AFRICAN JOURNAL OF APPLIED RESEARCH (AJAR)
www.ajaroniline.com Vol.1, No.1 ISSN 2408-7920 January 2015
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Atsu, A. M. (2015) Harnessing Skills and Competencies for Industrial Development through Knowledge Transfer Partnership in Ghana. In: Mojekwu, J.N., Ogunsumi,L.O., Ojigi,L.M., Atepor, L., Thwala,D.W., Sackey,S. Awere E., and Bamfo-Agyei, E. (Eds) African Journal of Applied Research .(AJAR) Journal, Vol.1,No.1 ISSN 2408-7920 January 2015, Cape Coast, Ghana. 363-371

HARNESSING SKILLS AND COMPETENCIES FOR INDUSTRIAL DEVELOPMENT THROUGH KNOWLEDGE TRANSFER PARTNERSHIP IN GHANA

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ABSTRACT
The development of Ghana can be said to hinge on skill development and technology transfer. In this regards, there is the need to bring industry and academia together for sharing of ideas and knowledge for solving developmental challenges. It is in this vein that Knowledge Transfer Partnership (KTP) has been introduced to help industries to improve their productivity. KTP is a UK-wide programme helping businesses to improve their productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge-Base. It is envisaged that this could be replicated in the Ghanaian perspective and Africa as a whole. Most industries solve problems hurriedly, thus causing re-occurrence of such problems. This paper sought to find out the awareness of industries and academic institutions in the Tamale Metropolis as well as their willingness to participate in a KTP program. Questionnaires were administered to the existing fifteen industries. The results showed that none of the industries and academic institutions was aware of KTP, but indicated their willingness to participate in it. It was found that duration of the attachment and preference of KTP over attachment due to long duration had the highest mean of 4.0. This is an indication that the respondents attach more importance to the length of the attachment and that made them to prefer KTP to industrial attachment. Also, the least mean was 1.7, which indicates that, the respondents do not attach any importance to the students solving problem, because students on attachment are not able to solve problems that is why they prefer KTP, associate who can help get solutions to their challenges. Sixty percent of companies interviewed said they would prefer KTP to attachment. Also, forty percent of companies agreed that KTP will give lasting solution to their problems. It is recommended that the government forms a board to facilitate the creation and operation of KTP.

Keywords: KTP, Skills, Polytechnic, Partnership, Industry

INTRODUCTION

The development of Ghana can be said to be with the skill development and technological growth of the country. Nsiah-Gyabaah (2009) stated that *"although, technical vocational education is key to opening the door for socio-economic development of the country, the implementation of the reforms in education, which began in 1987, has brought to the fore many problems in the objectives, content, administration and the management of technical vocational education in Ghana*. Opoku-Agyeman (2013) also re-echoed that *"Technical education is the backbone of the nation's technological advancement which was evident by the creation of Council For Technical And Vocational Education And Training (COTVET) and Skills*

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Development Fund (SDF"). In this regards, there is the need to bring the industry and the academia together for sharing of ideas and knowledge development for solving industrial problems, some of which they might not be aware that it exists. It is in this vein that Knowledge Transfer Partnership (KTP) is being introduced to help industries to improve their productivity. Knowledge Transfer Partnerships is a UK-wide programme helping businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge Base.

There are three principle players within a partnership (company partner, knowledge base partner and KTP associates) Company partner - this is usually a company (including not-for-profit) but in some cases it can be a health or education organization or Local Authority. Knowledge-base partner - this is a higher education institution (e.g. university), college, polytechnic or research organization (public or privately funded). KTP Associates – Each partnership employs one or more high calibre Associates (recently qualified people), transferring the knowledge the company is seeking into the business via a strategic project.

This paper sought to find out the awareness of industries and academic institutions in the Tamale Metropolis as well as their willingness to contribute funds and participate in a KTP program. The objective is to link industry to academic institutions to solve industrial problems.

