

Influence of Non-Academic Factors on Career Adaptability of Technology Education Graduates Working in Kenyan Technical and Vocational Institutions

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Abstract

The current world of work is very dynamic and needs a workforce that is well-suited to help accommodate the changes at the workplace. This study sought to investigate the influence of selected non-academic factors which included personality, gender, and family background on the career adaptability of the trainers who pursued a degree in technology education. The study was guided by Piaget's constructivist theory. This study used a descriptive research design. A questionnaire was used to gather responses from 814 trainers who were Technology Education graduates working as trainers in Kenyan Technical and Vocational Institutions. The validity of the questionnaire was ensured by the use of a pilot study and expert judgment while reliability was ensured by the use of the test-retest technique. Pearson Product Moment Correlation for the test-retest was 0.806. This study used snowball sampling to select the TED graduates. Data analysis was done by use of Stat Graphics Centurion XVII.I software. The study found out that trainers who were raised in poor family backgrounds were best adapted to their careers followed by those from rich backgrounds while those from middle-class backgrounds were least adapted to career. Regarding gender, the study established that male trainers who pursued technology education degree programs were more adapted to their careers as compared to their female counterparts. The study also found that the personality of the trainers affects their career adaptability. This study recommends that female TED graduates should be given more opportunities to enhance their career adaptability. Moreover, all families should endeavor to give support to the children to improve their future ability to cope with changes. The trainers should also soar beyond their personalities so that they can resonate well with changes in the workplace.

Keywords: Career adaptability, family background, gender, personality.

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Competing interests: The authors have declared that no competing interests exist

Introduction

Background

Over the years, the world has experienced several changes. The changes have been technological, economic, social, or moral in nature (Nurten & Oya, 2017). With these dynamics in effect, career

adaptability has emerged to be a lifelong skill or vehicle that can aid individuals in navigating various employment opportunities (Savickas, 1997) and grasping challenging professional circumstances (Hirschi, 2012).

Career adaptability is the ability of an individual to conform to changes swiftly and keep up the balance of his/her career roles when experiencing the transition of career roles (Super & Knasel, 1981). Career adaptability is an essential ability for career development and the preparation of professional individuals which involves behaviors such as planning, exploring oneself, environment as well and making decisions (Hirschi, 2009; Savickas, 1997).

Career adaptability is a multifaceted and hierarchical skill that is influenced by four profile factors: concern about the future, control of self to suit the existing niche, curiosity about future possibilities pertaining career, and confidence in pursuing ambitions (Savickas & Porfeli, 2012). Career concern entails being conscious about the future and coming up with plans to counter forthcoming changes, with a hopeful attitude in due regard to the future (Santili et al., 2014). Career concern can also be seen as individual views related to the current career as well as the ability to aim at and visualize how a career will look like, that is, in the future (Maggiori, Rossier & Savickas, 2017).

Career control refers to the individual's potential to take charge and stand in a position to construct and set up own career. Career control enables individuals to be focused on shaping themselves and their environment to meet the needs at hand using self-discipline, effort, and persistence. It, in other words, involves getting in possession of the future and feeling capable of making informed career-related decisions (Ntarangwe et al., 2021).

Career curiosity is the ability that an individual has to discover (innovate), explore, and retrieve information related to career development (Savickas, 2005). Career curiosity, therefore, entails delving into the intellectual process of finding the possibilities of career opportunities ideal for self, and scenarios (in terms of unforeseen changes) of the future.

Career confidence, according to Savickas (2012), is the ability to withstand the obstacles and the problems experienced when pursuing success. Career confidence involves being bold and strengthening oneself to pursue certain ambitions. Confidence is manifested in terms of trust and a strong belief that individuals have in executing their choices and achieving certain aims in life. Career confidence is also revealed when one shows tact in solving problems and shows prudence when handling resources to mitigate challenges emanating from emerging impediments.

