
TRAINING INTERVENTIONS AND YOUTH SOCIO- ECONOMIC EMPOWERMENT: EVIDENCE FROM THE KENYA YOUTH EMPLOYMENT OPPORTUNITIES PROJECT (KYEOP) IN MAKADARA SUB-COUNTY, NAIROBI COUNTY, KENYA

¹*Pauline Makasa & ²Dr. Nancy Kosgei

¹Student, Department of Development Studies, Jomo Kenyatta University of Agriculture
and Technology, Nairobi, Kenya

²Doctor, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

*Email of the Corresponding Author: makasapauline@gmail.com

Publication Date: August 2026

ABSTRACT

Statement of the Problem: Youth unemployment remains one of the most persistent socio-economic challenges facing developing economies, particularly in Sub-Saharan Africa, where expanding youth populations continue to exceed the capacity of labour markets to generate productive employment opportunities. In response, governments and development partners have increasingly invested in skills-development programmes aimed at improving youth employability, productivity, and economic participation.

Purpose of the Study: This study examined the influence of KYEOP training interventions on the socio-economic empowerment of youth in Makadara Sub-County, Nairobi County, Kenya.

Research Methodology: A mixed-methods research design was adopted, combining quantitative data collected through structured questionnaires with qualitative data obtained from key informant interviews. The study targeted KYEOP beneficiaries and programme implementation officers, with a calculated sample size of 184 respondents from a target population of 341 participants. Quantitative data were analyzed using descriptive statistics and regression analysis, while qualitative data were analyzed thematically.

Findings: The findings indicate that KYEOP training interventions positively influenced youth socio-economic empowerment by improving technical competencies, workplace preparedness, confidence, and participation in economic activities. Beneficiaries demonstrated substantial exposure to life skills training, technical skills development, and apprenticeship opportunities, with acquired skills applied in employment and income-generating activities.

Conclusion: The study concludes that KYEOP training interventions provide an important pathway for enhancing youth socio-economic empowerment by strengthening human capital and improving labour-market readiness.

Recommendation: The study contributes to youth employment policy discussions by demonstrating that successful training interventions must be integrated within broader labour-market systems that support the transition from skills development to productive economic participation.

Keywords: *Training Interventions, Youth, Socio-Economic, Empowerment, Youth Employment, Opportunities Project*

BACKGROUND OF THE STUDY

Youth employment remains a major global development concern due to its implications for poverty reduction, economic growth, social stability, and individual well-being. Young people represent a substantial proportion of the global population, creating both an opportunity and a challenge for economies seeking to harness demographic dividends. However, many countries, particularly developing economies, continue to experience difficulties integrating young people into productive employment due to limited job creation, skills mismatches, inadequate work experience, and restricted access to productive resources (International Labor Organization [ILO], 2022). The challenge is particularly severe in developing regions where economic growth has not generated sufficient employment opportunities to absorb increasing numbers of young labor market entrants. Sub-Saharan Africa has one of the youngest populations globally, yet many young people remain concentrated in informal, low-productivity, and insecure employment. Although employment participation among youth may appear high in some contexts, the quality and sustainability of such employment remain major concerns because many young workers engage in activities characterized by low earnings, limited social protection, and restricted opportunities for career progression (ILO, 2022).

One important explanation for persistent youth unemployment is the mismatch between the skills young people possess and those employers demand. Formal education systems in many developing countries often struggle to keep pace with changing labor market requirements, particularly as technological advancement transforms occupational demands. As a result, many graduates enter labor markets without the practical competencies, technical abilities, or workplace experience required for productive employment (McGrath et al., 2020). This situation has increased attention to Technical and Vocational Education and Training (TVET), apprenticeship programs, and other skills development interventions as mechanisms to improve employability. Skills development interventions are based on the assumption that investment in human capabilities enhances productivity and increases access to economic opportunities. Human Capital Theory, initially developed through the works of Schultz (1961) and Becker (1964), argues that education, training, and knowledge acquisition represent investments that increase individuals' productive capacity and generate economic returns. From this perspective, vocational and technical training can enhance employability by equipping individuals with practical skills that correspond with labor market requirements.

