APPRENTICESHIP TRAINING EFFECTS ON ENTREPRENEURSHIP DEVELOPMENT IN DEVELOPING ECONOMIES

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ABSTRACT

The study examines the effects of apprenticeship training on entrepreneurship development in developing economies: A case study of Nigerian apprenticeship system. The study seeks to ascertain how apprentices acquire technical and entrepreneurial skills for self-employment; assess the extent to which apprentices acquire entrepreneurial skills and knowledge for entrepreneurship development, and also identify the challenges encountered by apprentices in course of skill acquisition. The study adopted the survey design and interview apprentices in specific vocations. The sampled data were analyzed using Chi-square technique on Statistical Package for Social Science (SPSS v.20). Experts from the academia and industry validated the instrument. The results reveal that: apprentices acquire technical and entrepreneurial skills for self-employment through formal and informal apprenticeship training systems; Lack of qualified manpower, insufficient training tools, inadequate infrastructure facilities and lack of start-up capital impede the course of skill acquisition and apprentices do ultimately acquire sufficient entrepreneurial skills and knowledge for entrepreneurship development. The study recommends that the government should provide physical, financial, and moral support for apprenticeship training to boost entrepreneurship development.

Keywords: Apprenticeship Training, Entrepreneurship Development, Formal Apprenticeship, Informal Apprenticeship, Innovation, and Technical Skill.

INTRODUCTION

Apprenticeship is an instructional method for teaching an acceptable way of understanding and doing tasks, solving problems, and dealing with problematic situations (Collins et al., 1989). Apprenticeship is a system of training a new generation of practitioners of a structured competency, a basic set of skills (Werner and Desimone, 2006). It includes craft occupations or trades and those seeking a professional license to practice in a controlled profession. Apprentices build their careers from apprenticeships while working for an employer who assists in learning the trade or profession in return for labor at an agreed period within which they should have acquired measurable competencies. The requirements for a successful apprenticeship programme for individuals include initiative, perseverance, and ambition. In practically every skilled occupation, a fundamental knowledge of arithmetic is necessary. The ability to read, write and speak well is relevant in any work of life but in some apprenticeship occupations, it is more important than in others (www.definitions.net/definition/apprenticeship).

Apprenticeship training is vocational training where a basic vocational or special vocational qualification is gained as a competence-based qualification. In this, one develops as an entrepreneur, develop the business and put what he learns into practice with the support of a mentor. Apprenticeship training will suit an entrepreneur just starting up: if he wants to boost his new business, if he wants to find new partners and networks to support his business, and if he wants to acquire skills in entrepreneurship in addition to his vocational skills. Apprenticeship training will suit an experienced entrepreneur: if he wants to increase his entrepreneurial and management skills by expanding his company, if he wants to systematically develop his company's products or services, and if he wants to carry out company reorganization or change (https:mentoripankki recit.fi/en/entrepreneurs-apprenticeship-training).

Countries with varying duration and degrees of involvement in the production process uphold apprenticeship training. The scale of apprenticeship programmes varies widely across countries, reaching up to 4% of the work in Germany and Australia but only 0.3% in the United States (Lerman, 2013). Apprenticeship arrangements involve employees who have formal agreements with employers to carry out a recognized programme of work-based and classroom learning. In essence, apprentices are engaged in the production process under a trainer and mentor at the same time while acquiring adequate occupational competence for certification by an external regulator. It is the first step to creating a new way to join the ever-evolving and powerful movement of entrepreneurs thereby bringing social entrepreneurship into the mainstream while offering feasible career options to people regardless of class (www.unltd.org.uk). Businesses must have their say in training tomorrow's workforce, offering employers the power to design apprenticeships, hence, young people in these programmes will have the opportunity to learn sought-after skills and enjoy a great start to a working life (www.unltd.org.uk). Entrepreneurship and innovation are the Heart and soul of a successful modern economy. The proposed new apprenticeship standard will help students and teachers to recognize that starting your own business is a valid and positive career choice. It will give enthusiastic young people a chance to learn the ropes of running a business before setting out to build something new of their own (www.unltd.org.uk). Apprenticeships are an excellent way of attracting new talent into the organization and re-skilling existing staff using the career development programme. Apprenticeships are work-based learning programmes which are available to anyone over the age of 16. Apprenticeships run for 12, 18 or 24 months depending on the level of qualification being studied on the apprenticeship (content.hee.nhs.uk). Under this setting, the apprenticeship window will allow young people to acquire work experience while building their entrepreneurial skills and key character traits such as resilience, determination and self-management, as well project management, customer service and networking (www.unltd.org.uk).

Basically, apprenticeship has been an ageless method of training young people in catering, business, craft, agriculture, and trade in Nigeria and all over Africa. When youths achieve the status of skilled workers, they become responsible and relevant members of the society. The apprenticeship system was recognized in Nigeria after the Nigerian-Biafran war of (1967-1970). Many parents who were stranded after the war were forced to send their children (12-20 years) on apprenticeship. In the trade apprenticeship system, the trainer and the trainee are into an agreement for a period range of 4-7 years, whereby, the apprentice is to serve and learn from the master. The mode of settlement is usually contained in the agreement. Many trained apprentices achieved excellence after their masters had "*settled*" them. This is because they had the opportunity to acquire business acumen, work attitude, and interaction with other

practitioners (Onyima et al., 2013). Apprenticeships are an efficient and cost-effective way of building a workforce. Unfortunately, the Nigerian school system does not consider apprenticeship as a genuine path into a career (Ebiringa and Okorafor, 2010). The mode of apprenticeship as a mean towards career building is usually one that is premised on either a difficulty in the level of livelihood, which is expressed as a family's inability to pay school fees and other formal educational levies or when an individual is perceived to do poorly in school. Individuals that do poorly in school are usually advised to either go learn a trade by serving a "*master*" or by learning a skill, these concepts are locally known as "*Igbaodibo*" and "*Imu Oru Aka*" respectively (Ama, 2015). Although in 1987, the only formal career prone apprenticeship scheme was the National Open Apprenticeship Scheme of Nigeria which was organized under the "*Nigerian Directorate of Employment"*, this scheme was short-lived (Okafor and Akinwale, 2006)

Apprenticeship training programmes cover the following areas: automotive technician apprentice, carpentry apprentice, electrical apprentice, gas fitting apprentice, heat and frost insulator apprentice, heavy-duty equipment technician apprentice, industrial electrician apprentice, ironworker-reinforcing apprentice, cabinet maker apprentice, metal fabricator apprentice, millwright apprentice, motor vehicle body repair apprentice, motorcycle and power equipment mechanic apprentice, plumbing apprentice, refrigeration apprentice, sheet metal apprentice, truck and transport mechanic apprentice, transport trailer technician apprentice, welder apprentice, etc (https://www.bcit.ca/apprenticeship/students/training). Apprenticeship is a job with training, in other words, gaining recognized qualifications and essential skills whilst working and earning a wage (www.careerswales.com).