Career adaptability has been a point of focus across the globe. Kenyans have not lagged in exploring career adaptability through research (Wainaina et al., 2014; Ntarangwe et al., 2021). Wainaina et al. (2014) reviewed literature associated with factors influencing employee adaptability to transformation in commercial banks. In their review, they found out that resistance to transformation in commercial banks was one of the major limitations to expansion in organizations, due to its negative impacts.

Ntarangwe et al. (2021), on the other hand, studied on correlates of career adaptability among academic staff in selected universities in Nairobi, Kenya. In their research, they used correlates such as gender, age, level of education, years of experience, and type of university of the academic staff to study employees' career adaptability and guide employers on what to do to uplift employees' performance. They concluded that employers needed to organize seminars and workshops to improve concern and curiosity among workers. They further advised that employers needed to assign employees some roles to boost employees' career control.

Kabare et al. (2014) noted that individuals who work in Nairobi (Kenya's capital) in various sectors of the economy in the city exhibited an equal portion of the need for career adaptability. This is now the order of the day all over the country. In a recent television interview on employability, Kenya's principal secretary from the state Department of Public Service advised Kenyan graduates to separate themselves from the sense of entitlement: the thinking that they deserve the best because they worked the best in school. Rather, they are encouraged to be ready to pick any occupation and work best as waiting for the white-collar job they trained for might be their lifelong disappointment (Tran, 2019). Secondly, graduates are required to be flexible enough as the current world provides unclear prospects of employment for graduates from almost all professional fields (Tomlinson, 2012; Clarke, 2017). This syndrome of increased porosity and interaction among professional fields has not spared Technical and Vocational Education and Training (TVET) graduates (Ikinya, 2019).

This study investigated how Technology Education (TED) graduates from Kenyan universities had adapted to career transitions at their various places of work. This is because the scope of careers held by technology education graduates is very wide and ever-changing. The need for career flexibility is, thus, big. This study investigated the career

adaptability of technology education graduates using personality, gender, and family background.

Statement of the problem

Teaching and training, just as other professions, have changed over the years (Garcia et al., 2017). There have been complaints from the management of various Kenyan technical institutions that technology education graduates were less versatile and thus rigid in embracing the diverse technologies at work. This may point towards an inability to cope well with changes at places of work. This, therefore, points to possible issues in the career adaptability of the

graduates pursuing technology education. These complaints have been taken a step ahead, being picked by some employers as an allegation against the graduates. To the point of great concern, these complaints have been capitalized upon, causing technology education graduates to be less competitive during the deployment of trainers in TVET institutions. Although there is scanty literature to substantiate this, the phenomenon has been seen during the deployment of TVET trainers by Kenya's Public Service Commission (PSC). Table 1 below shows the phenomenon.

Table 1: Distinguished cases of public service commission deployment in some Kenyan TVET institutions from 2018 to 2022

Institution	Department	Number of Trainers Employed from 2019-2022	Number of those trained in:
Sang'alo TTI	Electrical & Electronics	5	TED - 0 Engineering - 4
Rift Valley TTI	Building and Civil Engineering	4	TED - 1 Engineering - 3
Matili TTI	Building and Civil Engineering	3	TED - 0 Engineering - 3
Ravine TTI	Mechanical & Automive	3	TED - 0 Engineering - 3
Coast National Polytechnic	Mechanical & Automive	4	TED - 0 Engineering - 2 Other Courses-2

Source: Survey from the TVET Institutions

This survey represents a few among several manifestations of preference of other professionals to TED graduates. There was a need to investigate the career adaptability of Technology Education graduates as a possible cause of the allegations and perceptions that TED graduates are less versatile.

Research objectives

1. To investigate the influence of family background on career adaptability of Technology Education graduates working in Kenyan technical and vocational institutions.
2. To find out the influence of gender on the career adaptability of Technology Education graduates working in Kenyan technical and vocational institutions.
3. To investigate the influence of personality on career adaptability of Technology

Education graduates working in Kenyan technical and vocational institutions.

