CURRICULUM DEVELOPMENT AND STUDENT TRAINING: A SHARED RESPONSIBILITY BETWEEN CLOTHING AND TEXTILE INSTITUTIONS AND THEIR INDUSTRY

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ABSTRACT: *The focus of the study was to look into the phenomenon of collaboration between clothing and textiles institutions and the industry regarding curriculum development and student training from the perspectives of respondents. Again the study was to find out if efforts to establish collaboration between clothing and textile institutions and the industry are based on theories/models or standardized practices. Purposive sampling technique was used for the study. Data for the study was collected using interview with semi-structured interview guide and observation. The sample size for this qualitative study was twenty-two (22) made up of two categories of respondent. It was made up of respondents from both the academia and industry. The outcome of the study showed these: It was realized that, as far as student training is concerned, respondents considered industrial attachment as the main and beneficial means of collaboration between the clothing and textiles institutions and the industry. Current efforts to establish collaboration between the two bodies around student training are not guided by standard practices or models. Implications of the outcome of the study as well recommendations for action are provided.*

KEYWORDS: Collaboration, Curriculum, Textiles, Institutions, Model

INTRODUCTION

Both the clothing and textiles academic institutions and large-scale clothing and textiles industries are major stakeholders as far as the success of the industry, and quality training of students in the field are concerned. It is envisaged that effective collaboration of academia and industry will bring about sustainability to minimize unemployment in the textile sub-sector. Quartey (2006) noted that the employment rate in the textile sub-sector started showing a reduction from 7,000 in 1995 to 5,000 in the year 2000, and again declined to 2,961 in the year 2005. From the above-mentioned authors, it can be realized that industry (Clothing and Textiles) has a key role to play in the growth of the economy. The success of the clothing and textiles industry depends on the quality of products from the training institutions in terms of knowledge, skills and attitudes. This indicates that industries are run with human resources and the question is: to what extent do the training institutions, and industries collaborate as far as the curriculum and training of students in clothing and textiles are concerned?

There is evidence in the literature concerning lack of strong linkage between academic institutions and the industries in Ghana (Donkor et al., 2009). This lack of strong linkage is evident in a reported reluctance of some industries to allow clothing and textiles students from

universities to do an industrial attachment in their companies. This is reportedly a major concern to the lecturers and causes frustration to students alike (Howard, 2013). More so, there is lack of partnership between academic circles and industry making textile students frustrated and discouraged. Furthermore, the students' disappointment is attributed to lack of collaboration in curriculum development to prepare the required labour force.

Indeed, there is lack of strong partnership between the academic institutions and the industry as far as preparation of curriculum for teaching is concerned. Curriculum decision is the exclusive reserve of the academic institutions since the industries are not always given the opportunity to make inputs to the curriculum. Howard (2013) further contends that one of the aims of the textile programme (Industrial Art Department 2010) at the Kwame Nkrumah University of Science and Technology (KNUST) is to improve the manpower resource base for the textile industry in Ghana. Again, he stated that in Bachelor of Technology (2010) programme there is a provision of specialized skills to Higher National Diploma graduates to meet contemporary manpower needs at managerial levels in the industry. These buttress the fact that industry should not be left out in the preparation of the curriculum for academic institutions. According to Una (1995), there is the need for a good relationship between industries and colleges for industrial attachment. Most students who have the opportunity to go for industrial attachment in the industries, either small or large scale, face challenges with new technologies, interpersonal skills, and development of good attitude towards work (Donkor et al., 2009). Piercy et al. (1977) mentioned that industries are short of adequately prepared graduates to fit into job-entry positions. They further found that managers from the industry complain of academia not having consistent programmes which capture industrial needs.