LITERATURE REVIEW

Apprentices Acquisition of Technical and Entrepreneurial Skills through Formal and Informal Apprenticeship Training Systems for Self-Employment

The federal, state and local government having realized the unprecedented unemployment of technical college graduates in the country, emanating from lack of practical experience for productive and marketable skills, adopted vocational education and training as one of the measures to address the problem. In actualizing this, an apprenticeship training scheme was introduced and administered under the National Directorate of Employment Scheme (NDES) (Oranu, 1993). Apprenticeship training scheme was introduced and administered under the National Directorate of Employment Scheme (NDES) to address the problem of lack of practical experience for productive and marketable skills, thus, provides vocational education and training. Apprenticeship is an important route to skills acquisition in most African countries including Nigeria (International Labor Organization (ILO), 2009).

John and Cyril (2015) posit that the apprenticeship system in vocational trades seems to have one advantage over that of formal technical education. This has to do with the amount of daily practical work done as compared to that of the technical colleges where both practical and theory, including some basic subjects, are taught. However, the practical aspects dominate the apprenticeship training system. Apprenticeship training system also called non formal vocational education and training refer to training on-the-job. This is based on an arrangement between the master craftsman and the trainee established by either written or verbal agreement which allows the apprentice to be trained under the tutelage of a master craftsman (Okorie, 1979).

In West Africa, traditional (informal) apprenticeships are a more important source of training than formal training and vocational education systems. Informal apprenticeship contributes significantly to youth employment and empowerment, and there by ensures productivity and reduces youth restiveness Adams et al. (2013). Apprentices embarked upon informal apprenticeship training as an alternative to formal education. This is because most of the apprentices cannot afford secondary, technical and tertiary education. As a result, the apprentices choose to acquire apprenticeship skills that will make them be employed in the society (Breyer, 2006; Adams et al., 2013).

For both the rural and urban economies, apprenticeship is a vital training system which is predicated on a training agreement between an apprentice and a mentor or trainer. In this agreement which may be unwritten or written, the master or mentor accepts to train the apprentice in the relevant competencies of his or her trade, spanning a substantial time period between one and four years. On the other hand, the apprentice or trainee accepts and devotes to contributing productively to the progress of the trade, profession or enterprise. Training is incorporated into the production process in which trainees learn by working with the experienced mentor or master of the craft. Informal apprenticeship systems are widespread in many countries and are considered the most important source of skills training in Africa and South Asia. As put by (ILO, 2011), informal apprenticeship is a socially accepted practice for transmitting skills from one generation to the next. Hence, at their workplaces, apprentices not only learn relevant technical skills but are also introduced to a business culture and a business network (ILO, 2011). Familiarity with these environments increases their chances of employment once the apprenticeship is complete (ILO, 2010). Generally, the knowledge of these surrounding influences enhances opportunities for jobs and employment at the completion of the training. The formal apprenticeship was introduced through the formal school system in Kenya. All African primary schools were vocational during the colonial system. The policy was enforced by providing funds only to schools following established vocational curricula. Students spent most of their time in vocational subjects (e.g. carpentry, masonry, and agriculture) where they produce actual goods for sale. The theoretical aspects of their training were learned at night. According to (King, 1977), few of the primary school graduates actually worked in the vocation for which they were trained. However, (Johnson and Ferej, 1997) observe that most of them sought clerical jobs which paid better wages and provided improved job security compared to skilled occupations. Thereafter, the typical formal apprenticeship involved attending a government trade school for a year or two after primary education. This training was then followed by employment in one of the government corporations or department, or some large corporations in the private sector. During the apprenticeship term, the learners would take trade tests at appropriate levels of the programme and since these tests were practical examinations, they provided a mechanism for legitimizing and enhancing the status of individuals who had acquired their skills through the informal system (Johnson and Ferej, 2000). Additionally, other benefits associated with the system are that trainees secure remunerations proportional with their skills as well as improve the chances of employment. In Kenya, the industrial training act of 1973 clearly stipulated the duration of the apprenticeship programme (not less than four years), the content of training, remuneration procedure, and the evaluation process, as well as the theoretical and practical to be provided at governmenst-owned vocational training institutes (Johnson and Ferej, 2000). A minimum of two years of secondary education was established as an entry requirement and proficiency examinations patterned after traditional examinations, informal education was also introduced (Johnson and Ferej, 1997). Both formal and informal apprenticeship systems are

geared towards entrepreneurship development. Entrepreneurship is getting more recognition because of its strong relationship with innovation and economic growth and development. The economic growth is characterized by the positive contribution of individuals who like to innovate and initiate their own business commonly referred to as entrepreneurs. Entrepreneurs are always willing to take the risk in order to exploit the opportunities they find around them (Hisrich et al., 2007). Hisrich (2005) sees entrepreneurship as a process in which individuals create and develop something innovative and creative by investing their resources and time and also take the various form of risks like financial, physical, psychological and social risks. In return, they get satisfaction and a sense of independence. Brockhaus (1980) defines entrepreneurship as the willingness of the individual to start a new business. Thus entrepreneurship is all about creating something new by investing resources and showing the willingness to take risks to avail the opportunities in the environment (Akram and Syed, 2017).

However, Entrepreneurship development focuses on the study of entrepreneurial behavior, the dynamics of business set up, development and expansion of the enterprise. Additionally, entrepreneurship is the process of boosting entrepreneurial skills and knowledge through structured training and institution-building programmes. It basically aims to enlarge the entrepreneur's base in order to hasten the pace at which new business ventures are created. This accelerates employment generation and economic development (Zgheib and Philippe, 2017).

Entrepreneurship development deals with the development of entrepreneurial personality: skills, values, motivation, and behavior of an individual which will enable the person to perform the entrepreneurial role. Nevertheless, entrepreneurship development involves the actual investment of financial resources, time and effort and also performing managerial functions to ensure the success of the business enterprise.