Beyond improving employment prospects, skills-development programs are also viewed as pathways toward broader socio-economic empowerment. Youth empowerment extends beyond securing employment to include increased economic independence, improved livelihoods, greater decision-making capacity, and the ability to participate meaningfully in economic activities. Effective training programs, therefore, aim not only to provide technical competencies but also to strengthen confidence, entrepreneurship capacity, workplace readiness, and resilience among young people. In response to youth employment challenges, many governments and international development agencies have introduced targeted interventions that combine technical training, apprenticeships, entrepreneurship development, and financial support. Evidence from several developing countries indicates that well-designed skills programs can improve employment outcomes when they are connected to labor-market needs and supported by industry partnerships. However, research also suggests that training interventions produce mixed outcomes depending on program quality, implementation arrangements, economic conditions, and the availability of complementary support systems.

Kenya faces similar youth employment challenges. Despite economic growth and multiple policy interventions, many young Kenyans continue to experience unemployment, underemployment, and unstable incomes. The country has a large youthful population, with young people forming a significant proportion of the labor force. However, employment creation has not kept pace with population growth, resulting in increased pressure on labor markets and growing dependence on informal economic activities (Kenya National Bureau of Statistics [KNBS], 2021). To address these challenges, the Government of Kenya, in partnership with the World Bank, introduced the Kenya Youth Employment Opportunities Project (KYEOP). The program was designed to improve youth labor-market outcomes through demand-driven technical training, life skills development, apprenticeship opportunities, entrepreneurship support, and access to business resources. KYEOP targeted vulnerable youth aged 18–29 years to enhance employability and create pathways to wage employment and self-employment.

According to the thesis from which this manuscript is drawn, KYEOP interventions in Makadara Sub-County focused on training, entrepreneurship support, and labor-market interventions to improve youth socio-economic outcomes. The study identified technical training, apprenticeship, and skills acquisition as central components through which the program sought to strengthen youth capabilities and economic participation. Although KYEOP represents a significant investment in youth employment development, questions remain regarding the extent

to which training interventions translate into meaningful socio-economic empowerment among beneficiaries. Existing studies have examined youth employment programs broadly but have paid limited attention to how specific training components influence empowerment outcomes at the local level. In particular, evidence remains insufficient regarding whether technical training, apprenticeship exposure, and skills acquisition enable youth to achieve sustainable employment, income improvement, and economic independence.

This study therefore examines the influence of KYEOP training programs on youth socio-economic empowerment in Makadara Sub-County, Nairobi County. By focusing specifically on the training component of KYEOP, the study contributes to understanding how skills-development interventions shape youth employment pathways and identifies areas requiring strengthening for future youth empowerment programs.

LITERATURE REVIEW

The section present the theoretical review and the empirical review of the study.

THEORETICAL FOUNDATION

This study is anchored primarily in Human Capital Theory, which provides a useful explanation of how investment in education, training, and skills development contributes to individual productivity and economic advancement. The theory was developed through the contributions of Schultz (1961) and Becker (1964), who argued that human abilities, knowledge, skills, and competencies represent forms of capital that can be developed through deliberate investment. Unlike physical capital, which includes machinery and infrastructure, human capital is embodied in individuals and increases their capacity to produce economic value. According to Human Capital Theory, education and training improve workers' productivity by enhancing their knowledge, technical capabilities, and problem-solving abilities. Individuals who acquire relevant skills are expected to have improved employment opportunities, higher earnings potential, and greater economic participation. Becker (1964) further argued that investment in human capital yields both individual and societal returns, as skilled individuals contribute to increased productivity, innovation, and economic growth.

The theory is particularly relevant to youth employment interventions because many young people face barriers associated with inadequate skills, limited work experience, and poor alignment between education systems and labor-market demands. Training programs seek to address these barriers by equipping young people with competencies that increase their

employability and ability to participate productively in economic activities. Within this study, KYEOP training interventions represent investments in human capital through technical skills training, life skills development, and apprenticeship opportunities. The application of Human Capital Theory in this study assumes that youth who participate in KYEOP training should develop improved capabilities that enhance their employment readiness and economic independence. Technical training enables beneficiaries to acquire occupation-specific skills, while life skills training strengthens communication, problem-solving, and workplace adaptation abilities. Apprenticeship opportunities further provide practical experience that bridges the gap between theoretical learning and workplace requirements within KYEOP.