Methodology

A research methodology outlines the specific details of the inquiry. Denzin and Lincoln (2021) refer to this as "strategies of inquiry". A study's general operational framework clearly describes the kind of data to be gathered from specified sources and applicable procedures to be employed. A well-developed research design is an essential requirement in arriving at valid findings, comparisons, and conclusions (Kumar, 2011). This study used a descriptive design and specifically a survey design to investigate the career adaptability of technology education graduates from Kenyan universities. A survey design, according to Creswell (2009), is applicable where there is a need to provide a quantitative or numeric description of a population's

attitudes, opinions, and trends by carefully studying a sample of the target population.

Study area

For a researcher to carry out a study objectively, there is a great need to identify the area for conducting the research (Leedy & Ormrod, 2005). This study was based in Kenya. This is because the majority of Technology Education graduates from various Kenyan universities are scattered across various TVET institutions within the country's borders.

Target population and sample

The target population in this study were all Technology Education graduates (degree holders) from Kenyan universities who were working in TVET institutions as trainers.

The universities that offer technology education courses in Kenya include Dedan Kimathi University of Technology (DeKUT), Meru University of Science and Technology (MUST), Masinde Muliro University of Science and Technology (MMUST), Moi University (MU), Murang'a University of Technology (MUT) and University of Eldoret (UoE). The graduates were working in various TVET institutions in Kenya.

Snowball sampling was used to obtain the required number of TED graduates to participate in the study. According to Mugenda (2009), a sample of between 10 - 30% is sufficient to be used to provide data that can be generalized for the entire population. This helped to determine the sample for the study.

The targeted population and sample of the technologists (TED Graduates) is as shown in Table 2 below.

Table 2: Target population and sample size of technology education graduates

University	Target Population	Sample	
	Approx. Number	Number	Percentage
DeKUT	209	52	25%
MUST	5	5	100%
MMUST	480	120	25%
MU	200	50	25%
MUT	100	25	25%
UoE	3500	875	25%
Total	4494	1127	25.08%

Source: Author 2022

Data collection instruments

This study utilized a questionnaire to collect data from the respondents. The questionnaire was administered together with the Career Adapt-Abilities Scale Short Form (CAAS-SF) that was developed by Maggiori, Rossier, & Savickas, (2017). CAAS-SF is a tool used to measure career adaptability. The tool was considered more appropriate because it is brief and could be more convenient to the respondents who had tight schedules. CAAS-SF has a 5-point Likert scale that ranges from 1 which implies no strength to 5 which implies greatest strength.

After participants were assigned scores to indicate their proficiency in addressing matters linked to their career concern, control, curiosity, and confidence, the averages for each dimension of career adaptability were computed for the respective groups. This process assisted in determining the extent to which the respondents possessed career adaptability based on their performance in these areas.

Validity and reliability of the instruments

According to Kubai (2019), validity in research is the attribute of the research instruments to properly cover what the study intends to investigate. The validity of the questionnaire was established through the use of a pilot study as well as expert judgment from experienced researchers. For the pilot study, the researcher identified 30 TED graduates and administered the questionnaire to them. Their responses and comments on the questionnaire were used to refine the questionnaire before administering them in the actual study. According to Taherdoost (2016), the reliability of a research instrument is the degree to which measurements can be replicated when taken by various people under different circumstances, settings, and purportedly substituted devices for measuring the same item. The reliability of the instrument was ensured by the use of a test-retest technique in which a Pearson Product Moment correlation coefficient of 0.806 was obtained.

Data analysis

The researcher used StatGraphics Centurion XVI.I software to analyze the data. This is because the software contains a set of statistical processes that allow for the establishment of relationships between one or more independent variables, which can be continuous or discrete, and one or more dependent variables. The quantitative data collected in the study was analyzed using descriptive statistics such as frequency, mean, and standard deviation.

Results

Response rate

The total number of Technology Education trainers who responded to the questionnaire was 814. This represented 72.23% of the estimated sample of 1127 respondents who were TED graduates from Kenyan

Universities. This response rate, according to Mugenda and Mugenda (2003) is very good.

