

Entrepreneurial Skills Improvement Needs by Self-Employed Technical College Automobile Technology Graduates in Delta State, Nigeria

Sylvester Chukwutem Onwusa (PhD)¹, Friday Ikechukwu Nwaosa² and Kelubia Daniel Isioma³

¹*Department of Technology and Vocational Education, Faculty of Education, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria*

²*Department of Automobile and Metal Work Technology, Faculty of Technical and Vocational Education University of Nigeria Nnsukka, Enugu State, Nigeria*

³*Department of Technical Education, Delta State University, Abraka, Nigeria*

Abstract: The study determined the entrepreneurial skills improvement needs by self-employed technical college automobile technology graduates in Delta State, Nigeria. The study was descriptive survey research design. Three research questions guided the study and two null hypotheses were tested at 0.05 level of significance. The study was conducted in Delta State, Nigeria. The population for the study was 76 respondents' automobile technology self-employed graduates. There was no sampling because of manageable size of the population. A structured questionnaire was designed by the researchers and were used for data collection. The instrument was face and content validated by three experts, two from the Department of Automobile/Metalwork Technology and one from Measurement and Evaluation Unit of the Department of Educational Foundation- all in Nigeria University Nnsukka. The questionnaire was used to collect relevant data. Instrument was trial - tested on 20 respondents who were not part of the population. Copies of the questionnaire was administered through personal contact to the respondents. The reliability of the instrument was determined using Kuder Richardson technique, was used for the study. The correlation coefficient calculated was 0.82. Copies of the instrument were administered to 76 participating automobile technology self-employed graduates and the return rate was 100%. The data collected for the study were analyzed using mean and standard deviation to answer the research questions. Mean and standard deviation were used to answer the research questions while z-test statistics was employed to test the null hypotheses. Based on the findings of this study, it was concluded that automobile technology self-employed graduates need practical/technical skills, computer diagnostic skills and customer service skills in automobile technology venture to keep up to date with the modern cars service and repairs. This will as well improve the standard of living of self-employed automobile graduates in Delta State. Recommendations was made that the entrepreneurial skills identified in this study should be packaged and use to improve the students before graduation. It was also recommended that the entrepreneurial skills identified should be introduced as one of the compulsory subjects in all secondary schools in the country. Through this methods students who transcend into technical institutions to the university level, would have become conversant with the tenets of entrepreneurial demand. Furthermore, there should be regular seminar, workshops and

conferences for improvement needs of graduates to strengthen and refocus on entrepreneurial education.

Keywords: Entrepreneurial, Skills, Self-Employed and Technical College, Automobile Technology Graduates

I. INTRODUCTION

Technology has become the primary means of knowledge transfer in most countries. Our communities have been transformed by technological integration, which has changed the way people think, operate, and live (Ghavifekr, Afshari & Amla Salleh, 2012). Recently, technology have been incorporated in all new automotive subsystems and have become standard implementation. Automotive technology is continuously becoming more and more sophisticated and have witnessed a rapid growth of automotive industries all over the world. As the years gone by, there has been enormous technological improvement to the modern day cars design for it to be safer, efficient and pleasing to the customer. These call for a skillful mechanic to be able to service and repairs modern day cars design. Accordingly, Gill, (2010) said that continual evolution in design is intended to achieve more reliable, streamline, cleaner and safer vehicle. Craftsmen and artisans are mostly graduates of technical colleges.

Technical colleges are post primary schools where students learn skills in various occupations. According to National Policy on Education, Federal Republic of Nigeria- (FRN, 2014) technical colleges are institutions where students acquire both practical and theoretical knowledge in a particular profession. Similarly, technical colleges are educational institutes with core values to train students to acquire employability skills, generate decent work and income through wage earning job or self-employment. Accordingly, Ayonimike (2011) opined that technical colleges are designed to train people for work to reflect the modern trends and development in occupations and skills requirement. In Nigeria, technical colleges produce craftsmen for various sectors of the economy and are regarded as the principal vocational institutions. Furthermore, technical colleges, according to Eze, Onwusa, Olunoku and Nwosah, (2020)

opined that the major vocational institutions in Nigeria which give full vocational training intended to prepare graduates for entry into various occupations such as fabrication and welding, brick/block laying and concreting, electrical installation and maintenance works and motor vehicle mechanics works.

Automobile technology programme in Nigeria technical colleges is designed to produce competent craftsmen that can test, diagnose, service and completely repair any fault on motor vehicles to the manufacturer's specification National Board for Technical Education (NBTE, 2011). Automobile trade is to provide its recipient with the skill required for work in the automobile industry. In the same vein, technical college give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant (NBTE, 2013). There are many automobile occupations which includes; automobile mechanics, automobile electricity, battery charging, vehicle body building, tyre repairs and wheel-balancing, Auto part merchandizing, car wash and transport services are small-scale enterprise and are found in the informal sector. Thus with technological advancement, computers are now incorporated to control virtually most operation in automobiles. Apart from the carburetor that has been replaced by Electronic Injection System, the ignition system has also witnessed changes from conventional point type with a magnetic pick-up coil to electronic ignition system (Subramanian, 2013). As the years gone by, there has been enormous technological improvement to the modern day vehicle design for it to be safer, efficient and pleasing to the customer. Some features such as hazard warning light, oil pressure warning light, anti-theft security services, antilock braking system and airbag could only be achieved practically through the use of technology. These features are rapidly becoming standard features in all new automotive. Owing to change in customers taste for automotive and status symbols attached to car ownership. All these systems require maintenance and repairs. Hence, the rising demands for skilled automotive technologists and craftsmen who could provide maintenance/ services for automobile users is on the increase.

Auto mechanics requisite skills are often developed in a well-equipped workshop and with competent teaching staff. Accordingly, Kayemuddin, & Kayum, (2013) stated that automotive service technicians and mechanics characteristically perform the followings:

- Identify mechanical problems, running diagnostics and testing parts to identify the source of automotive mechanical problems
- Completing preventative maintenance on vehicles including tire rotations, oil changes, filter replacement, and any other pertinent repair
- Providing advice to customers on how to improve their car care

- Following any state laws regarding emissions, safety, and other standards
- Using personal knowledge to disassemble and reassemble parts
- Using warranties, replacement parts, and personal experience to keep costs to a minimum
- Providing and writing a general estimate to customers
- Using customer satisfaction skills to establish a trusting relationship with clients
- Maintaining a steady supply of parts by keeping inventory and ordering as necessary
- Working with other mechanics to help diagnose problems and decide the best course of action
- Being familiar with any and all tools necessary for repairs, including power tools
- Following rigorous checklists to ensure that every aspect of the car receives an inspection
- Taking continued education classes to further mechanical knowledge on late-model vehicles
- Learning how to do repairs on electric, hybrid, diesel, and gasoline-powered automobiles
- If required, taking phone calls for appointments, as well as providing updates on progress to customers as a well establish entrepreneur.

An entrepreneur is an individual who possesses qualities of risk-taking, leadership, motivation, and the ability to resolve crises. Entrepreneurs are leaders and major contributors to the process of creative destruction. According to Baba (2013) an entrepreneur is any person who uses skills to discover hidden business opportunity and exploits it for a profit. Entrepreneur is a change agent, an innovator and a risk taker, who exploits business opportunities within the environment by utilizing the resources effectively to develop new technologies, produce new products and services to maximize profit and contributing significantly to societal development. This desire of an entrepreneur to maximize profit and contribute to economic and social well-being of the society shows the entrepreneur's great ability to organize in business organization. The activity or activities of the entrepreneur is called entrepreneurship. Entrepreneur plays a dominant role in the development of business opportunities. An entrepreneur in the context of this study is someone who takes the initiative to establish own business from scratch and nurtures it to growth and profitability, brings new ideas or innovations into it to make it viable. Therefore, the importance of entrepreneurial skills in the economy of developed and developing countries have led and would continue to lead to a reconsideration of their roles in the economy of nations. However, success for entrepreneurial ventures requires competent skills. Entrepreneurship skills would go a long way to help technicians to be successful entrepreneurs.