Entrepreneurship is propagated to reduce the increasing rate of unemployment, economic stagnation, as well as to enhance competitiveness and growth of businesses. The attempt which was made to promote and develop entrepreneurship is thus by giving specific assistance to improve the competence of the entrepreneur and his enterprise so as to achieve his entrepreneurial objectives and train more people to become entrepreneurs as well. Supportive and coordinated government policies can boost entrepreneurship. Entrepreneurship is channeled to the creation of employment and economic growth. Government policies and programmes do significantly affect the level of entrepreneurship within a country. As stated by (Odeigah, 2012), many governments vouch for support for entrepreneurial businesses, but usually, lack specific policies and coordinated programmes to support such activities.

Previous researchers maintain that successful apprenticeship training increases the probability of informal employment relative to having no job. Besides, a certified apprenticeship training programme can also offer an opportunity for a change of employment career from the informal to the formal, most likely with better employment benefits (Monk et al., 2007). The earlier discussion supports this hypothesis,

H_1: Apprentices acquire technical and entrepreneurial skills through formal and informal apprenticeship training systems for self-employment.

The Extent to which Apprentices acquire Entrepreneurial Skills and Knowledge for Entrepreneurship Development

Apprenticeship training in Nigeria largely followed the traditional system for many decades until 1971 when industrial training fund ITF was established as the premier skills

acquisition training institution in Nigeria (Anyakora, 2015). Similar institutions also created include; Administrative Staff College of Nigeria (ASCON), Nigerian Council for Management Development (NCMD), and the National Directorate of Employment (NDE). The NDE trains unemployed persons to acquire vocational skills, entrepreneurship or business development, labor-based works, rural employment promotion. NDE also offers job placement guidance and counseling to unemployed people (Monk et al., 2007).

Apprenticeship training programmes provide opportunities to people who are willing to acquire performance skills in specific trade areas. Apprenticeship training programme is a viable means for obtaining a lucrative, professional and marketable career.

Apprenticeship training programmes provide opportunities to people who are willing to acquire practical and relevant basic theory of the occupation (Anyakora et al., 2015). Successful apprenticeship increases the probability of informal employment relative to having no job. In addition, apprenticeship training programme can offer an opportunity for a change of employment career from the informal to the formal sector, most likely with better employment benefits and increased prospects for progress (Monk et al., 2007). Gurol and Atsan (2006) posit that entrepreneurship is critical for the economy as entrepreneurship is an engine of economic progress, job creation as well as social adjustment. According to (Stefanovic et al., 2009), entrepreneurship is highly linked to Small and Medium-sized Enterprises (SMEs) which are the main driving component of the developed market economies because they provide the springboard for industrial growth and economic development. Small and Medium-sized Enterprise (SME) is legally defined by the European Union as an independent company with no more than five hundred (500) employees (https://www.whatls.com). Micro enterprises refer to SMEs with less than five (5) employees. Enterprises in the industries with less than one hundred (100) regular employees can be classed as small and medium enterprises. Small and Medium-sized Enterprises (SMEs) are essential to the economy of developing countries in terms of growth, productivity, technological competitiveness and employment generation (Sobanke, et al., 2014). Small and Medium-sized Enterprises (SMEs) are regarded as the backbone of an economy for their dominant role in the economic development of a country (Dyerson et al., 2009).

A multi-disciplinary field which integrates personnel and project management skills with sound knowledge of technological systems and operations is regarded as technology management. Technology management may involve innovation and entrepreneurship that relates to technologically-based businesses. Technology managers are needed in companies to ensure that their computing and technical systems are adequate and secure (https://www.allengineeringschools.com).

Technology Management refers to the effective integration of technological considerations into business decision making (Horwitch and Stohr, 2012). Otherwise, ultimate goal of technology management is to advance competencies for creating or improving products, processes or services in the market place. Major components of technology management (such as information management, innovation management, entrepreneurship, new product development, intellectual property, etc) are increasingly recognized as essential for continued corporate and societal well-being (Atkinson and Andes, 2010).

Innovation Management is essential for organizational survival. This field offers several insights for managers of technology-oriented companies through introduction of new products, processes or services to market (Bolukbas and Guneri, 2018).

Technology Competency is designed to present various aspects of technology competency issues that guide firms based on decision criteria: technology policy, technology strategy, strategic plans, technology road mapping, technological environmental dynamism, sustainable development, competitive strategies, marketing strategies, strategic and tactical marketing activities, strategic management, strategic decisions, corporate culture, intellectual property rights, intellectual property management, technology transfer, technology commercialization, technology investment, technology sourcing, efficient collaboration, quality improvement, technology adoption, technology advancements, technology skills, scenario planning, organizational performance, supply chain performance, research and development management, new product development, information management, open innovation, innovative changes, adaptation of innovations, entrepreneurship activities, human capital, managerial ability, general and policy research as qualitative infrastructures and approaches (Badawy, 2009; Levin and Barnard, 2008).

Research and Development (R&D) refer to the process by which a company tries to gather new knowledge that can be used to create new technology, products, services, or systems that it will sell or use. Research and development do not only applies to pharmaceutical and technology companies but also applicable to producers of consumer products (https://www.shopify.com).

Research and development capability relates to innovation decision capability, which is required for knowledge management innovation and for minimizing uncertainty and risk activities (Bolukbas and Guneri, 2018).

Economic growth refers to the capacity of an economy to increase production of goods and services compared from one period of time to another (https://www.investopedia.com). Economic growth differs from economic development. Development concerns sustainability that meets the needs of the present without compromising future needs (https://www.intelligenteconomist.com).

The concept of an entrepreneur can also be considered from the business, management and personal perspectives. To an Economist, an entrepreneur is the person that combines human materials, information, financial and physical resources to produce goods and services, and also the one who introduces changes, innovations, and a new order whilst to a Psychologist, an entrepreneur is typically driven by certain forces especially the need to obtain/attain something, to experiment, to accomplish, or perhaps to escape the authority of others (Odeigah, 2012). To a businessman, the same entrepreneur may be a source of supply, a customer, or someone who creates wealth for others, as well as funds better ways to utilize resources, reduce waste and produce jobs others are glad to get (Odeigah, 2012).

