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**APPRENTICESHIP:  
TRENDS EXPERIENCES AND EXPECTATIONS  
OF KUMASI SUAME MAGAZINE INFORMAL  
INDUSTRIAL ENCLAVE IN GHANA**

**1. Introduction**

Apprenticeship is a system of learning a craft or trade from one who is engaged in it and of paying for instruction for a given number of years of work. The practice was known in ancient Babylon, Egypt, Greece and Rome, as well as modern Europe and to some extent the United States of America. It was typical in the medieval Europe for a master craftsman to agree to instruct a young man, to give him shelter, food and clothing to work for the master for a given time. The apprentice after this becomes a journey person who will work for the master for wages, or he/she sets up as master him/herself.

In the West Africa sub-region, including Ghana, apprenticeship has been practiced but with some slight modification [1] Apprenticeship in Ghana is generally informal. Training and skills are acquired by observing and practising what the master does. Agreement between the master and apprentice is either formal or verbal and in addition, the payment of certain amount of money or items. This binds the apprentice to the master for two to three years. This informal apprenticeship system,

supplies the human resource needs to most small scale industries, especially in the informal industrial sector, such as Suame Magazine in Kumasi, Kokompe in Accra and other similar clusters all over the country.

Suame Magazine in Kumasi is considered as the largest single cluster informal industrial setting in West Africa [1]. These small scale enterprises play major roles in the servicing of vehicles and the manufacture of small engineering tools and equipment, agriculture and industrial products which contribute directly to the economic livelihood of the people of Ghana and other West African states. The population at this informal cluster of engineering workshops has been on the increase. Powell [1] indicated that master craftsmen and apprentices in the middle 1970's stood at 27,000. This number has grown to over 100,000 in the late 1990's [2]. Suame Magazine Industrial Development Organization (SMIDO) places the figure at 200,000 with 12,000 micro and medium enterprises by mid-2000. It is this growth in human resources and its management which is relevant to the operations in Suame Magazine and other similar cluster across Ghana.

## **2. History of Suame Magazine in Kumasi**

The location of Suame Magazine is at the North Eastern part of the city of Kumasi. History has it that the name "Magazine" came from one of the several locations the early craftsmen settled. That is, around a former armoury for the colonial army in 1935, hence Magazine (storage facility for arms, ammunition and explosives). The clusters of craftsmen did not start with vehicle repair but rather indigenous skills and talents in blacksmithing and brass artefacts until some of these traditional family engineering traders found vehicle repair as a trade with good prospects, came together. The name "Magazine" followed the automobile repair shops which finally settled at their present site in Suame, a suburb of Kumasi. Suame Magazine area is a trapezoidal-shape about 1.80 kilometres long and 320 meters wide. The perimeter of the nucleus of the cluster, cover a distance of 7 kilometres. Features at the core areas of Suame Magazine, reveal, 6 out of every 10 building were constructed of temporary materials of wooden boards, iron sheets and shipping containers [3]. Although the plots of land are zoned administratively, the demarcations are not well done. This development therefore features scene of abandoned vehicle carcasses, smeared engine oil floors, metal scraps/chips and lateral streets tuned into workshops and car parks, providing an atmosphere of choked environment and mixed sound made from several machines, motor grinders, other human activity etc. carried out as a follow up to previous surveys or precede a survey to be used as a means of identifying key issues which merit further investigation.

### **3. Literature review**

Apprenticeship is one of the ways by which manpower resources are made available to industries and other sectors of the economy. However, manpower requirements in organizations are constantly changing due to world technological development. Government and to some extent, in partnership with the private sector are therefore required to provide the necessary policy framework that will enable the available human resources to continue to satisfy the needs of the sectors of the economy. Ghana like most developing countries, suffers from limited availability of relevant skills needed for the rapid expansion and modernization of its economy. In general, economic development is associated with technological advancement which depends on the availability and effective utilization of scientific, technical and managerial manpower resources [4].