Entrepreneurship in automobile technology is among the major ways to enhance socio-economic and industrial development of self-actualization for the individuals

concerned. Entrepreneurship is a process of bringing together creative and innovative ideas, combining them with management and organization skills in order to combine people, money and resources to meet an identified need and thereby create wealth (Abdulkadir, 2011). It is the willingness and ability of an individual to seek out investment opportunities, establish and run an enterprise successfully. Thus an entrepreneurship skills are simply business skills which individuals possess to enable them effectively function in the turbulent business environment as an entrepreneur or self-employed. The importance of entrepreneurial skills in the economy of developed and developing countries have led and would continue to lead to a reconsideration of their roles in the economy of nations. However, accomplishment for entrepreneurial ventures requires competent skills.

Therefore, entrepreneurship training seeks to provide automobile technology students with knowledge, skills and motivation to encourage in a variety of settings. Entrepreneurship education particularly in Nigeria, structured to achieve the following objectives according to Ojeife, (2013).

- To offer functional education for the auto technology students so as to enable them to be self-employed and self-reliant.
- To offer graduates with auto technology training that will enable them to be creative and innovative in identifying novel business opportunities
- To provide college graduates with adequate training in risk management to make certain bearing feasible.
- To provide the young graduates of auto technology with enough training and support that will enable them to establish a career in small and medium size businesses.
- To offer graduates of auto technology adequate training in the acquisition of skills that will enable them meet the manpower needs of the society.
- To stimulate both individual and economic growth of rural and less developed areas.
- To provide both small and medium business enterprises with opportunity of recruiting graduates who are trained and tutored in the skills relevant to the management and operation of small businesses.
- To inculcate the spirit of perseverance in the students and graduates which will enable them to persist in any business venture they embark on during their school period and after graduation.

In order to achieve these plausible objectives and with the current emphasis on self-reliance, the Federal Government of Nigeria through its educational regulatory agencies has made entrepreneurship education a compulsory course in the technical colleges irrespective of subject description. This was part of the education reform agenda in Nigeria and the essence of it is to equip the students on graduation with skills capable of making them employers of labour in their area of discipline rather than job seekers.

Skill acquisition as one of the expected result of an organization is the bedrock of any developing nation particularly now that unemployment is becoming a serious problem facing the nation. In technical institutions, the situation is made worst when graduates pass out of school with little or no employable skills. Skill acquisition involves the development of skills gained through practice, training or experience (Sanders, 2011). The importance of skill acquisition cannot be over emphasized because its roles to national development are multi-dimensional but of particular mention are the following: elimination of hunger and poverty; reduction or elimination of joblessness and reduction of crime through effective engagement of youths. In Nigeria, skill acquisition is hoped to be achieved through technical and vocational education. Automobile technology graduates should possess adequate entrepreneurial skills for successful management of their business after graduation. Skills improvement needs of technical teachers for effective teaching of automobile technology repairs and maintenance works to student of technical colleges in is very paramount (Fadairo, 2016). This will make them to remain relevant in the job. There are several categories of skills improvement needs by automobile graduates such as costumers' service skills, mechanical knowledge, manual dexterity, problem solving skills, computer diagnostic skills and practical skills.

Practical skills is based on practice or action rather than theory and or hypothesis. Practical skills therefore is a situation in which candidate has to demonstrate practical ability, for instance road side mechanics without acquiring formal education. Technical skills refer to the specialized knowledge and expertise needed to accomplish complex actions, tasks, and processes relating to computational and physical technology as well as a diverse group of other enterprises. Those who possess technical skills are often referred to as technicians, with the expression referring to audio technicians, electronics technicians, market technicians, computer technicians, engineering technicians, and a variety of other designations. Technical skills are qualities acquired by using and gaining expertise in performing physical or digital tasks. Therefore, practical/technical skills in automobile technology involves the proficiency in the use of machine, spanners, wrench, and hammers sockets, screwdrivers, calipers, equipment, diagnostic equipment and lathe machines to produce components. The various tools/equipment and needed in automobile trade skills areas to perform tasks in; auto body and panel repair skills, mechanics, vulcanizing (tyres and wheel repairs) spare part mechanizing, auto electricity system, compression test skills or cylinders compression test, wet test skills, vacuum test skills or cylinders power balance and oil pressure testing skills, steering repair work skills, brake system repair skills, involved assembling of parts, suspension system repair skills, heating and air-conditioning (cooling system) skills,. In a nutshell, technological development has brought several changes and modifications in automobile systems that are imported or assembled in this country. The new development

has greatly brought about changes in the skills required of auto mechanics craftsmen for employment in the automobile industry (Olufemi & Oyenuga, 2010). The practical skills demand for lifelong learning and self-reliance among developing countries is aimed at reducing unemployment, empower its citizenry economically and further reduce wastage caused by the production of unskilled technical college graduates. Therefore, it become necessary for auto technicians to possessed additional skill such as computer diagnostic skills.

Computers diagnostic skills refers to the ability to diagnose the problems in newer cars by hooking them up to specialized computers. Since computers are now components of motor vehicle therefore, mechanics these days need to have strong automotive fault diagnostics skill to run these diagnostic tests effectively and efficiently. Diagnostics or faultfinding is a fundamental part of an automotive technician's work. Current motor vehicle engines are controlled by microprocessor are electric micro-components or sensors that sense engine system demands and communication to the appropriate vehicle components for response (Uren & Virag, 2011). It is obvious that computers are now common place in modern day automotive design; braking, steering, starting and suspensions system are few examples of items now technologically operated. With the computers available, automotive designers have developed numerous sensors and controls. Also, automobile shops technicians could use computerized diagnostics tool, computers to store information about customers, schedule appointments and store replacement part information, making this skill even more useful (Olufemi & Onyenuga, 2010). In vehicles different computer programmes are installed in order to diagnose faults. Byoung-Suk, (2012) admitted today's vehicles engine control system are On-Board Diagnostic system. The use On-Board Diagnostics (OBD), Digital multimeters, computerized wheel alignment gauge and automatic wheel balancing machine are common place in the repair of modern cars in the manufacturer's approved service centers today (Kayemuddin & Kayum., 2013). The OBD is an automotive term referring to a vehicle's self-diagnostic and reporting capability. OBD systems give the vehicle repairer access to the status of the various vehicle sub-systems and give the mechanic a clue as to where to look at when a problem occurs on the vehicle. In the same vein, it may perhaps access diagnostic troubles codes (DTCs), run test to check system operations, identify problem area and monitor activity of the engine.

In addition fault(s) in cars could also be diagnosed using electronic gadget like exhaust gas analyzer. It is a sophisticated piece of test equipment used to measure the component gases of the vehicle's exhaust. The engine analyzer is also use for checking complete performance of engine, check battery capacity, starting system, charging system and fuel system. The fuel gauge tool is a computer tool for diagnosing fault in the fuel injection system. There are also injector balance tester, vacuum leak detector, tachometer and pyrometer. Since car manufacturing processes are changing

constantly, and mechanics need to stay up to date on the latest information. The internet is even spreading to mechanics, with certified mechanics providing advice online. Mechanics themselves now regularly use the internet for information to help them in diagnosing and/or repairing vehicles. Service manuals for vehicles have become significantly less prevalent with computers that are connected to the Internet taking their position (Jeffrey, 2015). Automotive fault diagnostic skills have become imperative and necessary in the training of motor vehicle technicians. For the present technicians to be able to function optimally in today's automobile industry, they need to acquire sufficient skill in the principle and operation of computer diagnostic system. Therefore the complexity of modern car have need of graduates to possess requisite computer diagnostic skills and as well as costumer service skills for optimal performance.