Entrepreneurs that are successful will have many qualities in common with one another. They are confident and optimistic, disciplined self- starters. They are receptive to any new ideas that cross their path. Entrepreneurs are not thwarted by their defeats. Ori and Theuri (2016) observe that entrepreneurs see defeat as an opportunity for success, and are determined to make their endeavors succeed and do not agree that something cannot be done. The entrepreneur has strong communication skills to sell the product and motivate employees, make critical contributions to a nation's economic development and bring technology intensive, often risky, innovations to the commercial market thereby helping to develop whole new industries (Ori and Theuri, 2016).

An entrepreneur needs to constantly come up with new ideas, and make good decisions about opportunities and potential projects. An entrepreneur exhibits the following features:

optimism, vision, initiative, drive, persistence, tolerant and above all, resilient. Optimism is the trait that keeps him confident and motivated in the pursuit of the desired goal. Vision, on the other hand, enables an entrepreneur to consider areas for improvement easily. Therefore, he can create a compelling vision of the future, as well as condition other people to engage with that vision. Additionally, an entrepreneur has initiative and can instinctively start problem-solving or business improvement projects. Drive and persistence help an entrepreneur to stay self-motivated and energetic, hence, prepared to work hard for a very long time to realize his goal. Risk tolerance also enhances his ability to take risks and make decisions when facts are uncertain while resilience helps him to learn and grow from his mistakes and failures. He can pick up himself when things don't go as planned (www.mindtools.com).

Ori and Theuri (2016) argue that in the closing decades of the 20th century, entrepreneurship gained increased recognition among economists as a significant driver of improvements in societal welfare. Around the world, governments have recognized the role of entrepreneurship in influencing individuals to create new prospects that can drive beneficial change and bolster the economy in their societies (Blenker et al., 2008; cited in Ori and Theuri, 2016). The entrepreneurial spirit is now seen as the main source of innovations in nearly all industries leading to the birth of new enterprises and the growth and renewal of established organizations. Entrepreneurship is the dynamic process of creating incremental wealth. The wealth is made possible by individuals who provide value for product/service and undertake the huge economic risks in terms of time, capital, equity, time, as well as career commitment. Entrepreneurship is an important tool for expansion of economy as it identifies, assesses and harnesses economic opportunities thereby revitalizing existing firms, encouraging start-ups, and stimulating economic growth via job creation, skills, competencies, and innovation. These positive values help to improve the general well-being of the people and society.

The commitment of the government to entrepreneurship took a significant leap after the Structural Adjustment Programme (SAP) of 1986 (Fadeyi et al., 2015). The establishment of the National Open Apprenticeship Scheme (NOAS), and the Small, Medium Enterprise Development Association of Nigeria (SMEDAN) and the National Directorate of Employment (NDE) adds credence to the afore-mentioned government commitment to entrepreneurship growth in Nigeria. The Nigerian government also promotes entrepreneurial development through initiatives that build innovation, social responsibility, positive business climate an attitude, business confidence, pride of success, thereby sustaining inter-firm linkages, research, and development (Fadeyi et al., 2015). Other initiative includes the introduction of entrepreneurial studies into the Nigerian higher education curriculum as a mandatory course. The Centre for Entrepreneurship Development (CED) was established to teach and encourage students of higher institutions to acquire entrepreneurial, innovative, and management skills. The CED's goal is to make the graduates self-employed, self-reliant, create job opportunities for others and to generate wealth (Fadeyi et al., 2015).

Previous researchers established that apprenticeship training in the informal sector in Ghana tend to increase the trainee's opportunity for employment both in the formal and informal sectors. Apprenticeship training programmes, produce highly skilled workforce, needed for economic development of a nation, and can be used as sustainable means of increasing youth employment Breyer (2007) cited in (Anyakora et al., 2015). Accordingly, it is expected that apprentices acquire sufficient entrepreneurial skills and knowledge for entrepreneurship development. And thus, this hypothesis is supported by the earlier discussion.

H_2: Apprentices acquire sufficient entrepreneurial skills and knowledge for entrepreneurship development.

Apprentices Challenges in the course of Skill Acquisition and Self-employment

Apprenticeship, mostly supply the technical competencies required for paid employment, however, it is unclear if apprentices receive the skills they needed to be successful at self-employment. This is because some former apprentices become unemployed at the end of the four-year formal apprenticeship period because the apprentices could not secure employment elsewhere. Also, (Fields, 1990; King, 1990) remarked that some former apprentices are unable to find paid employment or when they do, may find wages in the smaller firms to be lower than their pay in the larger companies where they had received their training and as result a substantial number of former apprentices leave formal wage employment and choose to enter into self-employment. This phenomenon as (ILO, 1988) observed is similar for a large number of artisans in the country that were trained via the informal apprenticeship system. Certainly, many enter self-employment at some point after acquiring sufficient skills through training-on-the-job. However, job security and wages in the informal sector tend to be less competitive, and those who were trained from the informal system of apprenticeship begin their own businesses to earn income and security (Abdel- Fadil, 1983; cited in House et al., 1990).

Sometimes, informal apprenticeship does not adhere to the principles of decent work. The reasons include that they usually work long periods of time per day with little or no breaks, many instances of very poor remuneration, wages or allowances; high exposure to illness and occupational hazards, strong gender imbalances as well as stereotypes which persist in apprenticeship trades. In addition, the informal system can be easily abused, for instance, some mentors or trainers violate apprenticeship agreements by poorly imparting their skills to the trainee, thereby delaying the maturity period and extending their dependence on them. In extreme cases, sometimes, the informal system of apprenticeship easily masks as child labor. Essentially, apprenticeship is a common trend in the world in which youth and adolescent are empowered. The world-changing realities of globalization, competitiveness and a knowledge-based economy, strongly underscore the relevance of technical skills acquisition among workers. Specifically, apprenticeship as a veritable tool which is one of the functional prerequisites for employment generation and poverty reduction at low investment cost as well as improving the wellbeing of the individuals has not been adequately harnessed in tackling the unemployment surge among youths who are meant to be drivers of development in Nigeria. Consequently, Fajobi et al. (2017) admits that reasonable attention which should have been focused on alternative empowerment schemes, especially apprenticeship to activate the role of youths in development has been conspicuously neglected.