Ghana's attempts at advancement since independence in 1957 were unsuccessful due to several reasons, one of them being the non-availability of the relevant manpower required. Dunn [5] attributed this constrain to the absence of appropriate skills and other manpower requirements. This weakness was the cumulative effect of the colonial policy on education that trained personnel to work as clerical staff to man administrative positions in the colonial offices. The lacks of artisanal skills therefore weakened the development and promotion of indigenous small enterprises in Ghana. This brought about structural disequilibrium in the labour market. Manpower skills in the country therefore concentrated mainly in the agricultural and commercial sectors [6].

Suame Magazine in Kumasi and other similar informal industrial set-ups have survived their existence till today on the constant supply of manpower requirement provided through apprenticeship systems which continues to evolve the same trends as the old Masters experienced them so many years ago. And so, at Suame Magazine, in Kumasi the Master Artisan trains and turns out apprentices yearly, using the same old methods techniques and technological resources learned and acquired from their original masters. The demands of the 21st century technological advancement and global trends in development however, require certain levels of attributes, techniques, and training methods to equip apprentices to function appropriately in global labour market place. The study of apprenticeship at Suame Magazine in Kumasi, takes a holistic look at the constrains of trainers (Master Craftsmen/Women), their literacy levels, capacity to upgrade themselves and the system of training and the general apprenticeship concept as it exists today.

These underlying bottleneck of apprenticeship at Suame Magazine and the challenges to supply appropriate skilled labour to industry need to be understood. It is only when this task of improving the capacity (technical, human resources and

management) of master craft persons, has been achieved, that a competitive apprentice would be produced to effectively survive in the current technological age. This is the focus of this study.

Agriculture and other forms of business activities. It therefore renders services, not only locally but also internationally to neighbouring countries such as Burkina Faso, Togo, Mali, Cote d' Ivoire, Niger, Nigeria and other West African countries. Some of the services include maintenance and repair of vehicles, manufacturing of agro-processing machinery, agricultural implements such as hoes, shepherd crooks, bullock plough blades, engineering and production of machine and vehicle spare parts.

It is undeniable fact that Suame Magazine is a cluster of small scale enterprises forming the hub of conglomerate informal industries. However, major sectors and products can be identified. These include manufacturing, vehicle repair and maintenance, metal working, sale of engineering materials and accessories, sale of automobile spare-parts, and the sale of food, drinks and beverages. Communication centers, secretariat services and banks are also silently but steadily creeping into prominence. Obeng [3] places these major sectors and product group and services found at Suame Magazine into a table shown below.

Table 1. Major Sectors and Products of Kumasi Suame Magazine

<b>Major sectors</b>	<b>Product group and services</b>
Manufacturing	Food processing machinery & equipment and farm implements, improved cook stoves, commercial and domestic utensils, foundry products.
Vehicle Repair and Maintenance	Engine overhauling, auto electrical works, vehicle interior upholstery, auto body straightening & spraying.
Materials Working	Metal working, Metal fabrication and plant construction using sheet metals, angle irons, channel irons, bars etc.
Sale of Engineering Materials & Accessories	Sheet metals, bars, iron rods, steel sections Hand tools, fasteners, electric motors, pumps etc.
Sale of Automobile Spare Parts	Used engines and parts, car decorating materials etc.
Sale of Food, Drinks and Beverages	Breakfast, lunch, snacks, soft drinks and alcoholic beverages.
Communication and Business Centres	Telephone and facsimile services, photocopying, computer typesetting, internet services, sale of mobile phones and cards, video cassettes, CDs and barbering.

Source: Obeng [2].

The entrepreneurs of the small and medium scale enterprises of Suame Magazine, being small in nature and character have the flexibility to change their production lines to meet any new development that is introduced into the Suame Magazine cluster area. Innovation of new products and services are therefore very common. However, since there are no enforcement of patency laws, there is rampant pirating especially for products and services which may be in hot demand and have good financial returns.

Generally, market for products and services from small scale enterprises of Suame Magazine, involves mostly Ghana. These include large scale firms and government departments (vehicle repairs and sale of engineering materials). On export markets [7], was surprise at a high proportion of 26% of clients to engineering enterprises being non-Ghanaians (trading in mostly bolts and nuts, shafts, com mill grinding plates, animal traps, locally manufactured guns and food processing equipment). Currently, repair and maintenance of earth-moving machine due to the mining industry.