RESEARCH METHODOLOGY

Purposive sampling was done to obtain information from those involved in tertiary education and the industry. A structured interview was conducted for three academic deans of Tamale Polytechnic and three academic deans at the University of Development Studies, Tamale to seek their views on the topic. Also questionnaires were administered to the fifteen (15) existing well established industries in the Tamale metropolis to seek their views on the topic and also to find out their willingness to contribute some amount of money to run the partnership. Out of which ten (10) questionnaires were received.

Descriptive statistics was used to analyze the data collected and results are shown as percentages and mean. Out of fifteen questionnaires sent out based on the number of existing industries in the region, ten were received.

FINDINGS AND DISCUSSION

Table 1 shows the responses of industries in terms of awareness of KTP and willingness to contribute to KTP.

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Table 1. Awareness and willingness of industrial respondents to contribute to KTP

Item	Yes		No	
	No.	%	No.	%
Awareness of KTP	0	0	10	100
Collaboration with an educational institution	0	0	10	100
Willingness of company to be part of the KTP	6	60	4	40
Willingness to contribute some money to KTP	5	50	5	50
Willingness to participate actively in KTP programs	10	100	0	0

The result in Table 1 shows that all the respondents in the Tamale metropolis were not aware of KTP. This suggests that there is the need to create the awareness to help their industries grow, because education is seen as a means of inculcating desirable knowledge, skills and attitudes into the members of society for the benefit of society. (Dzobo and Amegashie-Viglo, 2004) The KTP involves knowledge, technology, skills and adaptability to implement it, which is not always embodied in equipment or codified in an easily transferable form. People embody the skills and often the real know-how to effect innovative change in businesses. That is why the American people highly value creativity and innovation. (Liangcai, 2009) Knowledge developed or improved in academic institutions (knowledge base) may need extensive or intensive adaptation to particular business applications, because there is a positive relationship between education and development. (Amegashie-Viglo, 2009) A qualified person with a direct link to the academic source is the ideal transfer agent.

The aim of KTP is to strengthen the competitiveness, wealth creation and economic performance of the industries by the enhancement of knowledge and skills and the stimulation of innovation through collaborative projects between business (including social enterprises) and the knowledge base. It is in this direction that Agodzo (2007) said, all Polytechnics have one kind of external linkage programme or the other with institutions in especially Europe and North America aimed at capacity building in the institutions. The specific objectives include: to facilitate the transfer of knowledge and the spread of technical and business skills, through innovation projects undertaken by high calibre, recently qualified, people under the joint supervision of personnel from the industry and the knowledge base providing company-based training for graduates in order to enhance their business and specialist skills within the context of the project; to stimulate and enhance business relevant education and research undertaken by the knowledge base; to increase the extent of interactions by businesses with the knowledge base and their awareness of the contribution the knowledge base can make to business development and growth; and encourage an ongoing relationship beyond project completion between a company and their knowledge base partner to gain maximum benefit for all.

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A successful outcome of KTP in UK is reported as follows: There are over 1,000 Partnerships running at any one time and over 1,100 Associate projects. For every £1m of government spend the average benefits to the company amounted to an £4.25m annual increase in profit before tax, £3.25m investment in plant and machinery with 112 new jobs created and 214 company staff trained as a direct result of the project. For the knowledge base partner (higher education institution mainly), on average, each KTP Associate project produces 3.6 new research projects and 2 research papers. For the Associate 60% are offered and accept a post in their host company on completion of their KTP project. 41% register for a higher degree and 67% of these were awarded a higher degree.

Also, the results of the study revealed that there was no collaboration between industries and higher institutions of any kind in the Tamale Metropolis (Table 1). This indicates that collaboration between industry and the academia is seriously lacking so a platform must be created to encourage such collaboration. Nsiah-Gyabaah (2009) lamented lack of collaboration between industry and academia and stated that

> *"TVET has not been demand-driven and the linkage with industry, which is a key factor in making technical and vocational education relevant, is virtually missing. The deficiencies in the educational system and the gamut of problems, have not only affected the enrollment, performance, quality and relevance of TVET, but it has affected the supply of middle-level manpower needed by industry".*

Besides, Morgan (2013) mentioned in a radio discussion that due to lack of linkage between industry and academia there is mismatch in the job market. Furthermore, Metcalf, (2013) reported that collaboration between the industry and the academia is the way to go. He added that;

> '*In the spirit of industry and academic collaboration, Accra Brewery Limited and the University of Mines and Technology have entered into a mutually beneficial agreement to encourage multi-disciplinary research programme'.*

This it is felt will help eliminate mismatch in the job market and skills.