The form of a decline in apprenticeship has evolved through a socio-cultural process in the society. Apprenticeship is generally seen to be meant for people who cannot cope with the demands of the formal education system or those whose parents cannot afford to sponsor their education. However, this particular problem discourages young graduates and youths to get into the system. People undergoing apprenticeship are seen as "*never do well"* people and they are not given deserved respect as their counterparts in the formal school system (Adekola, 2013). The problem facing the practice of apprenticeship in developing countries involves funding. Financial problem, in most cases, made it difficult to sponsor apprenticeship training for the agreed period. Necessary equipment that can improve efficiency and meet up with technological needs was inadequately provided by the master craftsmen for apprenticeship training.

Consequently, the number of apprentice on training was reduced because many youths do not desire to go for apprenticeship training but would prefer motorcycle riding or taxi driving business to start to make money (Anyadike et al., 2012). There is a problem of inconsistency in running apprenticeship programmes. Some of the established apprenticeship programmes are no more functional and some are on the verge of winding up. Most times, the transition in government causes the established apprenticeship programmes to be neglected or dropped. The National Directorate of Employment in one of its programmes runs National Open Apprenticeship Scheme (NOAS) which attach apprentices to companies, ministries, parastatals, organized private sector, and professional craftsmen and women so as to sustain apprenticeship training and skill acquisition. However, such an effort could not bear fruit and has been forgotten. It has been observed that some of the apprenticeship systems in Nigeria pay more attention to practical skills without theoretical knowledge.

Previous researchers established that the biggest asset that former apprentices bring to self-employment is technical skill; however, they typically lack business skills and therefore, could not effectively manage their businesses. The majority of these businesses have poor growth rates (Johnson and Ferej, 1997). Thus, this hypothesis is supported by these arguments,

H_3: Lack of qualified manpower, insufficient training tools, inadequate infrastructural facilities and a lack of start-up capital significantly impede the course of skill acquisition.

THEORETICAL FRAMEWORK

Transformational Theory

This theory by Brinkerhoff and Montesino (1995) explores two management interventions, pre-training expectations and an after-training follow-up on the transfer of skills from training programs to the work situation in Michigan, USA. The tenet of the theory is that knowledge is gained when there is a transfer of skills from training programmes to work situation or environment. The theory was further modified by Montesino (2002) and holds that training is necessitated by the desire for knowledge and skill acquisition and such desire is aimed at achieving a particular goal/objective. It holds also that proper training results in satisfaction and performance; that well-trained worker helps to increase productivity and profitability. The theory states further that investing in employee training improves worker retention rates, customer satisfaction and creativity for new product ideas. It equally states that effective training saves labor by reducing time spent on problem-solving and saves money in the long run by producing a better workforce. A company's financial standing can be improved by training. Poor performance often results when employees do not know exactly what they are supposed to do, how to do their jobs or why they need to work a certain way. The application of this theory to this study is predicated upon the fact that improved performance in SME organizations come from knowledge and skill transfer from a master craft person to an apprentice in the workshop. From the foregoing, therefore, it is important to note that training apprentices to acquire skills influence SMEs performance through records of the apprentices' output and this has a transformational effect on the apprentices, hence the choice of transformational theory.

Bandura's Social Learning Theory

Bandura (1977) propounded his social learning theory in Alberta, Canada. The theory affirms that people learn from one another, via observation, imitation, and modeling.

The theory has been described as a bridge between behaviorist and cognitive learning theories as it encompasses attention, memory, and motivation (Bergh and Theron, 2006). This social learning theory applies to this study in that learners of craft acquire knowledge and skills by keenly observing and imitating their masters. People who learn by doing are more likely to produce products and services faster and can actually boost SMEs' performance. The application of Bandura's theory of observation can be seen at workplaces when a beginner imitates a skillful worker in a given profession. Thus, a beginner should first see how others work before he starts operating. The master, at the same time, may not be expected to apply the modern didactic principles of teaching the skills.

An apprenticeship program is a means of facilitating the training process. This kind of training process can, in fact, be explained using Bandura's (1977) theory of imitation or observation. The theory gives value to both the environment and the mental aspect of the human being. The theory consists of four basic components; namely, attention, retention, reproduction, and motivation. Accordingly, the theory asserts that people learn much about behavior by observing others. In order to learn they should pay attention to the behavior, they want to imitate. Attention may not be enough. It should be accompanied by retention in order that the observed behavior can be used in the future. The retained behavior should also be reproduced or applied to the situation that requires it. The last task can be accomplished when the person is motivated (Grieve and Mojapelo-Batka, 2005). The nature of learning, in the apprenticeship training process, requires the trainee to observe the skills of the master, supervisor or craftsman/craftswoman. During this process, the apprentice does not passively grasp all that he or she observes or listens; instead, he or she critically asks questions.

Person-Environment-Fit Theory

The theory described here was initially proposed by French et al. (1974) at Michigan University. Person-Environment fit (P-E fit) is described as the degree to which individuals and environmental characteristics match as supported by Dawis (1992.) Person-environment fit is relevant because it helps in understanding adjustments in organizations. The theory of person-environment fit affirms that everyone has a work environment with which they are most compatible. The idea of PE is grounded in Kurt Lewin's maxim, that behavior is a function of person and environment. Characteristics on the personal side of the equation include interests, preferences, KSAs (knowledge, skills, and abilities), personality traits, values, and goals. The environmental factors may include such things as vocational norms, demands of the job, job characteristics, and organizational culture and values. The basic rationale of the theory is simply that if you work in an optimally compatible environment, all sorts of good things happen, such as improved work attitude, performance, and less stress.

Other fit Models include Person-Vocation Fit, Person-Job Fit, person-organizational fit, person-group fit and person-person fit. Person-vocation fit is a fit between one and a specific vocation. This is the broadest form of person environmental fit and is defined by how closely an individual's interests match the interests of others who are members of the vocation. For example, if one loves entrepreneurship, learning about craft, and helping others may be a good vocational fit. Person-job fit: is a fit between one and a particular job. It is a fit between one's knowledge, skills, and abilities and the requirements of the job; one's needs and interests and the resources that can be provided to the job to fulfill the job requirement. The above theoretical groundings as applied in this study presuppose that the characteristics of apprentices must be in

alignment with the characteristics of the workplace and that of the craft master. This fit is necessary as organizational objectives are achieved through coordination and joint performance.

Models of Environmental Fit

Person-environmental fit research has sub-categories (Models) of environmental fit. The models are discussed briefly in turn.