On gender bases, Suame Magazine is dominated mainly by men. In the engineering and manufacturing sectors. Women are however found mostly in the sales shops where they sell bolts and nuts, belts, spanners etc. There are a few women in auto-body spraying, upholstery (automobile seats) other commercial activities such as communication and secretarial services and the greatest of all is the sale of cooked food, snacks, drinks and other beverages. Therefore, the population of women at Suame Magazine can be generally put at about 10-20%. The Suame Intermediate Technology Transfer Unit (ITTU) has observed the gender imbalance thus the establishment of Gender Development Unit to address the increase of women in some of the engineering trades. Some women can therefore be found in vehicle body works and machine shops where they operate lathe machines.

The population of Suame Magazine has increased greatly in recent years. Obeng [3] explained this to be due to the migration of the youth to Kumasi and other cities. He sited Kumasi Suame Magazine which had an average growth rate of 8% per annum in the 1990's. The intention of such youth was to learn a trade and later to be absorbed by the small and medium scale enterprises of the informal industrial cluster.

Educationally, Suame Magazine did not have any barriers or restrictions of entry. This was the norm at the initial stages that, anybody who had some skills good enough to provide some services had easy entry to Suame Magazine.

A socio-economic survey carried out on Suame Magazine by the Department of Housing and Planning Research of the Kwame Nkrumah University of Science Technology, Kumasi in 1971 had the following educational proportions; Master Craftsmen with primary education – 17%; middle School Level Education – 42%; City and Guilds level – 1%; private Trade tests from the National Vocational Training Institute – 24%; illiterates were – 12% and other forms of education – 4%.

The survey revealed that although Suame Magazine from, its on-set was an informal sector with very low levels of technical-manpower due to low level of education, slowly changed over the years with increases in middle school level education but with weak and very low level technical education.

## **4. Methodology**

The study focused on Kumasi Suame Magazine in Ghana. It is an informal industrial cluster, the largest in Ghana and West Africa [1]. The study adopted the case study approach but also combined qualitative and quantitative techniques where appropriate. Respondents in the field are five skills/crafts; Sheet Metal Works, Vehicle Repairs and Maintenance, Manufacturing, Blacksmithing, Foundry and Others. They were selected by being clients of Technology Consultancy Centre (TCC) in the College of Engineering of the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. These crafts men and women become clients of TCC since 1980, when the Intermediate Technology Transfer Unit (ITTU) was located within the cluster. It was a time when the ITTU concept trained artisans and transferred proven technologies through the distribution of used machine tools as start-up package on hire-purchase bases. The TCC through the ITTU has maintained links with these small scale engineering workshops, in the form of new training, use of machine tools at the ITTU, subletting of contracts and management trainings.

In the research design, a case study approach is appropriate because it gives an opportunity for some specific aspects of the problem to be studied at an in-depth within a very short time. It is a systematic collection of evidence and the matching of relationships [8]. This study therefore used observations and interviews as appropriate instruments for the situation at Kumasi Suame Magazine. One advantage of case studies is that, it allows the researcher to concentrate on specific situations and to identify the various interactive processes at work. Another advantage is when a case study is used as a follow up to previous surveys or precedes a future survey which merit further investigations. The former is the case here because studies conducted by the Department of Housing and Planning of the then University of Science and Technology, Kumasi in the 1970's, Dawson [7], Powell [1] and Obeng [3] has shown trends of technological and physical developments among artisans and at Kumasi Suame Magazine and other similar clusters in Ghana.

The following respondents were interviewed; Sheet Metal Workers – 5, Vehicle Repair and maintenance – 4, Manufacturing – 8, Blacksmithing – 14, Foundry – 7, others – 7. A total of 45 respondents formed the population. As stated above, the total number of respondents was due to several factors. One, the respondents are clients to TCC and have been supporting undergraduate students

for their internship programmes annually. Secondly, one of the field survey assistants had a short time in Ghana because he was on an international student exchange programme. Thirdly, the list of clients, were interview- friendly and did not require high level protocol arrangement, to have access to their workshops. Instruments used for collecting data were structured questionnaire, semi-structured interview and secondary data. These were administered by trained field assistants, through a face-to-face and one-on-one interviews. All research ethics and codes were strictly adhered to. The respondents were therefore willing and answered questions put to them by the interviewers.