The theory has been widely applied in studies examining the relationship between skills development and employment outcomes. For instance, McGrath et al. (2020) noted that TVET systems contribute to economic development by preparing individuals with practical competencies required in changing labor markets. Similarly, the International Labor Organization (ILO, 2022) emphasizes that skills development is critical in improving youth transitions from education into productive employment. However, Human Capital Theory has also attracted criticism. Some scholars argue that the theory places excessive emphasis on individual responsibility for employment outcomes while giving insufficient attention to structural factors such as economic conditions, labor-market constraints, discrimination, and availability of employment opportunities. Possessing skills does not automatically guarantee employment where economies lack sufficient job creation capacity. Therefore, while training may enhance individual capabilities, successful youth empowerment also depends on complementary factors such as access to finance, supportive policies, industry linkages, and market opportunities.

Despite these limitations, Human Capital Theory remains appropriate for examining KYEOP training interventions because the program is explicitly designed around the assumption that improving youth capabilities can enhance labor-market outcomes. The theory provides a framework for understanding how technical skills, workplace exposure, and competency development contribute to socio-economic empowerment among youth beneficiaries.

EMPIRICAL REVIEW

Previous studies have examined the relationship between skills-development programs and youth economic outcomes across different contexts. Evidence generally indicates that training interventions can improve employability when programs are aligned with labor-market needs

and supported by complementary interventions. Shi and Bangpan (2022), through a systematic review of youth participation in TVET interventions in low- and middle-income countries, found that vocational programs enabled young people to acquire technical skills, business knowledge, and life skills. However, the authors recommended further impact evaluations to determine whether skill acquisition translates into long-term employment and improvements in livelihoods.

Islam (2021) examined the role of TVET in Bangladesh's human resource development and found that vocational education positively contributed to employability by equipping individuals with the practical skills required in modern economies. The study concluded that investment in TVET strengthens human capital development and supports national economic growth.

Similarly, Omar and Kamaruzaman (2024), in a systematic review of TVET-industry collaboration studies, found that partnerships between training institutions and employers enhance the relevance of skills and reduce the mismatch between graduates' competencies and labor market expectations. The study emphasized that industry involvement is critical for producing graduates capable of responding to changing occupational demands. In Kenya, Musyimi (2021) examined modern teaching and learning equipment in TVET institutions and found that access to appropriate training resources enhanced learners' skills development and improved their employment preparation. The findings suggest that quality training requires not only curriculum content but also practical resources that reflect workplace realities. Despite these findings, a limitation of the existing literature is that many studies focus on general TVET outcomes rather than on specific youth employment programs. There remains limited empirical evidence on how targeted interventions, such as KYEOP, influence socio-economic empowerment at the beneficiary level, particularly in urban settings such as Makadara Sub-County. This study addresses these gaps by focusing specifically on the influence of KYEOP training programs on youth socio-economic empowerment in Makadara Sub-County, Nairobi County. By examining technical skills training, life skills development, and apprenticeship exposure, the study contributes evidence regarding how targeted skills interventions influence youth employment pathways.