Evidently, industrial attachment is a requirement for students in the universities such as Kwame Nkrumah University of Science and Technology, the University of Education in Winneba and Technical Universities in Ghana offering textiles as a programme. The duration for practical industry attachment is not adequate to get the necessary practical experience from the industry. It is expected that graduates would be able to work in the industry after school if they do not set-up their own businesses. Most often graduates do not fit into the industry after school because they have to be re-trained to do a prescribed job in the industry which is also a cost to the employer. Others too lack the confidence of setting up their own businesses, and this has contributed to the unemployment situation in Ghana.

The success of clothing and textiles institutions ensures quality workforce to the industries. The success of industries also creates employment avenues for products of the institutions. They all have a strategic interest in the curriculum and training of students. Academic institutions are interested in the success of their products in the workplace after graduation. Therefore, the curriculum and training expose students to the knowledge, skills and attitudes needed to succeed in the field of clothing and textiles. The industry is also interested in the competence and effectiveness of employees. By extension, the industry is interested in what goes into the training of the potential employees. This mutually beneficial interest offers the grounds for collaboration between the two bodies with respect to curriculum and training of students in clothing and textiles. However, the issue of effective collaboration between the two strategic partners, concerning curriculum and students training, has not been given the attention it deserves. It also appears that existing forms of collaboration between the two bodies are not based on standard practices and models. The focus of the study was to investigate the phenomenon of collaboration between clothing and textiles institutions and

large-scale clothing and textiles industry regarding curriculum development and student training from the perspectives of respondents. Again, the study was to find out if efforts to establish collaboration between clothing and textile institutions and their allied industries are based on theories/models or standardized practices.

METHODOLOGY

For the purposes of understanding and knowing what is known from the participants' point of view, the researchers considered interpretive paradigm in which the study was situated. The goal of interpretivism/constructivism is to make meaning/sense or interpret meanings that others perceive the world. The choice of interpretivist paradigm in this qualitative study guided the researchers to choose appropriate methods for the collection of data and analysis of same.

Action research and multiple case study approach were adopted for the study. The researchers in using action research approach sought for respondents' perspectives on the challenges impeding collaboration between clothing and textiles institutions and industry and how collaboration could be improved between the two bodies. For the researchers to have in-depth knowledge about the study from the various sections/departments from both academic institutions and allied industries, multiple case study was used.

Sampling technique

Purposive sampling was appropriate for the study. Purposive sampling technique in a qualitative study is used to identify and select rich data for a study (Patton, 2002 as cited in Palinkas, et al., 2016). Cresswell & Plano (2011) as cited in Palinkas, et al. (2016) state that purposive sampling technique is used to identify groups of people having experience and knowledgeable in the area of study. The researchers selected respondents from institutions that offer textiles (KNUST and Kumasi Technical University) through their heads of department and from clothing and textiles industry (TexStyles Ghana Limited and Nallem Clothing) through their Human Resource Managers for the needed data.

The sample size was arrived at after reaching data saturation, when nine respondents from the industry and 13 from the textiles departments making a total of 22 respondents were interviewed for the study.

Data collection procedure

Interview and observation were the main instruments used for data collection. The interview was conducted between December, 2015 and February, 2016. The semi-structured interview questions were used for the collection of data. This type of questions enabled the researchers to ask follow-up questions for clarification. The interview was done face-to-face with the respondents with the use of interview guide. At the beginning of every interview session respondents were made aware of the purpose as well as the duration of the interview. They were also informed that the interviews would be tape-recorded. Respondents were informed of the rights to participation, confidentiality and anonymity. Each interview conducted covered an average time of between 45 and 60 minutes. The researchers also did a telephone interview. In this case, the respondent was not immediately available for a face-to-face interview but agreed to the telephone interview. The interviews were tape-recorded after

which verbatim transcription was done. Tape recording of interviews and subsequent verbatim transcription ensured that data for analysis was exactly what respondents said and as such authentic.