Customer service is the ability to serve clients' needs. Improving customer service involves learning what clients need and developing plans to set up customer-friendly processes. Costumer service skills refers to discussion with car owners is a strong interpersonal skills which include being good at listening, explaining problems effectively and remaining polite at all times (Olufemi. & Oyenuga, 2010). Paying special attention to the customers and taking the extra step to provide them with excellent service. It will help technicians to succeed in their business. Customer service skills is very important, as a positive customer service experience can help create relationships that will lead to returning customers, as well as aid in attracting new ones (Elistina, & Naemah.,2011). Always thoroughly prepare, notify the customer when you are on the way, communicate with customer about the issue, document repairs, and test drive the vehicle after repairs are made. Inspect the vehicle for other potential issues, return a clean vehicle, and explain the repairs in layman's terms, return old parts to customer' and follow up on repairs. In the supply of services, consumers justly demand fair treatment and high standards in the whole range of services, which include tailoring, hairdressing, motor repairing, house construction, transportation, recreation, hire purchase, insurance, and banking. However, consumer services skills tend to be neglected compared to the attention paid to consumer goods. This requires the ability to solve problem and think on your feet. Whether a repair is taking longer than expected or a customer is unhappy with their vehicle, it's the job of a technician to come up with a solution that is best for the customers as a self-employed businessperson.

Self-employment is the act of generating one's income directly from a consumer as opposed to being an employee of a business. Self-employment is the creation of job rather than the seeking for job. Self-employed people generally find their own work rather than being provided with work by an employer, earning income from a trade or business that they operate. Therefore, every graduate of automobile technology are expected to improve their practical/ technical skills in a particular area and become expert in it. Some essential qualities required for self-employed automobile graduates

are there willingness to take risks, acceptance of uncertainty, natural networker; self-discipline, a total commitment to hard work, passion, energy, creativity and innovation.

Some self-employed graduates however, are located in rural areas, while some are situated in urban areas. It is most likely, that practical / technical skills possessed in the rural areas in Delta States could differ from those graduates in urban areas. This could be as result of level of exposure of repairs of different cars by those in urban setting, while deficient environment could be factor, particularly in the rural setting. Additionally, the years of working experience of the automobile graduates could range from zero – 10 years, 10 years-20 years and 20-30 years respectively. Thus, these varying experiences could have some influence on practical/technical skills to carry out repairs and maintenance. The years of working experience may perhaps vary from one technician to another. Eze, Onwusa, Olunoku and Nwosah, (2020) revealed that working experience or number of years spent with master craftsman could influence the skills acquired by apprentice. Thus to become a master craftsman, one need to have strong practical skills, problem-solving and automotive diagnostic skills. Auto-technicians also need to have good human relations and great customer service skills. By and large, there may not be effective entrepreneurs particularly in auto mechanics without the effective demonstration of practical skills, customer service skills and computer diagnostic knowledge.

Some automobile self-employed graduates seems to be selective in carry out repair especially modern cars. They carry out repair by trial and error because they do not possess diagnostic skills. It appears that teaching and learning in technical colleges is mainly theoretical in content which has superseded practical /technical skills, mechanical knowledge and automotive fault diagnostics knowledge. The ideal situation is that, automobile self-employed graduates are expected to use automotive faults diagnostic equipment to detect faults in motor vehicle without trial by error approach. Unfortunately, the technical college graduate are performing below expectation in the labour market. Hence, it becomes necessary to study entrepreneurial skills improvement needs by self-employed technical college automobile technology graduates in the Delta State.

Statement of the Problem

Consecutive governments in Delta State have employed several measures in areas like: fiscal incentives, grants, bilateral and multilateral support to aid educational institutions in the state specifically in technical and entrepreneurial development. However, automobile technology graduates from technical colleges who are expected to have possessed the entrepreneurial skills for self-employment and join the team of entrepreneurs in the country for economic growth and industrial development lack the required skills. Frequently the customers feel disappointed because of the delay in the repair of their cars by the

automobile technology graduates in their workshops. The inability of graduates to possess the relevant entrepreneurship skills is therefore could be attributed to deficiency in curriculum which also lead to the problem of poor performance, high incidence of business failure and unemployment. The graduates seeking for employment are in most times rejected by employers because they lack the employable skills. This has further increased the youth's negative behaviour in the state as most anti-social acts including banditry, militancy, restiveness, frauds stars and ethnic political clashes are now norms in different part of the country.

Also, it is common to notice that the automobile workshops in both urban and rural areas in Nigeria look primitive, archaic and old fashioned. The working environments lack good infrastructural and facilities. The sector is lacking structural organization and administration. The workforce perform operations without standard and business ethics. Similarly, the sector is virtually not regulated by government. Modern tools and equipment are lacking and the mechanics' carryout repair by trial and error due to lack knowledge of auto diagnostic. The existing problem is that technical college automobile self-employed graduates do not possess the requisite practical technical skills, computer diagnostic skills, customer services skills as well as knowledge of modern equipment in automobile industries. Therefore it becomes difficult for them to repair modern cars with Data Link Connector (DLC), Engine Controlled Unit (ECU), actuators and sensors incorporated to every vehicle parts. In order to enhance self-employability and productivity in workplaces among graduates of technical colleges. It becomes imperative to investigate entrepreneurial skills improvement needs by self-employed technical college automobile technology graduates in Delta State.

Purpose of the Study

The purpose of the study was therefore to determine the entrepreneurial skills improvement needs by self-employed technical college automobile technology graduates in Delta State. Specifically, the study sought to determine the;

1. Practical/technical skills improvement needs by self-employed technical college automobile technology graduates
2. Computer diagnostic skills improvement needs by self-employed technical college automobile technology graduates
3. Customer service skills improvement needs by self-employed technical college automobile technology graduates.

Research questions

Three research questions guided the study

1. What are the practical/technical skills improvement needs by self-employed technical college automobile technology graduates?

2. What are the computer diagnostic skills improvement needs by self-employed technical college automobile technology graduates?
3. What are the costumer services skills improvement needs by self-employed technical college automobile technology graduates?

Hypotheses

Hypotheses was tested at 0.05 level of significance.

1. There is no significant difference between the mean responses of self-employed automobile technology graduates on practical /technical skills based on their locations (rural and urban) areas.
2. There is no significant difference between the mean responses of self-employed automobile technology graduates on computer diagnostic skills based on their years of working experiences.

II. LITERATURE REVIEW

Theoretical Framework of the Study

Scholars have put forward several theories to explain the field of entrepreneurship to help aspiring entrepreneurs succeed in their endeavours. Theories of entrepreneurship seek to explain why entrepreneurs behave the way they do. In addition, they explore the environmental and individual characteristics that influence entrepreneurial decisions. Some of the entrepreneurial skills theories are as follows:

Sociological Entrepreneurship Theory

Sociological enterprise focuses on the social context .In other words, in the sociological theories the level of analysis is traditionally the society (Landstrom, 1998). Accordingly, Reynolds (1991) identified four social contexts that relates to entrepreneurial opportunity.

- a. **The first one is social networks:** Here, the focus is on building social relationships and bonds that promote trust and not opportunism. In other words, the entrepreneur should not take undue advantage of people to be successful; rather success comes as a result of keeping faith with the people.
- b. **The life course stage context:** Which involves analyzing the life situations and characteristic of individuals who have decided to become entrepreneurs. The experiences of people could influence their thought and action so they want to do something meaningful with their lives.
- c. **The ethnic identification:** One's sociological background is one of the decisive push factors to become an entrepreneur. For instance, the social background of a person determines how far he/she can go. Marginalized groups may violate all obstacles and strive for success, spurred on by their disadvantaged background to make life better.
- d. **The population ecology:** The idea is that environmental factors play an important role in the

survival of businesses. The political system, government legislation, customers, employees and competition are some of the environmental factors that may have an impact on survival of new venture or the success of the entrepreneur. Therefore, the theory is relevant to this study because it is directed on the social context of that the students will adapt as they engaged on entrepreneurship after graduation from school.