CONCEPTUAL FRAMEWORK

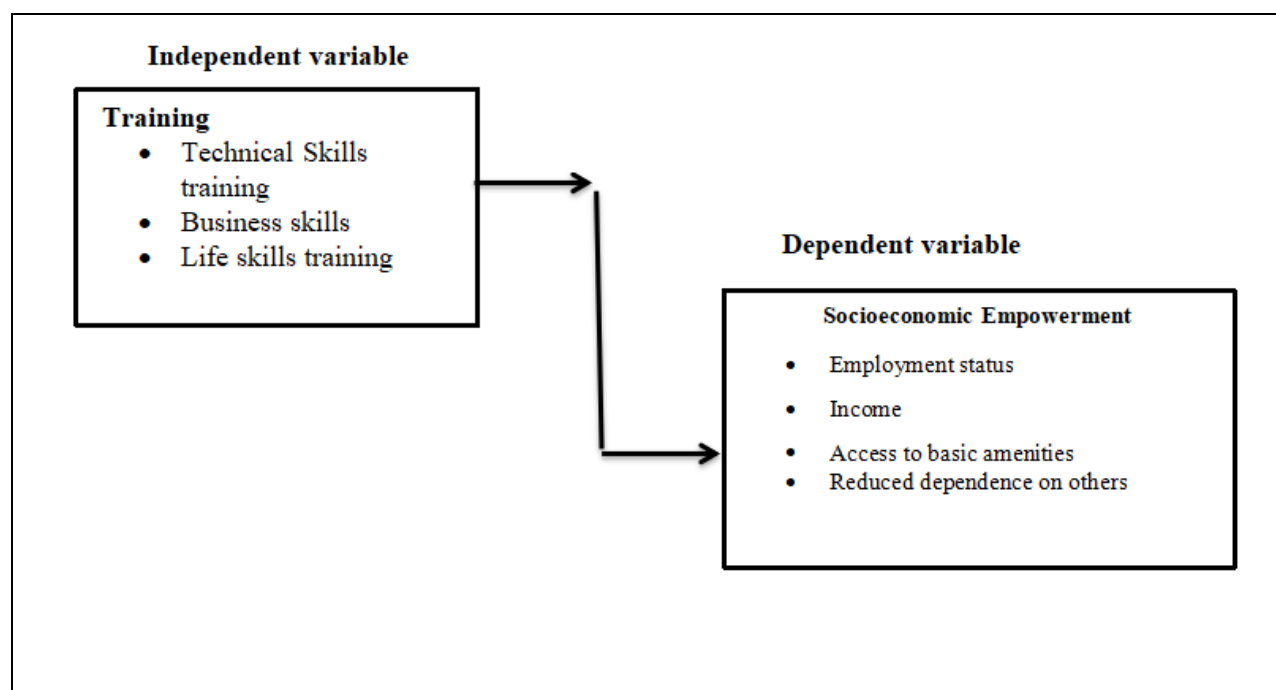


Figure 1: Conceptual Framework

METHODOLOGY

The study employed a mixed-methods research design to examine the influence of KYEOP training interventions on youth socio-economic empowerment in Makadara Sub-County, Nairobi County, Kenya. The target population comprised 337 KYEOP beneficiaries who participated in Cycles 4, 5, and 6 between 2020 and 2023 and four programme implementation officers, giving a total population of 341 participants. Using Yamane's formula at a 5% margin of error, a sample of 184 respondents was obtained. Stratified random sampling was used to select beneficiaries from the different programme cycles, while implementation officers from Youth Affairs and the Micro and Small Enterprises Authority were purposively selected because of their knowledge of the programme. Quantitative data were collected from beneficiaries using structured questionnaires, while qualitative data were obtained from programme officers through key informant interviews. The questionnaire captured information on participation in training, technical skills acquisition, apprenticeship experiences, employment outcomes, income changes, and socio-economic empowerment. Quantitative data were analysed using descriptive statistics and multiple regression analysis in SPSS, while qualitative data were analysed thematically to identify patterns relating to skills development, programme outcomes, implementation experiences, and challenges. The integration of quantitative and qualitative evidence enabled a more comprehensive interpretation of the study findings.

RESULTS AND FINDINGS

This section presents the quantitative findings from 160 KYEOP beneficiaries. The results cover respondents' characteristics, participation in programme interventions, technical skills acquired, and the moderating role of government policy.

Demographic Characteristics of the Respondents

The respondents' demographic characteristics provided context for interpreting their participation and socio-economic outcomes. The characteristics examined included age, gender, marital status, education, employment status, and household headship.

Table 1: Demographic Characteristics of the Respondents

Demographic Aspect	Frequency N=160	Relative percentage outcome
Age bracket		
18-20 years	16	10%
21-23 years	38	23.8%
24-26 years	53	33.1%
27-29 years	41	25.6%
above 29 years	12	7.5%
Gender		
Male	72	45%
Female	88	55%
Marital status		
Single	80	50%
Married	43	26.8%
Widowed/widower	16	10%
Separated/divorced	7	4.4%
cohabiting	14	8.8%
Highest level of education attained		
No formal education	0	0
Primary level	20	12.5%
Secondary level	110	68.7%
Tertiary level	30	18.8%
current working status		
Employed	27	16.8%
Self employed	58	36.2%
Unemployed	75	47%
Household headship		
Yes	97	60.6%
No	63	39.3%