For purposes of anonymity and confidentiality, names of respondents were not included in their responses. Respondents from academia were identified as **UL** (University Lecturers) and **PL (**Polytechnic Lecturers) based on the nature of their institutions. The respondents from the industry were also identified as **IND** (Industry). The use of **UL 1, UL 2**, **UL3, PL 1, PL 2** and **PL 3** in the study represents the order of interview of respondents. Other respondents from the industry were identified as **IND 1, IND 2, IND 3, etc.** which also represent the order of interview from industry respondents.

RESULTS AND DISCUSSIONS

Industrial attachment as mandatory for collaboration towards student training

Respondents from the institutions seemed to be divided in their opinions regarding existence and nature of collaboration between them and the large-scale Clothing and Textiles Industries. Some respondents thought that there was actually no meaningful collaboration between the clothing and textiles institutions and the industries as far as training of students is concerned. Others also thought there was some level of collaboration existing between the two bodies. They mentioned areas of collaboration between the two bodies such as industrial attachment, excursion at the industry, invitation to industry, seminar, provision of equipment and consultancy services.

Apart from the different areas through which Clothing and Textiles (C&T) institutions collaborate with the industry, interpretation of the data also showed that many of the respondents seemed to view industrial attachment as the main and beneficial means of collaboration currently existing between the institutions and the industries. That collaboration is purposely for student training. For instance, when asked if there is any success story in the academia and industry regarding collaboration, **PL1** stated that "it helps because it prepares the graduates to go back to the industry and provide their skills to industry" **PL2** also said "because of the collaboration students are able to handle different material or media. Again, students are exposed to the industry and also become part of them. One of the respondents also said, "getting a place for our students for attachment is not a problem, unlike some departments that battle before they get places for industrial attachment for their students" **(PL3).**

It appears from the responses that the respondent's perceived industrial attachment as a means of collaboration between the institutions and the industry, which is useful for effective training of students. It appears they considered industrial attachment as a fulcrum around which collaboration between them concerning student training revolves. They also thought that the industrial attachment exposed the students to the industry and made them become familiar with the new machines and materials in the industry. They also believe that it helps the students get experience with the skills at the industry. By this exposure, they believe students are able to go back to the industry and work with the experience and skills gained in the industry through industrial training. It is indicated that industrial attachment is quite important in skill training since it offers different kinds of experience to students who support what has

been taught in the classroom (Karunaratne & Perera, 2015). Effective collaboration between industry and academia provides an opportunity for student placement in industrial attachment (Pertuze, et al., 2012).

Respondents viewed the opportunity for their students to do an attachment in the industries as useful in helping students to learn to handle different materials and media used in the institutions and the industries. Additionally, the respondents thought that industrial attachment exposes their students to the practices in the industry and help them to easily go back and become part of the industry after graduation.

Lack of Industry involvement in curriculum decisions

Industry involvement in the curriculum development and review was an issue of consideration in the study. It was anticipated that the involvement of industry in the curriculum decisions could help make the curriculum responsive to the needs, expectations and standards of the industry. It could help develop a curriculum that embodies current body of knowledge from academia and contemporary practice in the industry. That kind of curriculum can address the common interest of both parties. That is, producing individuals with the right knowledge, competencies and attitudes that can help propel growth of the clothing and textiles industry in Ghana. Indeed, a collaboration between academia and its relevant industry partners is very important for effective training of students to acquire the relevant knowledge, attitudes, and skills. For instance, Teresa, et al. (2014), reported that the Ministry of Economic Affairs in Taiwan established a fund to support effective collaboration between academia and industry in student training that would produce graduates with the needed technical skills. Respondents from the clothing and textiles industry expressed that they were not currently involved in the curriculum development and review processes of the clothing and textiles programmes. By their responses, they suggest that their involvement and contributions were not sought as far as discussions and decisions regarding curriculum development, review and student training are concerned. There were claims that the industry used to be invited to take part in curriculum decisions, but that was not the case presently.