Person-vocation fit: Is a fit between trainee and a specific vocation? This is the broadest form of PE and is defined by how closely an individual's interests match the interests of others who are members of the vocation.

Person-Organizational Fit

Person-organization (P-O) fit is a model of great interest in the disciplines of organizational behavior and human resources management. Simply P-O fit is defined as a measure of fit among workers and organizations (Silverthorne, 2004). In a broader view, the P-O fit is defined as matching between the distinctive characteristics of the trainee and the organization in which that trainee is working. The P-O fit is a construct that has multiple conceptualizations (Westerman and Cyr, 2004). Moreover, the P-O fit is evaluated by matching the personality of the individual characteristics and that of organization (Chan, 1996). The individual characteristics include the individual's ideas, principles, interests, and dispositional characteristics while organizational doctrine, norms, traditions, and overall organizational climate.

In continuation Kristof (1996) observes that P-O fit is the level of compatibility exists between worker and organizations when at the minimum level one entity holds responsible for providing what the other wants and prefers. Kristof further opines that compatibility is of two types, one is a supplementary fit and the other is a complementary fit. Supplementary fit means that personal characteristics of the individual trainee are harmonized with that of the organizational characteristics. For instance, the trainees' psychological needs are satisfied with the conditions of the workplace, and then the complementary fit is achieved. In addition, the trainee is better fitted in the organization through having supplementary or complementary fit then the trainee will become a satisfied trainee (Bright, 2007; Kristof, 1996). A strong person-organization fit can also lead to reduced turnover and increased organization citizenship behaviors and performance (Andrews et al., 2010).

Person-Job Fit

Person-job fit, or P-J fit refers to the compatibility between a person's characteristics and those of a specific job-fit (Kristof-Brown and Guay, 2011). The complementary perspective has been the foundation for person-job fit. This includes the traditional view of selection that emphasizes the match of trainee KSAs and other qualities to job demands (Ployhart et al., 2006). The discrepancy models of job satisfaction and stress that focus on trainees' needs and desires met by the supplies provided by their job (Lock, 1976). The job fit is of two types. One is Demand-Abilities fit while the other is Need-Supply fit (Cable and DeRue, 2002). Demand fit is referred to as matching between trainees Knowledge, Skills and Abilities (KSA) with requirements of their, jobs whereas Need-Supply fit can be referred as the degree to which

employee's needs, aspirations and preferences are fulfilled by the jobs they perform and by the rewards associated with that jobs (Cable and DeRule, 2002). These two parts of P-J fit are now combined into an overall concept of P-J fit (Cable and DeRue, 2002; Vogel and Feldman, 2009). A good exists when an individual has the right skills and abilities to perform his job or the job can fulfill the individual's need (Edwards, 1991). When a trainee (apprentice) perceives that their work will significantly contribute to achieving organizational goals, they will become more involved in their jobs (Kahn, 1990).

Person-Group Fit

This is a relatively new topic with regard to person-environment fit. So, there could be limited research conducted to demonstrate how the psychological compatibility between coworkers influences individual outcomes in group situations. However, a study by Boone and Hartog (2011) revealed that person-group fit is most strongly related to group-oriented outcomes like co-worker satisfaction and feelings of cohesion.

Person-Person Fit

Person-Person (P-P) fit is conceptualized as the fit between an individual's cultural preferences and those preferences of others. It corresponds to the similarity-attraction which states that people are drawn to similar others based on their values, attitudes, and opinions (VanVianen, 2000). The most studied types are mentors, supervisors, and subordinates, or even apprentices. It is also worthy to note that person-supervisor fit is most strongly related to supervisor-oriented outcomes like supervisor satisfaction (Boone and Hartog, 2011). Since apprenticeship training makes the individual apprentice master the job and fulfills his life ambition working for his own organization, a person-Environmental fit theory is best suited for this research which is tied to objective five of this study.

PREVIOUS WORK

Ekpe and Razak (2016) examine the effect of apprenticeship on enterprises creation among Malaysian youths. The study was conducted among Malaysian University Graduates. The objective was to ascertain whether moderating factors such as self-motivation and social influence could hinder skill acquisition from resulting in enterprise creation among Malaysian University graduates. The population was 600 students which were from the three University business faculties. The sample of 240 was used. The survey design was adopted and copies of the structured questionnaire were given to entrepreneurs who are University graduates that had received skill training in business. Data analysis was done using descriptive statistics and simple regression. The study found that apprenticeship had a positive effect on enterprise creation and that self-motivation moderate between skill acquisition and enterprise creation among Malaysian Youths. The study concludes that University authorities and parents alike now emphasize learning outcomes instead of effort or ability to create value for the society. These factors have suppressed creative and analytical thinking and problem-solving skills among students who graduate to seek paid jobs at the expense of enterprise creation. The study recommends that counseling is required from parents, universities, governments and youth's organizations and other stakeholders for attitudinal change in order to engender greater interest among youth graduate in enterprise creation and development in the country.

METHODOLOGY

Research Design

The study adopted the survey design and interview of apprentices in specific vocations in Enugu metropolis, Nigeria. The survey is usually used for descriptive and exploratory research. The survey design collects quantitative data that can be analyzed using descriptive and inferential statistics. It involves the use of a questionnaire that is administered to a particular sample. Secondary data were obtained from books, journals, and internet.

Sampling

The target population consists of sixty-four (64) apprentices in specific vocations: cabinet making, carpentry, mechanic and welding apprentices which were purposely selected and considered as the sample. The sampled data were analyzed by the Pearson Chi-Square technique on SPSS (v.20). The use of Pearson's Chi-square is to establish the association between categorical variables (Ugoni & Walker, 1995). In the case of this study, we have resorted to the categories as those respondents in the affirmative (Yes), and those not (No); a method used in other studies where the psychometric nature of a Likert scale would be misleading as the respondents for this study are colloquially known to be not-so-literate (Bekiari et al., 2011; Albaum, 1997; Cavalini, n.d; Dolnicar, 2003; Dolnicar et al., 2011). The confidence interval with regards to the chi-square test of association is such that focuses on the p-value, that is, when the p-value is less than 0.05, there is an association between the question items and the responses (Ugoni & Walker, 1995) Opinion of experts from the academia and industry were sought to ensure face and content validity of the instrument. Some of the apprentices in the informal apprenticeship system were guided to obtain their responses. Apprentices were interviewed to get more information especially those that were not obtained from the questionnaire (Table 1). The interview provided new information for possible recommendations.