The statement on willingness to be part of the KTP saw sixty percent of the respondents declaring their willingness to be part of it (Table 1). Fifty per cent of the respondents were willing to set aside some amount of money for the partnership. This shows the willingness of industry to contribute money for their growth. On the statement of willingness to meet other members of the partnership to discuss progress, hundred percent of the respondents said yes. In trying to get the amount of money they were prepared to set aside monthly, hundred percent again opted for the lowest range which is between GH¢100 and GH¢500. This indicates that though they were willing to set aside some funds, none of them was prepared to go beyond GH¢500.

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Table 2. Acceptance of students and solving of industrial problems by respondents

item	Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)	Total	Mean	Rank
Accept students on attachment	6 (24)	4 (12)	0 (0)	0 (0)	36	3.6	2nd
Duration of attachment (3 to 6 months)	10 (40)	0 (0)	0 (0)	0 (0)	40	4.0	1st
Students engaged in their area of specialty	0 (0)	4 (12)	6 (12)	0 (0)	24	2.4	4th
Students help in solving problems	0 (0)	3 (9)	7 (14)	0 (0)	23	2.3	5th
Confidence in students on attachment	0 (0)	2 (6)	8 (16)	0 (0)	22	2.2	6th
Production challenges are encountered	1 (4)	2 (6)	5 (10)	2 (2)	22	2.2	6th
Problems are solved hurriedly	2 (8)	3 (9)	2 (4)	3 (3)	24	2.4	4th
Solved problems re-occurred	2 (8)	3 (9)	2 (4)	3 (3)	24	2.4	4th
Permanent solutions to problems	0 (0)	2 (6)	3 (6)	5 (5)	17	1.7	7TH
Accept national service personnel	3 (12)	3 (9)	2 (4)	2 (2)	27	2.7	3rd
Use of service personnel to investigate and find lasting solution to problems	1 (4)	1 (3)	6 (12)	2 (4)	23	2.3	5th
Prefers KTP to attachment	10 (40)	4 (12)	0 (0)	0 (0)	40	4.0	1st

Table 2 shows accepting students on industrial attachment by the industries and the role they play in solving problems. It can be seen from table 2 that, duration of the attachment and preference of KTP over attachment also due to long duration had the highest mean of 4.0. This is an indication that the respondents attach more importance to the length of the attachment and