During interviews with respondents from the industry, the researchers asked if industry players were involved in developing the curriculum used for training students in academia. One of the respondents, **IND 2,** stated: "no because the various institutions have not approached us for any discussions"**.** Another respondent from the industry, **IND 5,** said: "no we don't take part". **IND 4,** in response to the industry involvement in the curriculum development and review, also said:

Some time ago I used to be part of the universities for preparing their curriculum. Currently, they have not invited us but some time past we were involved. This was about eight to ten years back. Ten years ago I was part of the polytechnics when they were designing the Higher National Diploma and the degree programmes. But for some time now they have not invited us (industry) to be a part. But what we are aware of is that they have a portion of industrial attachment which we try to support when they come for the attachment.

The statements made by **IND2, IND5** and **IND4** seem to suggest that the industry is not currently involved in the curriculum development and review in the clothing and textiles programmes. The responses also show that the industry was looking forward to an opportunity to be involved in the curriculum decisions. That is, the industry seemingly wanted to be part of the academia in order to help in designing a curriculum that will help in training students

to acquire the needed skills in the industry.

Education and training in clothing and textiles demand the active involvement of both the academia and industry at different levels. According to Padmini et al., (2009), it is important that efforts are made to integrate the good ideas and practices of industries into the curriculum of the training institutions. Padmini et al. (2009) also suggested that it is important for the industry to play role in the preparation of curricula of the training institutions. This, according to them, will not only help in integrating requirements from industry into the curriculum of the institutions but will also assure industry of the implementation of the acceptable requirements by the education/training institutions.

Collaborative challenges

Other important findings of this study were challenges that respondents thought were confronting collaborative efforts between the institutions and the industry. That is there were numerous challenges that the respondents thought were affecting the existing areas of collaboration. The challenges are provided in table 1.

Despite all these challenges, it was also found out that the respondents from industry seemed to be willing and ready to partner with the academic institutions to train their students. The respondents indicated that they have been collaborating with the training institutions around student attachment. They accept students on industrial attachment and support their learning/training in the industry.

Table 1: Challenges of collaboration between the institutions and the industry

Challenges of collaboration, according to respondents from the institutions	Challenges of collaboration, according to respondents from the industry
Financial demands from industry in return for their services	Financial constraints
Lack of information, communication and proper understanding between the institutions and the industry	Limited time for students' attachment
Industry sometimes expects students on attachment to perform just like their workers	Institutions are not equipped enough with modern technology
Academia sometimes sends students to industry without clearly indicating to industry what students specifically need to know	Lack of frequent communication
Industry unaware of what students need to know	Lack of initiative
Frequent changes of Heads of department and their different interest and focus	Lack of Memorandum of Understanding
Lack of capacity to absorb students at the industry	
Lack of budgetary and logistical support from institutional level	
Industry's refusal to accept students for attachment	

Absence of curriculum models and collaborative theories

The researchers investigated if efforts by institutions to establish collaboration with the industries on the curriculum and student training were guided by any standardized theories, models or best practices. It was found out that the respondents were seemingly unaware of any collaborative models/theories and practices that anchored the collaborative efforts between the textile institutions and large-scale clothing and textile industries. When a question was asked if respondents were aware of any collaborative theories/models on which collaboration with the industry was based, **UL1** made this statement "I have not read anything on models/theories but there should be". In response to the same question, **PL1** and **PL2** also stated these respectively "not to my current knowledge. I know they may exist, but I may not be able to tell." "I don't know of any collaborative theories". **UL2** in response to collaborative theories rather mentioned that there are best practices on collaboration but failed to specifically state any when he said: "there are standard practices which can be used to structure the relationships." When asked about curriculum model used by institutions, **PL1** said "what we may be doing might be based on a particular model, but I cannot tell which model."

The responses indicated a seeming lack of awareness of particular curriculum and collaborative model/theory and best practices if any, that guide their collaboration with industry in the training of students in the clothing and textiles institutions. The responses seemed to suggest that there is the absence of standardized models/theories and practices that could guide how clothing and textile institutions and industry to collaborate effectively towards student training.