The mean scores for the values obtained from each of the four components comprising career adaptability were calculated by averaging the cumulative scores of these four components. The scores, which ranged from 1 to 5, were subsequently grouped into categories. Scores below 2.5 were classified as indicative of low career adaptability, whereas scores exceeding 2.5 were indicative of high levels of career adaptability.

Family background and career adaptability

The study investigated the influence of family background in terms of socio-economic status on the career adaptability of Technology Education graduates. The findings are presented in Table 3 below

Table 3: Family background and career adaptability

Family Background		Career Adaptability			
		Concern	Control	Curiosity	Confidence
Poor	Mean	4.2381	4.2369	4.4165	4.4285
	Std. Dev.	0.8309	0.8309	0.5976	0.8106
	Frequency	301	301	301	301
Middle-Class	Mean	3.9667	4.0000	3.9000	4.1000
	Std. Dev.	0.7649	0.9097	0.8847	0.7589
	Frequency	366	366	366	366
Rich	Mean	3.6667	4.4891	4.5000	4.1667
	Std. Dev.	1.3027	0.5239	0.5222	0.5774
	Frequency	147	147	147	147

Source: Author 2022

From the findings in Table 3, it was observed that graduates from poor family backgrounds had the highest values of curiosity (Mean= 4.4165) and lowest values of control (Mean=4.2369). For graduates from a family background that belongs to the middle class, it was observed that they had the highest values of confidence (Mean=4.1000) and lowest values of curiosity (Mean=3.9000). Moreover, it was also observed that graduates from rich family backgrounds had the highest values of curiosity (Mean=4.5000) with the lowest values of concern (Mean= 3.6667).

Concern, as a profile factor of career adaptability, was the highest for graduates hailing from poor family backgrounds to graduates (Mean =4.2381) followed by that for graduates from middle-class status (Mean=3.9667) and lastly graduates from rich family backgrounds (Mean=3.6667). This could

be due to the urge of graduates from poor family backgrounds to be committed to bringing change to their families through working hard and carrying out their career tasks as professionally as possible to maintain their jobs and attract better rewards. The urge tends to decrease with an increase in per capita income for the family from which graduates hail.

Graduates from rich family backgrounds had the highest score for control (Mean = 4.4891) followed by graduates from poor family backgrounds (Mean = 4.2369), while graduates from middle-class families had the lowest values of control as a construct of career adaptability (Mean = 4.0000).

Curiosity as a profile of career adaptability had the highest scores among graduates from rich families (Mean = 4.5000). The graduates from poor families followed by a mean of 4.4165 and then the people from the middle class had the lowest scores

(Mean = 3.9000). The graduates from poor family backgrounds might also have had higher values of curiosity due to their increased urge to gather more knowledge so that they could be effective in their professional activities. The graduates from poor family backgrounds might also have had their exploratory behavior stirred up by their parents' motivation to work hard as parental support is more than monetary assistance. Graduates from poor family backgrounds had the highest scores of

confidence (Mean = 4.4285) followed by graduates from rich family backgrounds (Mean = 4.1667) while graduates from middle-class family backgrounds had the lowest scores of confidence (Mean = 4.1000).

Gender and career adaptability

The study sought to examine the impact of gender on the career adaptability of TED graduates. In considering this, the results obtained are summarized in Table 4 below.

Table 4: Gender differences and career adaptability

Gender		Career Adaptability			
		Concern	Control	Curiosity	Confidence
Male	Mean	3.9778	4.2785	4.2444	4.2889
	Std. Dev.	0.9650	0.5886	0.7733	0.7268
	Frequency	513	513	513	513
Female	Mean	4.0000	4.0556	4.0489	4.1667
	Std. Dev.	0.7670	0.9297	0.9376	0.8575
	Frequency	301	301	301	301

Source: Author 2022

The study found that female graduates had slightly higher levels of career concern (Mean = 4.0000) as compared to male graduates (Mean = 3.9778). The male graduates, on the other hand, recorded higher values of control, curiosity, and confidence. This, in general terms, reveals that male graduates were better in terms of career adaptability compared to female graduates. This could be because Kenyan males, as dictated by their culture, are tasked with more obligations and therefore are likely to strive hard to cope with changes and maintain balance.

