value chain.

In addition, the Municipal Assembly should consider the creation of land banks specifically designated for MCPs in trades like welding. Currently, many welders struggle to find stable locations to set up their shops, often moving from place to place. This instability, combined with the difficulty of securing land, can disincentivize their entrepreneurial efforts. However, despite these challenges, many MCPs continue to contribute to the local economy by paying taxes. By providing designated spaces for welders to operate, the assembly could support

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their growth while also improving urban planning. A land bank would not only streamline the operations of welding businesses but also help to manage urban space more effectively, reducing the unsightly and inefficient distribution of various shops throughout the municipality.

In summary, these recommendations aim to sustain the momentum created by the DSIP project and ensure that both MCPs and apprentices can continue to develop, thrive, and contribute to the growth of their industries. By focusing on continuous skill development, better inter-sectoral collaboration, and the creation of supportive infrastructure, the programme can further enhance its impact and empower local tradespeople to seize new opportunities.

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Author Bio note

My name is Seyram Kojo Adipah, an educationist, researcher, and arts professional dedicated to the advancement of creative education and technical training in Ghana. I currently serve as the ICT/TVET/Creative Arts Coordinator at the Ga East Municipal Education Directorate, where I coordinate the implementation of national education policies and design in-service training programmes for teachers, with a focus on the new curriculum.

I hold both an M.Phil. and M.Sc. in Educational Innovations and Leadership Science, in addition to a B.A. in Industrial Art, all from the Kwame Nkrumah University of Science and Technology (KNUST). My research has explored the role of educational leadership in enhancing creative arts skills and evaluated vocational education initiatives, resulting in published academic work.

I am also an Assistant Examiner for the West African Examinations Council (WAEC) in both General Knowledge in Art and Computing. I assess educational materials for the National Council for Curriculum and Assessment (NaCCA), specifically in the area of Creative Arts and Design. Additionally, I serve as a panel member developing the new Senior High School curriculum, contributing to the Arts and Design Studio and Arts and Design Foundation components.

A committed member of GNAT, ATAG, and GITTA, I bring a multidisciplinary approach to education. I am fluent in English, Ewe, Ga, Twi, and Pidgin, and I am known for my strong communication, collaboration, and research skills. In my leisure time, I enjoy reading, playing chess and Scrabble, and exploring artistic composition and digital presentation design.

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