Table 1
ANALYSES OF RESPONDENT'S RESPONSES

S/N	Questions	Yes	%	No	%	Total	Total (%)
1	**To ascertain how apprentices acquire technical and entrepreneurial skills for self-employment.**						
(i)	Does an apprentice acquire technical skill through both formal and informal apprenticeship training systems?	58	91	06	9	64	100
(ii)	Does a trainee work and learn at a time during apprenticeship training?	56	88	08	12	64	100
(iii)	Can entrepreneurial and technical skills be acquired more by a trainee in informal apprenticeship than in formal technical colleges?	51	80	13	20	64	100
(iv)	Does a trainee acquire technical skill by observation and practice?	57	89	07	11	64	100
2	**To assess the extent to which apprentices acquire entrepreneurial skills and knowledge fo r entrepreneurship development.**						
(i)	Does apprenticeship training provide opportunity for trainees to be proficient in an occupation?	56	88	08	12	64	100

Table 1
ANALYSES OF RESPONDENT'S RESPONSES

(ii)	Does a trainee apprentice acquire sufficient entrepreneurial skills and knowledge for entrepreneurship development?	59	92	05	8	64	100
(iii)	Can apprenticeship training (formal and informal) produce high skilled workforce needed for economic development?	55	86	09	14	64	100
(iv)	Does apprenticeship training (formal and informal) promote entrepreneurship development in specific trades?	58	91	06	9	64	100
S/N	**Questions**	**Yes**	**%**	**No**	**%**	**Total**	**Total (%)**
3	**To ascertain the challenges encountered by apprentices in the course of skill acquisition**						
(i)	Is lack of qualified manpower to impart entrepreneurial and technical skills a challenge to apprenticeship training?	57	89	07	11	64	100
(ii)	Do insufficient training tools and inadequate infrastructural facilities jeopardize apprenticeship training?	54	84	10	16	64	100
(iii)	Is lack of capital to establish self- employed business a challenge to an apprentice?	50	78	14	22	64	100
(iv)	Do lack of qualified manpower, insufficient training tools, inadequate infrastructural facilities and lack of start-up capital impede the course of skill acquisition?	49	77	15	23	64	100

Source: Field Survey, 2017.

RESULTS

H_1: Apprentices acquire technical and entrepreneurial skills for self-employment through formal and informal apprenticeship training systems.

The responses obtained from the questions asked on how apprentices acquire technical and entrepreneurial skills for self-employment reveal that 58 (91%) of the respondents indicated yes that an apprentice acquires technical skill through both formal and informal apprenticeship training systems; 56 (88%) of the respondents indicated yes that a trainee can work and learn at a time during apprenticeship training; 51 (80%) of the respondents indicated yes that entrepreneurial and technical skills can be acquired more by a trainee in informal apprenticeship than informal technical colleges; 57 89%) of the respondents indicated yes that a trainee acquires technical skill by observation and practice. However, 06, 08, 13, and 07 respondents respectively (9%, 12%, 20% and 11%) had a contrary opinion.

Based on the result in Table 2, Pearson Chi-Square $\chi 2$ (1)=3.934, $p<0.05$, with a chi-square p-value of 0.027, at 3 degrees of freedom [DF (4-1)=3], (which is significant at 0.5%) there is sufficient statistical evidence to conclude that apprentices acquire technical and entrepreneurial skills through both the formal and informal apprenticeship training systems for self-employment. Therefore, the alternate hypothesis is hereby accepted and the null hypothesis rejected.

H_2: Apprentices acquire sufficient entrepreneurial skills and knowledge for entrepreneurship development.

Table 2 CHI-SQUARE TESTS						
	Value	**Df**	**Asymp. Sig. (2-sided)**	**Exact Sig. (2-sided)**	**Exact Sig. (1-sided)**	**Point Probability**
Pearson Chi-Square	3.934[a]	3	0.027	0.030		
Likelihood Ratio	3.710	30	0.029	0.032		
Fisher's Exact Test	3.609			0.032		
Linear-by-Linear Association	0.432[b]	1	0.051	0.057	0.028	0.043
N of Valid Cases	64					
Note: a. 0 cells (.0%) have expected count less than 5; b. The minimum expected count is 8.50.						

The responses obtained from the questions asked on the extent to which apprentices acquire entrepreneurial skills and knowledge for entrepreneurship development reveal that 56 (88%) of respondents indicated yes that apprenticeship training provides opportunity for trainees to be proficient in an occupation; 59 (92%) of the respondents indicated yes that a trainee apprentice acquires sufficient entrepreneurial skills and knowledge for entrepreneurship development; 55 (86%) of the respondents indicated yes that apprenticeship training (formal and informal) can produce highly skilled workforce needed for economic development; 58 (91%) of the respondents indicated yes that apprenticeship training (formal and informal) promotes entrepreneurship development in specific trades. However, 08, 05, 09, and 06 respondents respectively (12%, 8%, 14% and 9%) had a contrary opinion.

Table 3 CHI-SQUARE TESTS						
	Value	**df**	**Asymp. Sig. (2-sided)**	**Exact Sig. (2-sided)**	**Exact Sig. (1-sided)**	**Point Probability**
Pearson Chi-Square	1.604[a]	3	0.016	0.017		
Likelihood Ratio	1.621	3	0.017	0.017		
Fisher's Exact Test	1.609			0.017		
Linear-by-Linear Association	0.032[b]	1	0.019	0.019	0.015	0.011
N of Valid Cases	64					
Note: a. 0 cells (.0%) have expected count less than 5; b. The minimum expected count is 7.00.						

The result from Pearson Chi-Square in Table 3 show that Chi-Square $\chi 2$ (1)=1.604, $p<.05$, with a chi-square p-value of 0.016, at 3 degrees of freedom [DF (4-1)=3], which is significant at 0.5. Thus, there is sufficient statistical evidence to conclude that apprentices acquire sufficient entrepreneurial skills and knowledge for entrepreneurship development. The alternate hypothesis is accepted and the null rejected.

H3: Lack of qualified manpower, insufficient training tools, inadequate infrastructural facilities and lack of start-up capital significantly impede the course of skill acquisition.