Personality and career adaptability

Among the factors classified under non-academic factors that were examined by the study was personality. The impact between career adaptability and personality is presented in Table 5 below.

Considering each personality trait independently, graduates whose dominant trait was agreeableness had the highest values of control (Mean = 4.3333) and lowest levels of concern (Mean = 4.1482). Graduates with conscientiousness personality traits had the highest values of confidence (Mean = 4.4583) and lowest values of control (Mean = 4.0417). Graduates with extroversion personality traits were found to have the highest values of

confidence (Mean = 4.3333) but lowest values of control (Mean = 3.5333). Graduates with dominant neuroticism personality traits had the highest values of control (Mean = 4.3333) but the lowest values of career adaptability for concern (Mean = 4.0667).

In terms of scores in each construct of career adaptability, graduates whose personality trait is conscientiousness had the highest scores of concerns (Mean = 4.2083) while graduates with openness personality trait had the lowest scores of career concern (Mean = 3.1667).

Graduates with agreeableness and those with neuroticism personality traits had the highest values of career control (Mean = 4.3333). This could have been caused by the fact that agreeableness comes along with politeness as well as the ability to accommodate others which could make an individual control themselves and others. To account for neuroticism having the highest scores of control, the personality trait comes along with being careful to avoid irritating scenarios and this could lead to the concerned individuals having better control of themselves. Extroversion, on the other hand, had the lowest values of career control (Mean = 3.5333) and this could be because individuals having this personality trait social, talkative, and love fun. Thus, the individuals might lack the ability to tame themselves as well as control others accordingly.

Table 5: Personality and career adaptability

Personality		Career Adaptability			
		Concern	Control	Curiosity	Confidence
Agreeableness	Mean	4.1482	4.3333	4.2222	4.1571
	Std. Dev.	0.6624	0.6793	0.8006	0.7698
	Frequency	181	181	181	181
Conscientiousness	Mean	4.2083	4.0417	4.1667	4.4583
	Std. Dev.	0.7790	0.9546	0.8681	0.5882
	Frequency	159	159	159	159
Extroversion	Mean	4.0667	3.5333	4.2000	4.3333
	Std. Dev.	0.9612	0.9155	0.7746	0.7237
	Frequency	143	143	143	143
Neuroticism	Mean	4.0667	4.3333	3.7333	3.3333
	Std. Dev.	0.7988	0.8997	0.9611	0.9759
	Frequency	140	140	140	140
Openness	Mean	3.1667	4.1667	3.9167	4.1067
	Std. Dev.	1.2673	0.5774	0.7930	0.7177
	Frequency	191	191	191	191

Source: Author 2022

Graduates with an agreeableness personality had the highest scores of curiosity (Mean = 4.2222). This could be linked to the fact that the personality is characterized by flexibility and this could imply that the graduates in this category like investigating viable options and also embracing diversity in their workplaces. Graduates belonging to the neuroticism personality trait were found to have the lowest scores of curiosity (Mean = 3.7333).

Lastly, conscientiousness had the highest value of confidence (Mean = 4.4583) while neuroticism had the lowest value (Mean = 3.3333). The highest values of conscientiousness could be because the personality is characterized by honesty, hardworking and following rules as well as cherishing perfection. These attributes are essential in building an individual's confidence. Neuroticism has had the lowest values of confidence due to the reason that individuals with this personality easily get irritated and are moody as supported by the theoretical view of Savickas & Porfeli (2012). This could be a deterrent to having greater confidence when handling issues.