Psychological Entrepreneurship Theories

The level of analysis in psychological theories is the individual (Landstrom, 1998). These theories that define entrepreneurship. Personality traits, locus of control and need for achievement are reviewed.

i) Personality Traits theory

Coon (2004) defines personality traits as stable qualities that a person shows in most situations. To the trait theorists there are enduring inborn qualities or potentials of the individual that naturally make him an entrepreneur. The obvious or logical question on your mind may be what are the exact traits/inborn qualities? The answer is not a straight forward one since we cannot point at particular traits. However, this model gives some insight into these traits or inborn qualities by identifying the characteristics associated with the entrepreneur. The characteristics give us a clue or an understanding of these traits or inborn potentials. In fact, explaining personality traits means making inference from behaviour. Some of the characteristics or behaviours associated with entrepreneurs are that they tend to be more opportunity driven, demonstrate high level of creativity and innovation, and show high level of management skills and business know-how. They have also been found to be optimistic, emotionally resilient and have mental energy, they are hard workers, show intense commitment and perseverance, thrive on competitive desire to excel and win, tend to be dissatisfied with the status quo and desire improvement, entrepreneurs are also transformational in nature, who are lifelong learners and use failure as a tool and springboard. They also believe that they can personally make a difference, are individuals of integrity and above all visionary. The trait model is still not supported by research evidence. The only way to explain or claim that it exists is to look through the lenses of one's characteristics/behaviours and conclude that one has the inborn quality to become an entrepreneur.

ii). Locus of Control

Locus of control is an important aspect of personality. The concept was first introduced by Julian Rotter in the 1950s. Rotter (1966) refers to Locus of Control as an individual's perception about the underlying main causes of events in his/her life. In other words, a locus of control orientation is a belief about whether the outcomes of our actions are contingent on what we do internal control orientation or on events outside our personal control external control orientation. In this context the entrepreneur's success

comes from his/her own abilities and also support from outside. The former is referred to as internal locus of control and the latter is referred to as external locus of control. While individuals with an internal locus of control believe that they are able to control life events, individuals with an external locus of control believe that life's events are the result of external factors, such as chance, luck or fate.

iii). Need for Achievement theory

The trait model focuses on enduring inborn qualities and locus of control on the individual's perceptions about the rewards and punishments in his or her life, (Pervin, 1980), need for achievement theory by McClelland (1961) explained that human beings have a need to succeed, accomplish, excel or achieve. Entrepreneurs are driven by this need to achieve and excel. While there is no research evidence to support personality traits, there is evidence for the relationship between achievement motivation and entrepreneurship (Johnson, 1990). Achievement motivation may be the only convincing person logical factor related to new venture creation (Shaver & Scott, 1991). Risk taking and innovativeness, need for achievement, and tolerance for ambiguity had positive and significant influence on entrepreneurial inclination Mohar, Singh and Kishore (2007). However, locus of control (LOC) had negative influence on entrepreneurial inclination. The construct locus of control was also found to be highly correlated with variables such as risk taking, need for achievement, and tolerance for ambiguity. The recent finding on risk taking strengthens earlier empirical studies which indicate that aversion to risk declines as wealth rises, that is, one's net assets and value of future income (Szpiro, 1986). In complementing Szpiro's observation, Eisenhauer (1995) suggested that success in entrepreneurship, by increasing wealth, can reduce the entrepreneur's degree of risk aversion, and encourage more venturing. In his view, entrepreneurship may therefore be a self-perpetuating process. Further evidence suggests that some entrepreneurs exhibit mildly risk-loving behavior (Brockhaus, 1980). These individuals prefer risks and challenges of venturing to the security of stable income. Thus Psychological Entrepreneurship Theories are relevant to this study because it emphasize personality traits, need for achievement and locus of control needed by graduates to succeed as entrepreneurs

III. METHOD

The study made use of descriptive survey research design. The study was conducted in the three senatorial zones in Delta state. The population was the 76 automobile technology graduates and automobile technology entrepreneurs registered was used for collection of data from the study. Since the population is small the sampling technique was convergence. The instrument of data collection was 40 items structured questionnaire was used to collect the data for the study. The questionnaire items was generated through literature review. The instrument was validated by three experts. The reliability

of the instrument was determined using Kudar Richardson technique. The correlation coefficient calculator was 0.92. Copies of the questionnaire was administered through personal contact to the respondents with help of three research assistants. The 30 copies of the questionnaire were correctly filled and returned after three weeks. Data was analyzed and null hypotheses was tested using t-test statistical tool.

The data collected from responded were analyzed using mean, and standard deviation. Any item that had a mean value of 5.00 -4.49 Very Highly Needed (VHN), 4.49-3.49 Highly Needed (HN), 3.49 -2.49 Needed (N), 2.49-1.49, Moderately Needed (MN) and 1.49-0.00 Not Needed (NN). The standard deviation was used to determine the closeness or otherwise the opinion of the respondents from the group mean, z-test analysis was used to test the null hypothesis at probability level of 0.05 level of significance. Accept null hypothesis when $t_{cal} > t_{tab}$ and reject null hypothesis when $t_{cal} < t_{tab}$.

IV. RESULTS

Research Question 1

What are the practical/technical skills improvement needs by self-employed technical college automobile technology graduates?

Table 1: Mean respondents on the Practical /Technical Skills improvement Needs by Self-Employed Automobile Technology Graduates. N=76

S/N (i)	Practical /Technical skills on Engine Components	Mean	SD	Remarks
1	Selection of the correct tools and equipment	4.00	0.57	HN
2	Skillful use of tools	4.02	0.56	HN
3	Properly remove and disassemble a cylinder head	3.93	0.67	HN
4	Reassemble and install cylinder head	3.88	0.57	HN
5	Remove and install a crankshaft, check crankshaft and main bearing bores for problems	3.70	0.72	HN
6	Measure main bearing clearance and crankshaft end play	4.03	0.55	HN
7	Service engine pistons and properly install piston rings.	3.68	0.72	AN
8	Dismantle engine assembly correctly	3.75	0.66	HN
9	Correct engine timing and operation	4.13	0.60	HN
10	Remove and install a timing belt./ chain	4.02	0.61	HN
11	Remove intake and exhaust manifolds, spark plugs, wires, rocker arm cover and any accessory units attached to the head of the cylinder.	3.95	0.68	HN
12	Grind valves to the correct valve face angle	3.83	0.75	HN
13	Remove and replace valves in their original guides	4.07	0.54	HN

14	Check, remove and install valve seating.	3.87	0.89	HN
15	Check valve spring free length correctly	3.90	0.64	HN
16	Inspect spring for etching or other damage.	3.83	0.75	HN
17	Install valves, seals and spring assemblies.	4.07	0.89	HN
18	Install rocker arm and shaft assembly.	3.87	0.87	HN
19	Position rocker arm shaft correctly.	4.03	0.71	HN
20	Adjust valve lash or clearance.	3.81	0.54	HN
21	Fix correctly the lifter plunger and can lobe base circle.	3.88	0.70	HN
22	Remove camshaft skillfully	3.68	0.63	HN
23	Remove crankshaft assembly	4.04	0.58	HN
24	Remove oil pump and filter	4.23	0.63	HN
25	Replace connecting rod and gudgeon pin	3.67	0.74	HN
26	Install engine covers using gaskets, seals and sealers as required.	4.05	0.64	HN
27	Diagnose engine noises and vibrations.	4.06	0.57	HN
28	Observation of safety precautions	3.78	0.89	HN
29	Removal of injector nozzle	3.46	0.56	N
30	Testing the nozzle on the injector nozzle test	3.42	0.48	N
31	Carry out phasing and calibration test	3.30	0.85	N
32	Examining the injector nozzle and test for better performance	4.05	0.87	HN
33	Cleaning the carbon deposit and refitting the injector nozzle	3.54	0.78	N
(ii)	Practical/Technical Skills on Vehicle Transmission System			
34	Fix problems on manual transmission systems	4.09	0.57	HN
35	Fix problems on automatic transmission systems	4.17	0.89	HN
36	Fix problems on gear box systems	4.04	0.56	HN
37	Fix problems on clutch assembly	4.34	0.98	HN
38	Fix problems on universal joints systems	3.67	0.85	HN
39	Fix problems on propeller shaft	3.90	0.87	HN
40	Fix problems on differential unit	3.94	0.78	HN
41	Fix problems on final drive assembly	3.56	0.78	HN
42	Fix problems on rear wheels	3.45	0.64	N
43	Using scan tool to diagnosis faults on transmission Systems	3.16	0.78	N
44	Selection of right tools/ equipment for services and repair of transmission system	4.07	0.85	HN
(iii)	Practical /Technical Skills on Lubrication System			
45	Check oil pump for functionality	4.12	0.73	HN
46	Remove faulty, wear and install	4.09	0.78	HN