The fact that respondents were seemingly unaware of any standardized practices, models or theories that could serve as the foundation for collaborative efforts between the institutions and the industries on student training should have some implications. It could mean that the respondents in the study were probably not directly involved in the process of establishing relationships with the industry. It could also mean that they were conscious of the fact that their efforts to establish collaboration with the industries were not based on any standardized practices or models. This situation calls for a search for a possible model that can anchor future efforts to establish collaboration between the institutions and the industries, for the purpose of student learning.

CONCLUSIONS

It can be concluded that there is evidence of collaboration between C&T institutions and C&T industries that were involved in this study. It seems the existing collaboration between the two bodies is centered on industrial attachment. It is important to note that not all respondents believed that there was any form of collaboration between the two bodies. However, others thought there were some forms of collaboration between the C&T institutions and C&T industries. These included areas such as field trip, excursion, provision of equipment, consultancy service, an invitation from industry, seminar, and industrial attachment. Out of all the many areas, industrial attachment appeared to be the most consistent and strong, ongoing areas of collaboration between the C&T institutions and C&T industries in this study, which presently have an industrial attachment.

The fact that there is already existing structure of collaboration between the two bodies is positive and encouraging in the sense that it would enhance training for students in C&T institutions. This is because students would have opportunities for practical training in the industry, something that is needed in the field of C&T education. The existing understanding and relationship between the two bodies can also serve as basis for further collaboration, especially in the areas of curriculum development and programme planning. It would be beneficial to move the collaboration to the next level by involving the industry in the actual planning of the programmes, including modalities of industrial attachment instead of just sending students to them for industrial attachment.

It is the expectation of industry to employ people with skills, competencies and knowledge that can be useful in the industry. The training institutions are also expected to train graduates who can fit into the requirements of the industry. Therefore, the training of students should be the mutual concern of both parties. Lack of one party's involvement will create a gap in students training. Institutions should regularly invite industry whenever there is curriculum review for them to make an input. Industry's involvement would also enhance collaboration between the two bodies.

One other conclusion that could be made is that both industry and academia face some challenges when it comes to collaboration between the two bodies. For example, the industry seems to have some challenges such as financial constraints, lack of regular communication and institutions not equipped enough with modern technology. The C&T institutions also seem to have the following examples of challenges: financial demands from industry in return for their services, lack of information and communication between the institutions and the industries and industry's refusal to accept students for attachment. Some of these challenges can affect effective collaboration between the two bodies if they are not identified and dealt with.

It can equally be concluded that respondents thought the existing collaboration between C&T institutions and industry is not based on any particular model, theory, or standardized practices. There seemed to be the absence of any models on which the existing collaboration between the two bodies is founded. It would have been best if collaboration were based on a certain model. The perception of lack of model in the system calls for the discovery of a model to support the establishment of such collaborations in our context. Academia and industry should team up to prepare curriculum for teaching.

RECOMMENDATIONS

The existing understanding and relationship between the two bodies can serve as basis for further collaboration, especially in the areas of curriculum development and programme planning. It is recommended that existing understanding and collaboration between the C&T institutions and industries would be moved to the next level by ensuring the involvement of the C&T industry in decision and planning of programmes, including modalities.

The clothing and textiles industry is dynamic and has changing needs. Therefore, the curricula of the training institutions need to be able to respond adequately to the new skills/competencies that the industry requires. Integration of new skills/competencies into the curricular would enable the products of the institutions to meet the contemporary expectations

of the industry. For this reason, there is the need for the industry and the training institutions to see themselves as one body training students for a common goal.

There should be a committee from institutions with representatives from industry to be in-charge of planning and organization of collaboration between C&T institutions and industry to consider possible up-front challenges that can affect the success of collaborative effort by the two bodies.

There would be a need for the planning and organization of collaboration between C&T institutions in the study and C&T industries to be based on models, theories, or best practices. Evidence from the study indicates a lack of collaborative model in the system to guide collaborative efforts between C&T institutions and the industry.

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