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that made them to prefer KTP to industrial attachment. Also, the least mean from the table is 1.7, which indicates that, the respondents do not attach any importance to the students solving problem, because students on attachment are not able to solve problems that is why they prefer KTP, associate who can help get solutions to their challenges. The mean for item one is 3.6 which shows that, the respondents strongly agreed with the first item that is accepting students on attachment by the industry. On the period for the industrial attachment, which is item two, had a mean of 4.0 indicating that, the respondents strongly agree that the duration is between 3 to 6 months and that is why they accept them. It was observed that most of the industries did not engage students on attachment in their area of specialty, because the mean is 2.4. This is evident in a study by Nsiah-Gyabaah (2009) that *"Some students are placed in positions where they don't have opportunities to gain the experience that would help them to understand better what they have learnt or are yet to learn in school. Reports are that some students who find places for industrial attachments are used as errand boys and girls. Instead of assigning them to positions of relevance to their studies, they are left frustrated, sometimes without specific assigned tasks or not supervised"*. This confirms the response of item three. The mean for item four is 2.4 which gives an indication that, the respondents which are the industries do not use students on attachment to solve industrial problem, because they do not have confidence in them. This is an indication that, majority of the industries do not have confident in student on attachment so they do not use them to solve problems. Nsaih-Gyabaah (2009) indicated that "*because most student trainees lack basic practical skills and training, industry is reluctant to expose students to expensive or sensitive equipment for the fear that student trainees would break down equipment*". This is also a confirmation to the responds to item five that industries do not have confidence in students on attachment. The statement whether the industries encounter production challenges had a mean of 2.4 which shows that the respondents agree to it. This means that some of the industries have production challenges, which must be addressed through the KTP where an associate will have to study the challenge and find a lasting solution to it. Solving production problems hurriedly, and solved problem re-occurring, had a mean of 2.4 which shows that the respondents agreed, to the statements that due to production targets industries rush to solve problems which do not last and re-occurs shortly. This shows that there is the need to take time to solve the problem to give a lasting solution. This is where KTP comes in with an associate partner to take a systematic study of the problem and give a lasting solution. On the statement of accepting national service personnel, the mean is 2.7 which shows that the respondents agreed to the statement that they accept service personnel while the respondents disagree that they use the personnel to investigate and find lasting solutions to their production challenges. This shows that because industry does not have confidence in the students, they do not allow them to use their machines. With regards preference of KTP over industrial attachment, all the respondents agreed that they would prefer the KTP to industrial attachment due to its longer duration of between one and two years. This had one of the highest mean of 4.0.

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This is emphasized by (Afun, 2013) who advocated for a full year practical training for polytechnic students, to enable them to master their skills and also the use of wide array of equipment available in industries. Speaking at the 13th graduation ceremony of Ho Polytechnic, the Rector said *'since the attachment was for students to master the various skills available, the 10-week period allocated was not enough. He therefore suggests a full year attachment during national service'.*

Responses From Deans In Tamale Polytechnic And University For Development Studies

A structured interview was used to seek for the views of three academic deans at the Polytechnic and three academic deans at the University. All of them were not aware of the knowledge transfer partnership but know that there are collaborations between higher academic institutions and the industry. After the concept has been explained to them and asked if they are willingness to form partnership with the industry, they were all willing to partner the industry. When asked whether they are willing to share ideas or discuss findings of the KTP associate that is the student with the industry, they answered in the affirmative. When asked how? One said with power point presentation, another said a meeting of the academic institution, the KTP associate and a representative of the industry to discuss the findings. On the question of whether they are in collaboration with any industry, the deans at the polytechnic said no, when asked why? They said it is difficult to form collaboration in Ghana may be due to lack of education on the concept. This shows that there is the need to create the awareness and formulate policies to support the idea. An academic dean at the university answered yes and when asked how, he said they are in collaboration a university in Canada where they would get help to establish a hospitality centre and train their students with it. This shows that there is infrastructure benefit for the university. This was also re-echoed by Jallanluden that, *"The African Development Bank (AfDB), in collaboration with the Council for Technical Vocational Education and Training (COTVET), is to fund a number of infrastructural facilities for selected technical institutes across the country. This was announced at a meeting of the board of governors of the Nkoranza Technical Institute"* (Jallanluden, 2013).

CONCLUSION

In conclusion, the study revealed that, there was no awareness about knowledge transfer partnership. Also, majority of the industries did not have any collaboration with higher educational institutions and vice versa. Therefore, there is the urgent need to create the awareness and also create a platform for collaboration between industry and the academia to eliminate mismatch and also to solve industrial production challenges.

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Recommendations

The following recommendations are made to be considered by government and or relevant authorities to create the platform for forming collaboration between industry and academia:

1. Government should form a board to facilitate the creation and operation of the Knowledge Transfer Partnerships in Ghana.
2. The industry should try and enter into some form of collaboration with higher educational institutions.
3. The Polytechnics and the Universities should also try to enter into collaboration with industries to share ideas, knowledge and skills.

ACKNOWLEDGEMENTS

The authors would like to show appreciation to the respondents of the questionnaire, that is the academic deans of the Tamale Polytechnic and The University of Development Studies, the Industry, and those who helped in the administering of the questionnaire.

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