	new oil pump.			
47	Change oil relief valve	4.04	0.76	HN
48	Service oil filtration systems	4.34	0.89	HN
49	Change by-pass and full flow filters	3.17	0.56	N
50	Use feeler gauge to check clearance between the gear teeth and the pump body	3.90	0.88	HN
51	Determine correct engine oil grade and viscosity to be used on each vehicle	3.94	0.85	HN
52	Determine practical viscosity index	4.06	0.56	HN
53	Applying special greases where is needed	3.16	0.87	N
54	Check pump cover for flatness.	3.45	0.78	N
55	Determine when oil should be changed.	3.36	0.76	N
56	Ability to gauge the oil correctly.	4.07	0.54	HN
(iv)	Practical/ Technical Skills on Cooling System			
57	Check for internal leakage in cooling system.	4.12	0.56	HN
58	Check for external leakage from the radiator and hose	3.29	0.46	HN
59	Fix the drain plug and refill the radiator with water	4.03	1.67	HN
60	Fix back the radiator to the engine	3.67	1.85	HN
61	Remove the radiator fan and inspect for breakage	3.90	1.87	HN
62	Remove and correct examination of thermostat	3.94	0.78	HN
63	Remove, clean and carry out soldering operation in radiator	3.56	0.76	HN
64	Test radiator for leakages.	3.45	0.54	N
65	Correct removal of water pump	3.46	0.56	N
66	Correct cutting of water pump gasket	4.32	0.67	N
67	Remove radiator hose and examining it	3.45	0.67	N
68	Skillful mounting of water pump	3.89	0.65	N
69	Start the engine and check whether water pump is leaking	3.36	0.56	N
70	Rectify cooling system faults, overheating, overcooling , poor circulation and corrosion	3.26	0.89	N
Vi	Practical /Technical Skills on Fuel System			
71	Select carburetor service kit	3.19	0.63	N
72	Logically remove the carburetor for service and fix back	3.87	0.78	N
73	Remove the fuel filter, pump and clean it	3.95	0.75	N
74	Remove and service the electrical/manual fuel pump and test for good working performance	4.03	0.45	HN
75	Logically check for fuel spray and sequentially test for phasing	4.05	0.57	HN
76	Replace fuel supply pipelines	3.46	0.78	N

	and trace fuel line leakage			
77	Remove fuel tank, remove the sediment bowl and clean	4.06	0.56	HN
78	Sequential re-assembling and observation of safety precautions	3.26	0.76	N
79	Ability to locate faults and rectify it in fuel system	3.40	0.84	N
Vii	Practical /Technical Skills on Clutch and Braking System Services			
80	Service different types of clutch.	4.09	0.77	HN
81	Adjust types of clutch linkages.	4.17	0.89	HN
82	Diagnose clutch problems. and rectify it	4.04	0.56	HN
83	Removal of master cylinder and service it	4.34	0.08	HN
84	Replace clutch pilot bushing	3.67	0.85	HN
85	Install clutch disc and pressure plate assembly	3.90	1.87	HN
86	Use clutch disc aligning arbor.	4.94	0.78	HN
87	Adjust clutch pedal free travel	3.56	0.76	HN
88	Diagnose common brake system problems and refitting of the new brake	3.45	0.54	N
89	Install brake shoes. and coupling of front wheel	3.56	0.56	HN
90	Check for signs of leakages in the system.	4.07	0.56	HN
91	Dictate brake pad wear and replace with new ones	4.78	0.46	HN
92	Removal of wheel cylinder seals and refitting new seals in wheel cylinder.	4.12	0.53	HN
93	Bleed master cylinder before installing.	4.09	0.78	HN
94	Adjust brake pedal height and free travel.	4.11	0.75	HN
95	Removal of rear wheel	3.76	0.45	N
96	Adjust and center major and minor brake shoes.	4.86	0.44	HN
97	Inspect, clean, remove and install brake drum	3.78	0.78	HN
98	Coupling of the rear wheels.	3.18	0.56	N
99	Remove and install brake pads.	3.37	0.76	N
96	Check hydraulic fluid and gauge it properly	3.27	0.84	N
100	Check for leakage in the brake pipeline	4.89	0.46	HN
101	Fix piston in caliper braking system	3.14	0.49	N
102	Check master cylinder for internal/external leaks.	3.26	0.67	N
Viii	Practical /Technical Skills on Wheel Balancing and Wheel Alignment			
103	Select equipment for wheel alignment	4.12	0.67	HN
104	Correction of wheel misalignment	4.09	0.76	HN
105	Remove worn out wheel	4.11	0.75	HN
106	Correct visual inspection of the wheels	3.88	0.80	HN

107	Correct placement of the wheel alignment gauge on the front wheels	3.64	0.57	HN
108	Remove tyres and check for wear	3.22	0.45	N
109	Correct fault finding on the front wheel	3.22	0.34	N
110	Ability to read the gauge properly	3.42	0.34	N
112	Ability to adjust the alignment gauge to correct reading	3.17	0.34	N
113	Correct support of the axle with axle stands	3.26	0.33	N
114	Correct checking of the wheel for static balance	3.35	0.44	N
115	Use lead weight to balance the wheels	3.45	0.34	HN
116	Use computerized wheel alignment gauge	3.28	0.78	N
117	Use manual wheel alignment machine	3.18	0.56	N
118	Use optical wheel alignment gauge	3.42	0.76	N
119	Check car tyres on pressure behaviour	3.37	0.84	N
X	Practical/ Technical Skills on Ignition System			
120	Service battery, alternator and regulator	4.05	0.56	HN
121	Install and adjust contact point	4.16	0.56	HN
123	Test, replace and adjust electronic distributor parts.	4.13	0.74	HN
124	Remove and replace a distributor assembly	3.89	0.4	N
125	Adjust ignition timing	3.61	0.34	N
126	Clean, inspect, test and replace spark plugs	3.86	0.65	N
127	Check the primary wiring for signs of cracking.	4.68	0.56	HN
128	Replace any defective wires.	4.32	0.34	HN
129	Check battery efficiency and electrolyte level.	4.35	0.86	HN
130	High rate discharge test to check the battery	4.07	0.78	HN
131	Remove and install battery. Correctly	3.68	0.34	N
132	Check circuit for voltage drop.	3.91	0.45	N
133	Carryout starter load and non-load test.	4.12	0.23	HN
134	Remove starter motor, check brushes in its holder, check the tension of the brushes springs check the commutators for burnt spots and repairs.	4.09	0.78	HN
135	Carry out hydrometer test of the electrolyte	4.11	0.75	HN
136	Dismantle the starter motor assembly	3.76	0.45	N
137	Switch off or turned off the vehicle ignition	4.86	0.34	HN
138	Select the right spanners, and observed safety precautions	3.78	0.78	HN
139	Loosen the alternator tension adjustment bolts	3.68	0.56	HN
140	Remove the belt by pressing the alternator inward	3.67	0.76	HN

141	Loosen the three mounting screws and disconnect the brush holder assembly	3.67	0.84	HN
142	Inspect the rotor coil ground and check for continuity between the slip ring and the core	3.45	0.87	N
Xi	Practical /Technical Skills on Steering and Suspension System			
143	Diagnose problems of steering and suspension systems.	3.89	0.45	N
144	Check manual steering gear lubricant level.	3.87	0.43	N
145	Adjust manual steering gear rack and pinion.	3.95	0.56	N
146	Overhaul manual steering gear	4.03	0.89	HN
147	Adjust power steering gear	4.05	0.56	HN
148	Install shock absorber.	3.56	0.67	N
149	Check and adjust thrust bearing preload.	4.06	0.56	HN
150	Remove and install steering wheel. Assembly	3.56	1.89	N
151	Remove and install coil spring	3.40	0.67	N
152	Remove and install torsion bar	4.04	0.45	HN
153	Repair idler arm and test for good working performance	4.05	0.75	HN

Note=Very Highly Needed=VHN, Highly Needed=HN, Needed N, Moderately Needed=MN, Not Needed-NN

It was revealed in table 1 above that the respondents to the practical /technical skills items statement, 110 items are highly needed and 43 items are needed. The mean ranged of 4.49 to 3.49, which is above the cutoff point of 2.50. The standard deviation of 0.34 and 0.98 shows that the respondents were heterogeneous in their mean ratings. This showed that practical/ technical skills outlined are needed and highly needed by self-employed automobile graduates Delta State.