## **5. Analysis and discussions**

Data generated from the six (6) craft persons were analysed using Spata 15 software instrument. The results were cleaned, transformed and remodelled to an acceptable conclusion. This enabled interpretation of findings and their significance to the research problem. The six respondent master craft persons all went through apprenticeship to acquire their skills. The highest being 7 and lowest 4 years, however, apprentices to these masters spend maximum of 5 years and 4 years being the lowest. The longest years for masters were spent in the Manufacturing sector while current apprentices at Vehicle repair and Maintenance and Blacksmithing experience the highest years in apprenticeship. The trend in apprenticeship continues at Suame Magazine because it is the only way generations of knowledge can secure for the future. Previous experiences in apprenticeship indicate that trainees had to reside with masters to take care of other domestic errands. The survey showed that among the current master craft persons only 7% lived with their masters at home, 71% came from their parental homes. Although these difficulties and experiences existed, 88% of the craft persons think apprenticeship was beneficial, interesting and professional. It has provided them with skills which earns them income.

The experiences gained by these craft masters shaped their thought on the types and nature of apprentices to admit into their workshops. Previously anybody could go or be sent to a master for training. Some apprentices spent more years labouring to cope with the skills and the traits required for that particular skill. Master craft persons had to spend more time trying to upgrade or force the skill upon these apprentices. The survey of the 6 trade skills show that 50% want literate apprentices with a maximum of Junior High School standards. Skills obtained by the master craft persons continue to be upgraded. Data collected show that Government was the largest provider at 52% from respondents, followed by NGO's 24%, Unions and trade association make up 8%. Out of these trainings, respondents accepted their trainings as beneficial at 64.3%, professional trainings at 17.9%. Others felt the trainings were unprofessional at 7%. 95% agreed they

will need additional training to improve their capacity, 5% said “no”. 66% want advance training, ICT 29.2%, basic training 4.8%. What nature should the training take? Respondents, 54.5% wants a combination of practical and classroom scenarios. 43% wanted hands on only, while 2.3% wanted classroom only. Meanwhile 64.4% are ICT illiterates because they felt there was no need. The 35.6% ICT literates say they have no access to personal ICT because they cannot afford it. Generally, the age bracket shows over 50 years’ olds at 31%. That is about a third. Ages 41-50 yrs. is 27%, 31-40 yrs. – 24%, 21-30 yrs. – 11%. It means that below 50 years has a high of 62%. This makes their expectation brighter by looking into the future of apprenticeship with literacy, training and ICT capacity enhancements.

## **6. Conclusion**

In conclusion, although apprenticeship systems at Kumasi Suame Magazine are left to their fate in matters concerning national development and planning. Obeng [3] observed that, for over half a century, very little was done by the local city council as well as central government to develop the physical infrastructure (water, electricity, road, telecommunication, safety devices, waste disposal sites, etc.), which would help to attract direct investment in modern engineering into the cluster. The lack of these facilities has left the small-scale entrepreneurs to operate from small make shift set-ups and workshops. The locations/sites of master craftsmen/women are very deplorable and therefore perform most of their work in open spaces around their enclosed shops (cubicles) where their tools and equipment are kept. The effect of this challenge is parts of the lateral streets have therefore been turned into workshops, rendering the streets un-motorable at certain times of the day.

This trend, however, is gradually changing because the experiences of the past are slowly fading away, through literacy which has created an enhanced atmosphere for new things (machinery equipment) trainings and capacity building and the edge to improve whatever the master craft persons come to meet at Kumasi Suame Magazine.

Apprenticeship as a human resource tool, adds its impact not only to Kumasi but to the rest of Ghana and West Africa. And as a human centred institution, apprenticeship can be regarded as the single most important assert to skills training and development in informal industrial clusters as found in Kumasi Suame Magazine and other similar locations. This is because after an apprentice had acquired his/her skills, will be gainfully employed and may also employ or train other apprentices. Entrepreneurship is stimulated and small-scale enterprise gets started.



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