The largest proportion of respondents was aged 24–26 years (33.1%), followed by those aged 27–29 years (25.6%) and 21–23 years (23.8%). Respondents aged 18–20 years accounted for 10.0%, while those above 29 years represented 7.5%. Although KYEOP targeted youth aged

18–29 years at enrolment, some participants had moved into older age categories by the time of data collection. The age distribution therefore reflects respondents' ages during the study rather than their ages upon programme entry. Female respondents constituted 55.0% of the sample, while males represented 45.0%, indicating relatively balanced participation across gender. Regarding marital status, 50.0% were single, 26.8% were married, 10.0% were widowed, 8.8% were cohabiting, and 4.4% were separated or divorced. These findings show that some beneficiaries had family responsibilities that could increase their need for stable employment and reliable income.

Most respondents had attained secondary education (68.7%), while 18.8% had tertiary education and 12.5% had primary education. No respondent reported having no formal education. The predominance of secondary-school graduates suggests that KYEOP provided an alternative skills-development pathway for youth with limited access to tertiary or professional training. Regarding employment status, 47.0% were unemployed, 36.2% were self-employed, and 16.8% were employed. Although self-employment provided an income-generating pathway for some beneficiaries, the high unemployment rate indicates that programme participation did not automatically result in employment or enterprise establishment. Stronger post-training support, including job placement, market linkages, mentorship, and enterprise-development services, may therefore be necessary. Additionally, 60.6% of respondents were household heads, indicating that employment and income outcomes were important for both individual empowerment and household economic security.

Participation in KYEOP Training Programmes

The study examined beneficiaries' participation in training, apprenticeship, and job-creation interventions. Respondents could participate in more than one programme component.

Table 2: Participation in Training, Apprenticeship, and Job-Creation Support

Component	Sub component	Frequency (f) of respondents	Relative percentage (%) of respondents	Average participation Percentage
Training and Apprenticeship (internship)	Life skills training	144	90	73.7%
	Technical skills training	109	68.1	
	Internship workplace experience	101	63.1	
Support for job creation	Business plan competition	47	29.3	34.1%
	Startup grants	66	41.25	
	Business development services	51	31.8	

As presented in Table 2, life skills training recorded the highest participation rate at 90.0%. Technical skills training reached 68.1% of respondents, while 63.1% participated in internships or workplace experience. The average participation rate across training and apprenticeship components was 73.7%. These findings indicate that KYEOP placed considerable emphasis on developing communication, teamwork, problem-solving, occupational skills, and workplace readiness. However, participation varied across the components, with life skills training reaching more beneficiaries than technical training and practical workplace exposure. Participation in job-creation support was considerably lower, averaging 34.1%. Start-up grants reached 41.3% of respondents, followed by business development services at 31.8% and business plan competitions at 29.3%. This difference suggests a gap between skills acquisition and access to interventions supporting employment, business establishment, and enterprise growth. Although training strengthened beneficiaries' competencies and labour-market readiness, sustainable empowerment also required financing, mentorship, market linkages, job placement, and continued enterprise support. These findings are consistent with Apunyo et al. (2022), who found that skills-development programmes enhance employability when training is connected to practical labour-market opportunities.

Technical Skills Acquisition

Table 3: Technical Skills Acquired Through the KYEOP Programme

Skill	Frequency	Respondents' relative percentage (%)
Fashion design	0	0.00%
Hairdressing and beauty	10	10.60%
Carpentry	0	0.00%
Electrical installation	34	36.20%
Welding	0	0.00%
Plumbing	21	22.30%
Catering	29	30.90%
Tailoring and dressmaking	0	0.00%
Welding	0	0.00%
Other	9	8.70%
Total	103	100%

Table 3 indicates that Electrical installation was the most common technical skill acquired, accounting for 36.2 percent of the respondents who underwent technical training. This was followed by catering (30.9%) and plumbing (22.3%). The concentration of trainees in these skill areas suggests that beneficiaries were largely trained in occupations with potential for both wage employment and self-employment within local labor markets. Hairdressing and beauty

accounted for 10.6 percent of respondents, while other skills such as barbering, computer networking and repair, masonry, DJ and music production, and interior design collectively accounted for 8.7 percent. No respondents reported receiving training in fashion design, carpentry, welding, or tailoring and dressmaking.