Research Question 2

What are the computer diagnostic skills Improvement needs by self-employed technical college automobile technology graduates?

N=76

S/No	Computer Diagnostic Skills	Mean	SD	Remarks
1	Starting and shutting down computer system/ peripherals	3.09	0.67	N
2	Cut, copy, past documents/text	3.17	0.89	N
3	Identifying and use of icons, menus and windows	4.04	0.56	HN
4	Ability to enter the vehicle information number (VIN), locate by the front windscreen or front door hinge	4.34	0.68	HN
5	Ability to add and delete records on computer	3.67	0.85	N
6	Ability to use computer keyboard and locate fault reading in the vehicle	3.90	0.87	N
7	Fault codes will be displayed as	3.94	0.78	N

	shown, reading permanent fault. repairs are to be carried out at this point			
8	Ability to use computer to detect fault codes in vehicle	3.56	0.76	N
9	Navigate to select clear fault codes using On-Board Diagnostic	3.45	0.54	N
10	Using words processing for typing and other applications	4.13	0.84	HN
11	Install and upgrade applications	3.89	0.74	N
12	Insert and eject storage devices	3.61	0.84	N
13	Ability to use computer software and hardware	3.86	0.65	N
14	Ability to use computerized wheel alignment	4.68	0/56	HN
15	Ability to use automatic wheel balancing machine	4.32	0.94	HN
16	Make backup copies of document and files	4.35	0.86	HN
17	Insert and eject external storage	4.07	0.78	HN
18	Start an application, create and save document using save and save as command.	3.68	0.34	N
20	Identify the use of icons, windows and menus	3.91	0.45	N
21	Connect and install peripheral devices	4.23	0.67	HN
22	Setup system computer (CPU) monitor, keyboard and mouse	4.09	0.78	HN
23	Ability to use computer tool for diagnosing faults in cars	4.11	0.75	HN
24	Create and use e-mail account for exchange information with others	3.76	0.45	N
25	Lunch and use basic browser facilities for different browsers	4.86	0.34	HN
26	Download and save data images, file, software and drivers	3.78	0.78	N
27	Use suitable techniques for easy search e.g. bookmarks and favourite	3.68	0.56	N
28	Create web site and publish materials on the web	3.67	0.76	N
29	Evaluate and choose a suitable connection method to access the internet	3.67	0.84	N
30	Customize browser setting to improve and maintain performance	4.09	0.87	HN
31	Purchase materials online	4.17	0.89	HN
32	Evaluate, choose and use appropriate search engines.	4.04	0.56	HN
33	Use computer for injector cleaner services	4.34	0.88	HN
34	Computer programming in engine control unit	3.67	0.65	N
35	Use of password and data security	3.90	0.87	N
36	Ability to diagnostic troubles codes	3.94	0.78	N
37	Download files and print it	3.56	0.76	N
38	Establish specific virtual practical learning of skills	3.45	0.54	N
40	Effective use of control technology /robotic	3.67	0.67	N

Note=Very Highly Needed=VHN, Highly Needed=HN, Needed= N, Moderately Needed=MN, Not Needed=NN

It was revealed in table 2 above that the respondents computer diagnostic skills the 40 items, 15 items are highly needed and 25 items indicates needed because they had a mean ranged of 4.04 to 4.90, which is above the cutoff point of 2.50. The standard deviation of 0.34 and 0.94 show that the respondents were heterogeneous in their mean ratings. This indicated that computer diagnostic skills out4ined are needed and highly needed by self-employed automobile graduates of technical colleges in Delta State.

Table 3 : Mean respondents on the Customer Service Skills Improvement needs by Self-employed Automobile Technology Graduates.

N=76

S/N	Customer Service Skills	Mean	SD	Remarks
1	Cleanliness in workshop environment	3.89	0.45	N
2	Paying special attention to customers	3.87	0.43	N
3	Provide excellent service to customers	3.95	0.56	N
4	Always thoroughly to provide information for repair procedure	4.03	0.89	HN
5	Communicate with customers about the vehicle problems	4.05	0.56	HN
6	Ask questions necessary to help understand the exact nature of the problem	3.56	0.67	HN
7	Ask to describe noises, symptoms of the issues such as vibrations in the steering wheel or noise from the brakes or suspension	3.89	0.45	HN
8	Position altitude and demeanor when communicating with customer in order to help them feel comfortable	3.87	0.47	HN
9	Document all repairs carried out to the best of your ability	3.95	0.56	HN
10	Photos and notes the repair as your carrying them out	4.03	0.89	HN
11	Test drive the vehicle after repairs are made	4.05	0.56	HN
12	Inspect the vehicle for the potential issues, check the fluid level of the engine oil, coolant, power steering fluid and brake fluid	3.56	0.67	HN
13	Always return a clean vehicle to the customer	4.06	0.56	HN
14	Explain the repair in layman’s terms/language	3.16	0.87	N
15	Tools and equipment is up-to-date	3.40	0.67	N
16	Follow up with customer a few days after the repairs are made to make sure that everything is in order	4.04	0.45	N
17	Telemarketing experiences of approximately 20- 30 mouth	4.05	0.75	HN
18	Communicating with customers to build rapport, as well as discussing the diagnosis and repairs	3.89	0.45	HN

20	Actual charge is lower or similar to the estimated one	3.87	0.83	HN
21	Return any old parts to customer	3.95	0.66	HN
22	Physical appearance of the garage is appealing.	4.03	0.89	HN
23	Mechanics’ appearances are suitable	4.05	0.56	HN
24	Displays important information at easily accessible places.	3.26	0.67	N
25	When something is promised, it is done	4.16	0.56	HN
26	Could be trusted to do a good job.	4.13	0.74	HN
27	Finishes the jobs within a reasonable time.	3.89	0.38	N
28	Mechanics are never too busy to respond to customers’ requests and desires	3.61	0.34	N
29	Understands what the consumer wants and needs	3.86	0.65	N
30	Individual attention given to each consumer.	4.68	0.56	HN
31	Provides strong information of any risk that could happen	4.32	0.84	HN
32	Provides clear information of the specification of spare parts.	4.35	0.86	HN
33	Provides clear information of the issues before the services are performed	4.07	0.78	HN
34	The prices of spare parts are reasonable and moderate	3.38	0.64	N
35	The charges are reasonable and affordable	3.11	0.55	N
36	Convenient operating hours for customers	4.12	0.83	N
37	Has the knowledge in answering all the consumers’ problems	4.09	0.78	HN
38	Do not feel that they were being talked into unnecessarily servicing/repairing	4.11	0.75	HN
39	Provision of prompt service to customers	3.76	0.45	HN
40	Use different pricing strategies peculiar to different customers.	3.76	0.45	HN

Note=Very Highly Needed=VHN, Highly Needed=HN, Needed N, Moderately Needed=MN, Not Needed=NN

It was revealed in table 3 above that the respondents on computer services skills the 40 items, 25 are highly needed and 24 indicates needed because they had a mean ranged of 4.49 to 3.49, which is above the cutoff point of 2.50. The standard deviation of 0.34 and 0.89 showed that the respondents were heterogeneous in their mean ratings. This implies self-employed automobile technology graduates in urban and rural areas need to improve their skills on interpersonal relationship aspect in order to effect a change on the way they relate with customers.

Hypothesis One

There is no significant difference between the mean responses of self-employed automobile technology graduates on practical /technical skills based on their locations (rural and urban) areas.

Table 4: The result of the Z-test conducted in respect of this hypothesis is presented in Table 4

Z-test Result of the Rating of Self-employed Automobile Technology Graduates on Practical /Technical Skills based on their Locations (rural and urban) areas.