Discussion

Regarding family background, all the participants had high levels of career adaptability (above the mean of 2.5000). This study established that TED graduates from poor family backgrounds had the highest scores

in terms of career concern and career confidence as compared to their counterparts from middle-class and rich families. This finding disagreed with the findings of Xing & Rojewski (2018), Metheny & McWhirter, (2013), and Keller & Whitson (2004) which revealed that upbringing children in families with poor socio-economic status caused diminished development of children in the various constructs of career adaptability. Graduates from rich family backgrounds, on the other hand, had the highest values of career control as well as curiosity but the lowest values of concern. This could be attributed to the fact that graduates from rich backgrounds had a vast knowledge of the career world so they had high aspirations in terms of seeking better opportunities that were in line with their family status (Liu et al., 2015). This finding also agreed with the findings by Wiwik et al. (2017) which revealed that there was an observed increase in exploratory behavior among graduates who were accorded more parental support and care by their parents.

The findings of this study revealed that male TED graduates had the highest values of control, curiosity, and confidence. Female graduates, on the other hand, had the highest values of career concern where they narrowly surpassed the male graduates by a margin of 0.0012. This finding, thus, revealed that male graduates were more adapted to their careers as compared to their female counterparts.

The average scores, nevertheless, were above the values that point to lower career adaptability. These findings agreed with the findings of Han and Rojewski (2015) but differed with the findings of Ferreira (2012), Coetzee & Harry (2014), and those of Ntaragwe et al. (2021).

In terms of personality and career adaptability, this study found out that TED graduates with agreeableness as a dominant personality trait had the highest values of curiosity and control. TED graduates with conscientiousness personality traits had the highest scores of concern and confidence. This finding agreed with the findings of Burger (2006) and Creed et al. (2009) who found that conscientiousness was the strongest indicator of the total score of career adaptability of an individual. On the other hand, those with openness personality trait had the lowest values of concern, those with extroversion had the lowest values of control while those with neuroticism personality trait had the lowest values of curiosity and confidence. The negative correlation obtained between neuroticism personality trait and career adaptability was also found out by Nilforooshan & Salami (2016) and Oncel (2014). All these findings had a direct link with the attributes that corresponded with the personality trait. In general, the findings concerning the impact of personality on career adaptability revealed a significant relationship between personality and career adaptability. These findings agreed with the findings of Teixeira (2012), Viaven et al (2012), Fan & Yao (2012), Nauta & Derckx (2007), Kavas et al (2015), and Zacher (2014). Neuroticism, indeed, in general terms recorded the lowest values of such constructs as curiosity and confidence.

This finding implied that there was a strong correlation between one's personality traits and career adaptability. That is, the attributes that characterize the personality of an individual inform the individual's ability to demonstrate career concern, control, curiosity, and confidence.

Conclusion

From the findings obtained, it can be concluded that a poor family background provides the best grounds that enhance the career adaptability of an individual followed by a rich background while middle-class backgrounds breed the least adapted individuals. Moreover, male TED graduates are more adapted to their careers as compared to their female counterparts. Last but not least, dominant personality

traits' associated attributes inform the constructs of career adaptability in which someone does well.

Recommendations

This study recommends that all families irrespective of their socio-economic status should offer the required support to their children so that they can enhance the career adaptability of the children. Moreover, all TVET institutions in Kenya should provide exposure opportunities to female trainers to enhance their career adaptability. Female trainers should be given opportunities to handle various roles and their workplaces to enhance their versatility at the workplace. Last but not least, all trainers need to strive beyond their personalities to ensure that they are versatile at their workplaces. If possible, the trainers should use the strengths of their personalities to serve more roles at their workplaces.