This may indicate limited program offerings in these trades or lower enrolment levels among beneficiaries. The findings demonstrate that KYEOP training programs primarily focus on practical and market-oriented technical skills that can support employment creation and income generation. However, the lack of training in certain trades suggests opportunities to broaden program coverage to better cater to diverse youth interests and labor market needs. These findings are consistent with Apunyo et al. (2022), who observed that technical and vocational training programs improve youth employability by equipping beneficiaries with practical skills directly applicable to the labor market. Similarly, Wamalwa et al. (2024) argues that labor market-oriented skills development programs enhance young people's ability to secure employment and engage in productive economic activities. The concentration of beneficiaries in technical fields such as electrical installation, plumbing, and catering reflects, therefore, KYEOP's emphasis on enhancing employability through demand-driven skills development.

Moderating Effect of Government Policy

The study examined whether government policy moderated the relationship between KYEOP training interventions and youth socio-economic empowerment. Hierarchical regression analysis was conducted by entering training, government policy, and their interaction term in successive models.

Table 4: Regression Coefficients for the Moderating Effect of Government Policy

Table 1.4 Regression Coefficients

Model	Variable	B	Std. Error	Beta	t	Sig.
1	Constant	0.842	0.221		3.81	0.000
	Training	0.374	0.071	0.381	5.268	0.000
2	Constant	0.811	0.236		3.437	0.001
	Training	0.359	0.069	0.367	5.203	0.000
	Government Policy	0.192	0.063	0.181	3.048	0.003
3	Constant	0.745	0.241		3.091	0.002
	Training	0.301	0.076	0.308	3.961	0.000
	Government Policy	0.173	0.066	0.162	2.621	0.001
	Policy × Training	0.115	0.039	0.207	2.949	0.004

Training intervention was positively and significantly associated with youth socioeconomic empowerment in Model 1, $\beta = .381$, $p < .001$. This finding indicates that greater exposure to technical training, life skills development, and apprenticeship opportunities was associated with improved employment readiness, confidence, and economic participation. In Model 2, training remained significant after government policy was introduced, $\beta = .367$, $p < .001$. Government policy also showed a positive and significant association with socioeconomic empowerment, $\beta = .181$, $p = .003$. These results suggest that both skills development and supportive policy conditions were relevant to beneficiaries' empowerment outcomes. In Model 3, the interaction between government policy and training was positive and statistically significant, $\beta = .207$, $p = .004$, confirming a moderating effect. Training also remained significantly associated with socioeconomic empowerment after accounting for the interaction, $\beta = .308$, $p < .001$. The findings indicate that the association between KYEOP training and empowerment was stronger under favourable policy conditions. Policies supporting skills certification, apprenticeships, employer engagement, and labour-market access may therefore help beneficiaries translate acquired competencies into employment, self-employment, and sustainable livelihoods.

CONCLUSION

This study examined the influence of KYEOP training interventions on youth socio-economic empowerment in Makadara Sub-County, Nairobi County. The study established that KYEOP training interventions played a significant role in strengthening youth capabilities and improving their capacity to participate in economic activities. The findings demonstrate that training interventions contributed to youth empowerment through the development of technical skills, life skills, workplace competencies, and practical experience acquired through apprenticeship opportunities. The demographic findings revealed that KYEOP primarily reached economically active youth facing significant employment challenges. Most respondents were young adults aged between 21 and 29 years, with the majority having attained secondary education as their highest level of education. Despite their educational background, a substantial proportion of beneficiaries remained unemployed, demonstrating the importance of targeted skills-development interventions in addressing barriers associated with skills mismatch and limited labour-market opportunities.

The study further established that beneficiaries had substantial exposure to KYEOP training components. Life skills training recorded the highest participation, followed by technical skills training and workplace experience through apprenticeship. This indicates that KYEOP adopted

a comprehensive training approach that combined personal development, occupational competencies, and practical workplace exposure. The acquisition of skills in areas such as electrical installation, catering, plumbing, and other vocational fields demonstrates that the programme provided market-oriented competencies with potential application in employment and self-employment activities. The findings also showed that beneficiaries were able to apply a significant proportion of the skills acquired through KYEOP training. Exposure to practical training environments, workplace experience, and modern tools and technologies enhanced beneficiaries' confidence, employability, and preparedness to engage in economic activities. However, the study established that skills acquisition alone does not automatically guarantee sustainable socio-economic empowerment, as some beneficiaries continued to experience challenges related to employment opportunities and the effective utilisation of acquired competencies.