Sources of Variation	Locations	N	Mean	SD	α -level	t-cal	t-crit	Df	Sig.	Dec.
Practical/ technical skills Improvement needs by automobile graduates	Urban	50	1.74	0.25	0.05	0.71	1.96	76	0.42	Reject H_{01}
	Rural	26	1.50	0.22						

Note: N= total population, SD=standard deviation, α -level=level of significance, t-cal = t - calculated, t-crit = t - critical, df = degree of difference

The analysis summarized in table 4 shows that there is no significant difference between the mean ratings of the responses of the respondents automobile graduates in the practical/ technical skills based on their locations (urban and rural). Tested at 0.05 significance, while degree of freedom (76), and the z-calculated (0.71), obtained is less than z-critical (1.96). Therefore at that level of significance ($P \leq 0.05$) the z-calculated is less than z-critical; therefore, we reject the null hypothesis. Thus there was statistical difference between

the mean ratings of automobile self-employed graduates in the urban and rural areas with regard practical/ technical skills.

Hypothesis Two

There is no significant difference between the mean responses of self-employed automobile technology graduates on computer diagnostic skills based on their years of working experiences.

Table 5 : The result of the Z-test conducted in respect of this hypothesis is presented in Table 5

Z-test Result of the Rating of Self-employed Automobile Technology Graduates on Computer Diagnostic Skills Based on their Years of Working Experiences

Sources of Variation	Years of working Experience	N	Mean	SD	α - level	t-cal	t-crit	Df	Sig.	Dec.
Computer Diagnostic Skills Improvement Needs Based on their Years of Working Experiences	10-20years	46	1.87	0.66	0.05	0.75	1.96	76	0.50	Reject H_{01}
	Zero-10years	30	1.62	0.51						

Note: N= total population, SD=standard deviation, α -level=level of significance, t-cal = t - calculated, t-crit = t - critical, df = degree of difference

The analysis summarized in table 6 shows that there is no significant difference between the mean ratings of the responses of the respondents of automobile self-employed graduates possessed computer skills based on their years of working experienced (1-10 years) and (10-20 years). The numerators 46 and denominators 30 respectively. Tested at 0.05 significance, degree of freedom (76), the t - calculated (0.75), obtained is less than t - critical (1.960), at significance (0.05).Therefore at that level of significance ($P \leq 0.05$) the t-calculated is less than t-critical. Thus we reject the null hypothesis. It was the concluded that there is no significant difference in the computer diagnostic skills by well experienced and less experienced automobile self-employed graduates in technical college.

V. DISCUSSION

Findings revealed that from the 153 items statement on the practical /technical skills were very much needed by technical college graduates self-employed in automobile technology, such skills include technical skills on engine components, vehicle transmission, lubrication system, cooling system,

ignition system, braking system, fuel system, steering and suspension system, wheel balancing and wheel alignment etc. Based on the findings, it was revealed that ability to; work on the engine components, install cylinder head components, piston and rings, remove and install oil pump, fuel pump, cooling system components and lubrication system etc. are highly needed by self-employed graduates of automobile technology. The findings was supported by Kayemuddin & Kayum, (2013) that the top level mechanic, capable of handling the many phases of automotive repair, must have a number of talents practical /technical skills to cope successfully with the demand of the trade. It becomes obvious that practical/technical skills are the fundamental to automobile technology graduates who are self-employed. Thus this will make them practically oriented and can manipulate tools and equipment to refurbish motor vehicle. Consequently the overall performance of graduates in there various shop will automatically improve thereby contributing immensely to the economy of the nation.

The findings revealed that that computer diagnostic skills outlined are highly needed by self-employed technical

colleges' graduates of automobile technology. The ability to start up and shutdown computer, computer keyboard and locate fault reading, use computer for injector cleaner services, use of password and data security, establish specific virtual practical learning of skills, effective use of control technology /robotic, Insert and eject external storage, start an application, create and save document using save and save as command. Identify the use of icons, windows and menus, create and use e-mail account for exchange information with others setup system computer monitor, keyboard and mouse, lunch and use basic browser facilities for different browsers, use of OBD2, computerized wheel alignment, automatic wheel balancing, engine analyzer are needed by self-employed graduates of automobile technology to excel in their business. It was also revealed that all the graduates should possess the requisite entrepreneurial skills before establishment small scale business Supporting this view Uren and Virag, (2011); Nice, (2012) said the use of computer are common place in the repair of automotive in the manufacturers approved service centers today. Auto diagnostic skills equipment can access diagnostic troubles codes (DTC), run test to check system operations and monitor activity of the engine. With this the issue of trial by error method used to identify faults will be phase out completely from the system. Consequentially, the skills performance, effectiveness and efficiency of auto technicians will be improve generally.

Findings further revealed that all the items statement in customer service skills are needed by the self-employed graduates automobile technology to excel in their business such as a positive customer service experience, create relationships that will lead to returning customers, as well as aid in attracting new ones. Always thoroughly prepare, notify the customer when you are on the way, communicate with customer about the issue, document repairs, and test drive the vehicle after repairs are made. Inspect the vehicle for other potential issues, return a clean vehicle, and explain the repairs in layman's terms, return old parts to customer' and follow up on repairs. These also agree with the opinion of Olufemi and Oyenuga, (2010).who outlined some of the essential skills for success as an automotive technician. In the supply of services, consumers justly demand fair treatment and high standards in the whole range of services, which include tailoring, hairdressing, motor repairing, house construction, transportation, recreation, hire purchase, insurance and banking. Are very necessary self-employed graduate to succeed in their business enterprise,

The findings also revealed that there was no significant difference between the mean ratings of the respondents due to locations (urban and rural) of automobile self-employed graduates as regards the practical/ technical skills. This means that irrespective of the locations (urban/rural) of the graduates, their levels of practical technical skills do not significantly differ. The findings also is in agreement with Eze, Onwusa, Olunoku and Nwosah, (2020); Ibrahim and Abdullahi, (2010) which reported that the locations of automobile self-

employed graduates did not, whether rural or urban, affect the level of practical/ technical skills in their workplaces. But rather much depends on individual creativity/innovation and resourcefulness of the technical colleges graduates.

The study further revealed that there was no significant difference between the mean responses of the years of working experience among automobile self-employed graduates as regards the working experience. In other words, the working experience differ significantly in the way they possessed or demonstrated skills. The findings was supported by Eze, Onwusa, Olunoku and Nwosah, (2020) stated that the technical graduates do differ in their working experience based on computer diagnostic skills The computer diagnostic skills possessed could be as result of additional vocational training or exposure received on the job . However the knowledge is very paramount to remain relevant in the job because many modern cars are computerized as well as modern tools and equipment require competencies on computer technology.

Significance of the Study

The findings of the study would be of great benefit to the automobile technology students, technical colleges' graduates, National Board for Technical Education (NBTE), curriculum planners, technical education, Federal and State Ministries of Education, parents, society, and researchers.

The students could benefit from the findings of this study by receiving start up training on entrepreneurial skills and the use of these skills would in turn improved their performance effectively in business operation.

The findings from the study would be of immense benefit to technical colleges' graduates. It would enlightened the graduates on the wider range of skills required for establishing auto mechanics workshop and become entrepreneurs.

The findings from the study would provide information to the curriculum planners. The curriculum planners are expected to identify, plan and develop the curriculum that would equipped the technical institution graduates with the entrepreneurial skills needed to work and become an effective workers in the world of work after graduation.

The National Board for Technical Education (NBTE) as a regulatory body in curriculum development would use the findings from the study to in-clude suitable programmes/modules that can enhance entrepreneurial skills of graduates of auto mechanics technology. The entrepreneurial skills would be of great importance to these graduates in terms of practical technical skills, customer skills and computer skills respectively.

The findings from the study would readily be used by the Federal Ministry of Education and Delta State Ministry of Education in particular, as a guide to policy formulator for skill acquisition centers administrators for the training of the

unemployed youths for jobs in auto mechanics technology. The findings would be useful to these ministries as a reference material during refresher courses for graduates of auto mechanics technology by officials of the ministries.