References

- Angel, S., (2012). Planet of Cities. Lincoln institute of Land Policy. Cambridge.
- Clarke, M. (2017). Rethinking Graduate Employability: The Role of Capital, Individual Attributes and Context. Retrieved from <https://doi.org/10.1080/03075079.2017.1294152>
- Coetzee, Melinde & Harry, Nisha. (2014). Gender and hardiness as predictors of career adaptability: An exploratory study among Black call centre agents. *South African Journal of Psychology*. 45. 10.1177/0081246314546346.
- Creed, P.A., Fallon, T. & Hood, M. (2009). The Relationship between Career Adaptability, Person, Situation variables and Career Concerns in Young Adults. *Journal of Vocational Behavior*. 74, 219-229.
- Creswell, J.W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Approaches*. (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Denzin, N.K., & Lincoln, Y.S.(Eds.). (2018). *The Sage Handbook of Qualitative Research* (5th ed). Los Angeles, CA Sage.
- Cheung, F.M., Fan, W. & Yao, J.(2012). Chinese Personality and Vocational Behaviour. *Handbook of Chinese Organizational Behavior: Integrating Theory, Research and Practice*. 359-379.
- Ferreira, N. (2012). *Constructing a Psychological Career Profile for Staff Retention*. University of South Africa.
- Garcia-Huidobro, Juan & Nannemann, Allison & Chang-Bacon, Chris & Thompson, Katherine. (2017). Evolution in educational change: A literature review of the historical core of the *Journal of Educational Change*. *Journal of Educational Change*. 18. 263-293. 10.1007/s10833-017-9298-8.
- Han, H., & Rojewski, J. W. (2015). Gender-Specific Models of Work-Bound Korean Adolescents' Social Supports and Career Adaptability on Subsequent Job Satisfaction, 42(2), 149-164. <https://doi.org/10.1177/0894845314545786>.
- Hirschi, A. (2009). Career adaptability development in adolescence: Multiple predictors and effect on sense of power and life satisfaction. *Journal of Vocational Behavior*, 74, 145- 155