The regression analysis confirmed the significant contribution of training intervention to youth socio-economic empowerment. Training had a positive and statistically significant relationship with empowerment outcomes ($\beta = 0.381$, $p < 0.001$), indicating that increased participation in KYEOP training was associated with improved employment readiness, economic participation, and livelihood outcomes. The findings therefore confirm the relevance of Human Capital Theory, which argues that investment in knowledge and skills enhances individual productivity and economic potential. Further, the moderation analysis demonstrated that government policy strengthens the relationship between KYEOP training intervention and youth socio-economic empowerment. The significant interaction effect between policy and training ($\beta = 0.207$, $p = 0.004$) indicates that training interventions produce stronger empowerment outcomes when supported by effective policy implementation, skills recognition systems, labour-market linkages, apprenticeship opportunities, and supportive institutional frameworks.

The study concludes that KYEOP training intervention was an important pathway for enhancing youth socio-economic empowerment in Makadara Sub-County. However, the sustainability of training outcomes depends on the ability of beneficiaries to transition from skills acquisition to productive economic participation. Therefore, youth training programmes should not only focus on providing technical and life skills but should also be embedded within supportive labour-market systems that facilitate employment opportunities, continuous skills development, and effective application of acquired competencies.

RECOMMENDATIONS

Based on the findings and conclusions of the study, the following recommendations are made:

The study recommends that youth training programmes strengthen partnerships between training providers and industry actors to improve the transition from training to employment. Since apprenticeship and workplace exposure contributed to improving beneficiaries' practical competencies and workplace readiness, stronger employer involvement should be promoted through expanded internship opportunities, workplace mentorship, and industry-based skills assessment.

The study recommends continuous review and updating of training curricula to ensure alignment with changing labour-market demands. Although KYEOP beneficiaries acquired practical skills in areas such as electrical installation, catering, and plumbing, future training programmes should incorporate emerging technologies, digital skills, and market-demanded competencies to improve youth competitiveness.

The study recommends that youth training interventions extend beyond skills provision by introducing structured post-training support. This should include career guidance, employment placement services, mentorship, and follow-up mechanisms to help beneficiaries effectively apply acquired skills and transition into sustainable employment or self-employment.

REFERENCES

- Attah, A., Ibrahim, M., & Yusuf, A. (2023). Apprenticeship programs and youth employment creation: Evidence from skills development initiatives in Nigeria. *Journal of Youth Studies and Development*.
- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. Columbia University Press.
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
- Ebekozien, A., Aigbavboa, C., & Thwala, W. (2024). The role of apprenticeship in the skills development of construction artisans in achieving Sustainable Development Goal 8. *Journal of Engineering, Design and Technology*.
- Eneh, N., Okoye, P., & Eze, C. (2023). Apprenticeship training and youth empowerment: Pathways toward employment and entrepreneurship development. *International Journal of Vocational Education and Training Research*.
- International Labor Organization. (2022). *Global employment trends for youth 2022: Investing in transforming futures for young people*. International Labor Office.

- Islam, M. S. (2021). Technical and vocational education and training (TVET) for human resource development and sustainable national development in Bangladesh. *Journal of Education and Practice*.
- Kanu, I. (2020). Apprenticeship training and youth employability: Developing practical skills for labor market participation. *International Journal of Vocational and Technical Education*.
- Kenya National Bureau of Statistics. (2021). *Economic survey 2021*. Nairobi: KNBS.
- McGrath, S., Alla-Mensah, J., & Langthaler, M. (2020). Skills for development and vocational education and training: Current debates and future directions. *International Journal of Educational Development*, 78, 102251.
- Omar, M., & Kamaruzaman, M. (2024). Technical and vocational education and training (TVET)-industry collaboration: Enhancing employability through skills development. *Education and Training Journal*.
- Schultz, T. W. (1961). Investment in human capital. *American Economic Review*, 51(1), 1–17.
- Shi, W., & Bangpan, M. (2022). Youth participation experience of technical and vocational education and training interventions in low- and middle-income countries: A systematic review. *International Journal of Educational Development*, 92, 102610.