The findings of the study would be of benefit to the parents and the society at large because, by the time the automobile technology graduates practice enterprises in the maintenance and repairs of automotive engines both at home and in the entire society.

The findings would benefit technical education by using the information provided to come up with measures that will ensure effective supply of these materials across the states in Nigeria. The information provided, would also portraint the image of entrepreneurial education

Finally, it is hoped that the findings from the study would provide information to researchers that may wish to carry out similar research in other field in the future.

VI. CONCLUSIONS

Based on the findings of this study, it was concluded that automobile self-employed graduates technical college require practical/technical skills, computer diagnostic skills and customer service skills in automobile technology venture to keep up to date with the modern cars service and repair. The inclusion of computer software in the repair of cars has gone long way humanizing repair which every self-employed graduates must possess the requisite skills. This will as well improve the standard of living of self-employed automobile graduates in Delta State.

VII. RECOMMENDATIONS

Base on the findings of the study, the following recommendations were made:

1. All the skills identified on (practical/technical skills, computer diagnostic skills and customer service skills) should be packaged and use to improve the graduates of automobile technology as prospective entrepreneurs in Delta State, Nigeria.
2. There should be regular seminar, workshops and conferences for graduates to strengthen and refocus on entrepreneurial education.
3. Graduates should be introduced to entrepreneurial activities at their early stage to enable them grow alongside with it in and out-of-school programmes. Through this methods students who transcend into technical institutions to the university level, would have become conversant with the tenets of entrepreneurial demands.
4. Entrepreneurship education should be introduced as one of the compulsory subjects in all technical colleges' in Delta State.
5. Government should increase the budget for the implementation of this policy on mandatory entrepreneurship education and the budgeted sum

should be released in order to actualize the purpose of the funding.

6. Government should provide initial capital in for of soft loan with little or no interest to the prospective graduates who intend floating their entrepreneurship.

REFERENCES

- [1] Abdulkadir, A. A. (2011). The role of entrepreneurship education in empowering the Nigeria youth. *Business Education Journal*, 8 (1), 14 – 22.
- [2] Ayonmike, S. C. (2011). Skill training in Nigeria technical colleges: Benefits and challenges.
- [3] Baba G.K. (2013). The challenges of entrepreneurship development in Nigeria and way forward; *Journal of Business and Organizational Development* 5(1), 53-64.
- [4] Coon, D. (2004). *Introduction to Psychology* (9th Ed) Minneapolis: West Publishing Company.
- [5] Elistina, A. B. & Naemah, A. (2011). Consumers' perceptions on the service quality in the motor vehicle repair and service industry: An Exploratory Study in Klang Valley, Malaysia, *Social Science & Humanity* 19 (2): 409 – 422.
- [6] Eisenhauer, J.G. (1995). The entrepreneurial decision: economic theory and empirical evidence", *Entrepreneurship theory & practice*. Retrieved from www.allbusiness.com
- [7] Eze T. I, Onwusa, S. C, Olumoko, B. O. & Nwaosa, F. I. (2020). Assessment of the extent of auto-mechanics teachers' utilization of instructional materials for teaching in technical colleges in Edo and Delta State, Nigeria. *Education Research Journal*, 10(10), 305–317.
- [8] Fadairo, O. O. (2016). Development of entrepreneurship skill training modules in motor vehicle mechanic work for enhancing self-employability of technical college graduates in Lagos State, Nigeria, Department of Vocational and Technical Education. *Journal of Innovative Practice in Vocational Technical Education* 1(1)014-01., Available online <http://transcontinentalpublisher.org>.
- [9] Fasehun, O. O. (2013). Technical manpower and entrepreneurship in a developing economy. *Technology Education Journal*. 9(1).34-39.
- [10] FRN (2010) National Policy on Education Federal Republic of Nigeria Lagos; NERDC Press.
- [11] Fiet, J.O. (2002). *The Systematic Search for Entrepreneurial Discoveries*, Westport, CT: Quorum Book
- [12] Funkhouser, J. (2013). How innovation has changed the job of auto repair technician. *Washington Post*
- [13] Ghavifekr, S., Afshari, M., & Amla Salleh. (2012). Management strategies for E- Learning system as the core component of systemic change: A qualitative analysis. *Life Science Journal*, 9(3), 2190-2196.
- [14] Gill, P. S. (2010). *A textbook of automobile engineering-Vol-1* New Delhi: S. K. Kataria and Sons..
- [15] Jeffrey, N. R. (2015). 40-millionth Toyota Corolla ever built. *Autoblog.com*. Retrieved -02-17.
- [16] Johnson, B. (1990). Toward a multidimensional model of entrepreneurship: The case of achievement and the entrepreneur, *Entrepreneurship: Theory& Practice*, 14, 39-54.
- [17] Kayemuddin, M. & Kayum, S. (2013). Problems and prospects of automobile workshops in Bangladesh. *Journal of African Studies* from <http://www.howstupffworks.com> and *Development*, 5(6), 157.
- [18] Landstrom, H. (1998). *The Roots of Entrepreneurship Research*, Conference proceedings, Lyon, France, November 26-27.
- [19] McClelland, D.C. (1961). *The Achieving Society*, NJ: Van Nostrand, Princeto
- [20] Mohar, Y .M.S, Singh, J & Kishore, K. (2007), "Relationship Between psychological characteristics and entrepreneurial inclination: A Case Study of Students at University Tun Abdul Razak", *Journal of Asia Entrepreneurship and Sustainability*, 8, ProQuest Information and Learning Publishers

- [21] National Board for Technical Education- NBTE (2013). Directory of accreditation programmes in Polytechnics. Similar Tertiary Institutions, Technical Colleges and vocational Enterprise Institutions in Nigeria. Kaduna:
- [22] National Board for Technical Education- NBTE (2011). Memo on acute shortage of teachers in technical colleges. 48th session of the National council.
- [23] Nice, K. (2012). Operation of computerized vehicles. Retrieved
- [24] Nwachukwu, L.C. and Nwamuo, P. (2010). Entrepreneurship development for sustainable livelihood among you this in Imo State: Implication for counseling, conference proceedings, CASSON.
- [25] Ojeife, S.A. (2013). Entrepreneurship education in Nigeria. A Panacea for youth unemployment. *Journal of Education and Practice*, 4(6), 61-67.
- [26] Olufemi. O & Oyenuga, A. (2010). Integration of automobile technological developments into Nigeria technical college motor vehicle mechanics work curriculum, *Academic Leadership: The Online Journal* 8 (2) Article 26. Available at: <https://scholars.fhsu.edu/alj/vol8/iss2/26>
- [27] Pervin, L.A. (1980). *Personality: theory, assessment and research*. New York: John Wiley & Sons
- [28] Reynolds, P.D. (1991), *Sociology and entrepreneurship: concepts and contributions*, *Entrepreneurship: Theory & Practice*, 16(2), 47-70
- [29] Rotter, J. (1966), "Generalised expectancies for internal versus external control reinforcements", *Psychological Monographs*, 80, Whole No.609.
- [30] Sanders, C. (2011). Skill uncertainty, skill accumulation, and occupational choice.
- [31] Santini, A. (2014). *Automotive electronic 2nd edition*. Glen Ellyn, Illinois: Cengage Learning.544.
- [32] Shaver, K.G & Scott, L.R. (1991). Person, process, choice: the psychology of new venture creation, *Entrepreneurship Theory & Practice*, 16, 23-45.
- [33] Subramanian, S. D. (2013). How innovative ICT promotes auto Industry growth defiance technologies ltd.
- [34] Szpiro, G. (1986). Measuring risk aversion: An alternative approach, *Review of Economics and Statistics*, 68, 1156-159.
- [35] Ukit, S. J. (2013). Use of information and communication technology in automobile trades to achieve global human capacity building. *JONATT: The Journal of Nigerian Association of Teachers of Technology (NATT)* 9 (1) Lagos: NATT.
- [36] Uren & Virag, (2011). Skill requirement, search frictions and wage in equality. *International Economic*