- Hirschi, A (2012). The Career Resources Model: An Integrative Framework for Counselors. *British Journal of Guidance and Counselling*, 40 (4), 1-15.
- Ikinya, S.(2019). Technical Engineering Training and Employability in Kenya: Focus on Thika Technical Training Institute and Meru National Polytechnic. Doctorate Dissertation. Catholic University of Eastern Africa.
- Kabare, K., Mukulu, E.& Wainaina, C. N. (2014). Determinants of Employee Adaptability to Transformational Change in Commercial Enterprises in Nairobi, Kenya: Empirical Review. *International Journal of Academic Research in Business and Social Sciences*, 4(10).
- Kavas, B.A, Duffy, R.D. & Douglass, R.P. (2015). Exploring Links between Career Adaptability, work volition, and well-being among Turkish Students. *Journal of Vocational Behaviour*. 90,122-131.
- Keller, B. K., & Whitson, S.C. (2004). The Role of Parental Influences on Young Adolescents' Career Development. *Journal of Career Assessment*, 16(2), 198-217. doi:10.1177/1069072707313206.
- Edwin, Kubai. (2019). Reliability and Validity of Research Instruments.
- Kumar, R. (2011). *Research Methodology: A Step-by-Step Guide for Beginners*. (3rd ed.). Sage. New Delhi.
- Leedy, P.D.& Ormrod,J.E.(2005). *Practical Research: Planning and Design*. Prentice Hall, Upper Saddle River, NJ.
- Liu, J.,McMahon, M., & Watson,M. (2015). Parental Influence on Mainland Chinese Children's Career Aspirations: Child and Parental Perspectives. *International Journal of Educational and Vocational Guidance*,15(2), 131-143. doi:10.1007/s12187-011-9131-5
- Maggiori, C., Rossier, J., & Savickas, M. L. (2017). Career Adapt-Abilities Scale—Short Form (CAAS-SF): Construction and Validation. *Journal of Career Assessment*, 25(2), 312–325. <https://doi.org/10.1177/1069072714565856>
- Metheny,J. & McWhirter, E.H (2013). Contributions of Social Status and Family Support to college Student's Career Decision Self Efficacy and Outcome Expectationc. *Journal of Career Assessment*, 21(3), 378-394. doi:10.1177/1069072712475164
- Mugenda, O. & Mugenda, A. (2009). *Research methods: quantitative and qualitative approaches*. (1st ed.). Nairobi: African Centre for Technology Studies (ACTS).
- Nauta, R. & Derckx, L. (2007). Why Sin? A Test and an Exploration of the Social and Psychological Context of Resentment and Desire. *Pastoral Psychology*. 56, 177-188.
- Nilforooshan, P. & Salimi, S. (2016). Career Adaptability as a Mediator between Personality and Career Engagement. *Journal of Vocational Behavior*, 94.
- Ntarangwe, M., Asatsa, S. & Ndung'u, E.M(2021). Correlates of Career Adaptability among Academic Staff in Selected Universities in Nairobi County,Kenya. The Catholic University of Eastern Africa Repository.
- Nurten, K.O. & Oya, Y.G. (2017). The Factors Contribute to Career Adaptability of High-School Students. *Eurasian Journal of Educational Research*, 67, 183-198. doi:10.14689/ejer.2017.67.11
- Oncel, L. (2014). Career Adapt-Abilities Scale: Convergent Validity of Subscale Scores. *Journal of Vocational Behavior*. 85(1), 13-17.
- Savickas, M.L. (1997). Career adaptability.An Integrative construct of Life-span, life-space theory. *The Career Development Quarterly*,45 (3), 247-259.
- Savickas, M. L. (2005). The theory and practice of career construction. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 42–70). Hoboken, NJ: John Wiley.
- Savickas, M.L.(2012). Life Design: A Paradigm for Career Intervening in the 21st Century. *Journal of Counseling and Development*.
- Savickas, M. L. (2013). Career construction theory and practice. In R. W. Lent & S. D. Brown (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 147–183., 2nd ed.). Hoboken, NJ: John Wiley.
- Savickas, M. L., & Porfeli, E. J. (2012). Careers adapt-abilities scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80(3), 661– 673. <https://doi.org/10.1016/j.jvb.2012.01.01>.
- Santili, S., Nota, L. Givenra, M.C. & Soresi, S. (2014). Career Adaptability, Hope and Life Satisfaction in Workers with Intellectual Disability. *Journal of Vocational Behaviour*, 85(1).
- Super, D.E., & Knasel, E. G. (1981). Career Development in Adulthood: Some Theoretical Problems and a Possible Solution. *British Journal of Guidance and Counselling*,9,194-201.
- Taherdoost, H. (2016). Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research. *International Journal of Academic Research in Management*. 5. 28-36. 10.2139/ssrn.3205040.
- Teixeira, M. A. P., Bardagi, M. P., Lassance, M. C. P., Magalhães, M. O., & Duarte, M. E. (2012). Career Adapt-Abilities Scale—Brazilian Form: Psychometric properties and relationships to personality. *Journal of Vocational Behavior*, 80(3), 680-685.
- Tomlinson, M.(2010). Investing in the Self: Structure, Agency and Identity in Graduates' Employability. *Education, Knowledge and Economy*, 4(2),77-88.
- Tran, T.T (2019). Graduate Employability: Beyond the Skill Agenda <https://doi.org/10.4324/9780429058899-14>.
- Van Vianen, A. E. M., Klehe, U.-C., Koen, J., & Dries, N. (2012). Career adapt-abilities scale— Netherlands form: Psychometric properties and relationships to ability, personality, and regulatory focus. *Journal of Vocational Behavior*, 80(3), 716-724.
- Xing, X. & Rojewski, J. (2018). Family Influences on Career Decision-Making Self Efficacy of Chinese Secondary School Vocational Students. *New Wave Educational Research & Development*, 21, 48-67.
- Wainaina, L., Iravo, M. & Waititu, A.(2014). Workplace Spirituality as a Determinant of Organizational Commitment amongst Academic Staff in the Private and Public Universities in Kenya. *International Journal of Academic Research in Business and Social Sciences* 4(12)
- Wiwik, S. & Seger, H (2017). Career Adaptability: The Influence of Readiness and Adaptation Success in the Education Context: A Literature Review. *Advances in Social Science, Education and Humanities Research*, volume 133.
- World Bank. (2016). *Jobs for Youth*. Report No. 101685-KE. <http://pubdocs.worldbank.org/en/873301466715415004/Kenya-Jobs-for-Youth.pdf>
- Zacher, H. (2014). Career adaptability predicts subjective career success above and beyond personality traits and core self-evaluations. *Journal of Vocational Behavior*, 84, 21–30.