The responses obtained from the questions regarding the challenges encountered by apprentices in the course of skill acquisition reveal that 57 (89%) of the respondents indicated yes that lack of qualified manpower to impart entrepreneurial and technical skills is a challenge to apprenticeship training; 54 (84%) of the respondents indicated yes that insufficient training tools and inadequate infrastructural facilities do jeopardize apprenticeship training; 50 (78%) of the respondents indicated yes that lack of capital to establish self-employed business is a

challenge to an apprentice and 49 (77%) of the respondents indicated yes that lack of qualified manpower, insufficient training tools, inadequate infrastructural facilities and lack of start-up capital impede the course of skill acquisition. However, 07, 10, 14, and 15 respondents respectively (11%, 16%, 22% and 23%) had a contrary opinion.

Table 4
CHI-SQUARE TESTS

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.346[a]	3	0.023	0.026		
Likelihood Ratio	4.511	3	0.021	0.222		
Fisher's Exact Test	4.392			0.022		
Linear-by-Linear Association	4.139[b]	1	0.042	0.049	0.025	0.007
N of Valid Cases	64					

Note: a. 0 cells (.0%) have expected count less than 5; b. The minimum expected count is 11.50.

The Chi-Square test results in Table 4 shows that Pearson Chi-Square $\chi 2$ (1)=4. 346, $p<0.05$, the test has a chi-square p-value of 0.023, at 3 degrees of freedom [DF (4-1)=3], which is significant at 0.5, there is sufficient statistical evidence to conclude that lack of qualified manpower, insufficient training tools, inadequate infrastructural facilities and lack of start-up capital significantly impede the course of skill acquisition. Hence, the alternate hypothesis is accepted.

DISCUSSION

The study surveyed apprentices regarding their views on how they acquire technical and entrepreneurial skills for entrepreneurship development. The result from Pearson Chi-Square test reveals that apprentices believe that apprentices do acquire entrepreneurial and technical skills through both the formal and informal apprenticeship training systems [$\chi 2$ (1)=3.934, $p=0.027<0.05$]. This indicates that technical and entrepreneurial skills can be acquired through both the informal apprenticeship training and formal technical colleges (Al-shammari & Shammari, 2018; Ekpe, 2017; Swart & Pretorius, 2018; and Darmanto & Yuliari, 2018) respectively affirm with the finding. Monk et al. (2007) establish that successful apprenticeship training increases the probability of unemployed individuals being able to move into informal employment while those registered or certified apprenticeship training programmes can gain the opportunity to move into formal employment.

It was of interest to examine the extent to which Nigerian apprentices acquire the types of entrepreneurial skills and knowledge needed for entrepreneurship development and hence self-employment. The result from the Pearson Chi-Square reveals that apprentices believe that they acquire sufficient entrepreneurial skills and knowledge for entrepreneurship development [$\chi 2$ (1)=1.604, $p=0.016<0.05$]. This implies that apprenticeship training (formal and informal) could promote entrepreneurship development in specific trades and potentially, help to produce the highly skilled workforce needed for economic development. Stefanovic et al. (2009) establish that entrepreneurship is strongly linked to Small and Medium-sized Enterprises (SMEs) which are the main developing force of the developed market economies that provide the springboard for industrial development and economic growth (Jena & Thatte, 2018) also affirm with the finding.

The study also examines the challenges encountered by apprentices in the course of skill acquisition. The result from the Pearson Chi-Square reveals that lack of qualified manpower, insufficient training tools, inadequate infrastructural facilities and lack of start-up capital significantly impede the course of skill acquisition [$\chi 2$ (1)=4.346, p=0.023<0.05]. Johnson and Ferej (1997) establish that the informal apprentices acquire technical skills for self-employment, but however, they lack business management skills. Some of the self-employed persons face major difficulties in managing their businesses. Thus, the businesses they established have poor growth and could not succeed (Rai et al., 2017; Amato et al., 2018; and Najafian et al., 2018) also supported the finding respectively.

CONCLUSION

Apprenticeships offer people a ladder of opportunity to acquire the vital skills they need to succeed. It possesses the ability to shape the economic space by supporting a vast population of potential entrepreneurs into innovative start-ups. Thus, it also enables organizations in different industries to shape their corporate culture towards a more entrepreneurial approach. Ideally, apprenticeship training can transfer entrepreneurial expertise and facilitate a smooth transition into self-employment. The apprenticeship will allow young people to gain work experience while building their entrepreneurial skills and key character traits such as resilience, determination, and self-management, as well as project management, customer service and networking. Standard apprenticeship schemes enhance and sustain productive and inventive micro and small enterprises. Enterprises that can diversify their products and services are in a better position to respond to current and future changes in economic conditions and demand and are therefore likely to create jobs and grow. Improved informal apprenticeship systems can train young people in developing countries and thereby enhance the skill acquisition base of national economies at much lower cost than the formal technical and vocational education and training systems. However, apprentices should be encouraged and a requirement made for one to be attached to areas of their interest, to learn more and improve on employability skills; the government should continue to provide physical, financial, and moral support for apprenticeship training (formal and informal) to ensure the acquisition of relevant skills for entrepreneurship development; the government should establish ministries and companies that support skill acquisition and also employ skilled people; the government should provide infrastructural facilities (electricity, pipe borne water, health facilities, etc.) that support apprenticeship training, skill acquisition, and entrepreneurship development; it is important to strengthen the capacity of small business associations and other groups representing the interests of master craftsperson and apprentices so that they have the capacity to implement change themselves; apprenticeship contracts should specify details of working time, the expected and maximum duration of the apprenticeship, the condition that determines its completion, the craftsperson's an apprentice's respective rights and duties, and the duration of a trial period; government policy-makers should develop specific policies that will guarantee ease of doing business, access to finance, technical support and professional services for start-ups as well as fair tax regimes which are very important for economic growth, job creation and employment reduction; seminars and the study of entrepreneurial development abroad can be included in programmes addressing entrepreneurship policy; and fostering entrepreneurship should involve ensuring that markets for capital, labour, goods, and services are working well. It also requires that challenges to entrepreneurship be removed and that conditions be established in which innovation and risk-taking can flourish.

LIMITATIONS

There are constraints to this study: The study was constrained by using ordinal data from questionnaire and interview which represent the respondent's narrow opinion that could not have a future prediction. The reason was that pre-existing data on this topic were not available and therefore, the use of ordinal data was inevitable. The sample seems small but was able to generate data from which conclusion was made. Future researchers can carry out research on assessing the comparative effects of formal and informal apprenticeship systems on entrepreneurship development.

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