Mechanism for Contending Overschooling Among Students of Building/Wood Technology at Technical Colleges in Nigeria

A.D. Usoro and E.E. Essien

Department of Vocational Education, University of Uyo, Uyo-Nigeria

Abstract: As economic, social and technology changes gather momentum, people everywhere develop their knowledge and skills by schooling so as to work and live meaningfully in the knowledge society. This study sought to identify mechanisms to contend overschooling among students of Building/wood Technology. A 29 items questionnaire developed from the literature was used to collect data from the respondents; sampling technique was purposive, three experts validated the instrument. A reliability coefficient (r) of 0.79 was obtained. Data collected was analyzed using weighted mean of Over Schooling Index (OSI) and Adequate Schooling Index (ASI) to determine mechanisms for contending overschooling among students of Building/wood Technology. The result revealed that in addition to overschooling, there is also existence of underschooling among students of Building/wood Technology. It was therefore recommended that to offset the effects of overschooling and underschooling, there should be integration, reconfiguration and repackaging of the entire curriculum content in Technology Education to cater for the increasing demand for workplace skills, job generation competencies and self-employment.

Keywords: School Industry link, New skill standard/Curriculum reconfiguration, Standard delivery strategies

INTRODUCTION

Education shapes the way the world is seen. It therefore has the capacity to bring about change of attitudes needed to ensure improve quality of life of individuals and sustainable development. Looking at the changes that have taken place in developed countries such as Korea, China, Taiwan, Malaysia and so on over the years, it is clear that the driving force for improvement came from gains in knowledge and technologies and transformation of value system through technical education.

Technical Education according to Federal Republic of Nigeria (FRN), in the National Policy on Education [1] is referred to that aspect of educational process involving, in addition to general education, the study of related sciences and the acquisition of practical skills, attitude, understanding and knowledge relating to occupation in various sector of economic and social life.

Building/Wood Technology is a study given to students in Technical Colleges to promote a deliberate and intervention plans to bring about learning which could make the students to be more productive in the areas of economic sector, occupation and specific work as in interpretation of Building Plans as well as Construction of Building Project.

In Nigeria today, the goal of making students of Technical Colleges to be productive and self-reliance is still a long way off. The global crisis faces humanity at the dawn of the 21st century, marked by increasing poverty in the asymmetrical world, environment degradation and worst still the short sightedness in policy making hinders the bridging of the existing gap between unemployment and self reliance thus, increases overschooling among building students.

Usoro and Ogbuanya [2] noted that Technical Institutions have been turning out graduates at all levels of education, whereas at graduation most of them lack employability skills, work place skills and job generation competencies. The quality of education and the necessity for the students to truly learn what matters within the specified school years in order to steer society toward sustainable development and poverty reduction becomes imperative.

Corresponding Author: A.D. Usoro, Department of Vocational Education, University of Uyo, Uyo-Nigeria.
Over schooling according to Joshua [3] means undertaking the process of being trained, drilled, instructed, taught or educated in school far above or excess of what is required or expected. He stressed that overschooling/underschooling could be understood in different levels between level acquired by the student after schooling as ‘X’ and the level of schooling required by an individual for the job he is expected to holds as ‘Y’, symbolically:

\[ X \supset Y = \text{Overschooling}, \]
\[ X \subset Y = \text{Underschooling}, \]
\[ X = Y = \text{Adequate schooling}. \]

This article sees overschooling as over tutoring which connotes continuous overstimulation of the learner’s brain in the process of education far beyond the specified years of study. In a state at which the learners spent number of years in schooling and are certificated, jet still he/she requires more number of years in formal or informal setting, is underschooling which resulted in overschooling. The prevalent circumstances that plagued Technical Schools in Akwa Ibom State is the issues that students of Building Technology undergoing more training outside the school after their specified years of study in order to be self-employed or for work place skills [4].

One would think that there is no over schooling in Technical Education because of the much talk about Science and Technology Education, the situation is pathetic, as the student’s brain is over stimulated, over drilled, over tutored, over stretched and over strained. It may not be out of place to assert that overschooling/underschooling among students of Building/Wood Technology could be a product of continuous existence of overeducated students in schools (formal and informal) beyond the specified years before the true economic benefits are gained. This situation derives from the gap that exists between what is produced by educational system and what is determined in the world of work.

Accordingly, in the Job Competence Theory Model, overschooling do exist, but the required amount of schooling necessary to perform well on the job is only rewarded. Among students of Technical College, overschooling has resulted in high rate of attrition and so many students have had to change their programme during their stay in the college. In a recent development, Udoh [5] ascertained that, students of Technology Education that have completed the programme of study could not acquire the necessary competencies and workability skills for self-reliance and sustainable development. In many instances those in Building/Wood Technology could not register students with 50% pass in five papers including English, Mathematics and their major trade subjects. Because of this situation, students resort to taking prescribed examination externally in the first term of their third year all in a bid to get some papers before the actual examination year, this situation stimulates student’s brain in excess which could result in overschooling as a result of underschooling.

This condition is pitiable as the world has gone globalization and Technology Education in other countries is gaining revolution but Nigeria, Technology Education Nigeria does not increase productivity but rather is plagued with inadequate of school industry link, new skills standard/curriculum revitalization, standard delivery strategies.

Student Industry Link: Technical Education is cost intensive, thus there is need to partner with government, employers, social partners such as social organization, public and private partnership and business community, all in a bid to ensure that students are link well with the industry. This link would not be done as with Students Industrial Work Experience Scheme (SIWES), rather at the completion of theoretical module the students would be sent to the Industry for the practical training after which the students will return to the classroom.

Udoh [5] noted that by this link, the industrial competences could be acquired within the schooling years. This implies that the dual training involving combination of work place skills by the industry and institution based training at formal setting could eliminate overschooling.

New Skills Standard/Curriculum Development: Technical School Curriculum should move away from the traditional courses of wood work, blocklaying and concreting, electrical electronic, carpentry and joinery, welding and fabrication, auto mechanic and mechanical trades to embrace petrol chemical, graphic art, instrumentation, web designing, glass and community technology and so on.

In a related development, Usoro and Ogbuanya [6] asserted that Technical Education Curriculum should focus more on creativity curriculum, where its product would not be rejected as a result of outdated and obsolete
method of developing skills. On their own side of view, Osinem and Nwoji [7] remarked that links between education and training and the development sector should be improved through researching the need and competencies that are on demand or would be required in the future by the labour market.

This implies that Technical Education Curriculum should move from provider driven training model, where students received training without the assurance that the training was aligned to an identified need in the labour market, to a demand-driven one.

**Standard Delivery Strategies**: It is clear that Technical Education Curriculum is designed to provide specific, predetermined skills demonstrated to industrial standard. This does not represent knowledge constructed internally by students; rather this generates overschooling among the graduates of Building Technology as they could not go further beyond the limit of their teachers. To contend overschooling in the 21st century, it is imperative that an advance skills training should be given to the students through such teaching strategies as; experimental learning, value education, enquiry learning, appropriate assessment, future problem solving, community problem solving, learning outside classroom, edutainment, multi-dimensional technique, cognitive apprenticeship and among others. If this trend is allowed to continue, students would not acquire the needed skills within the specified years and therefore perpetual overschooling among students of Building/Wood Technology. This paper therefore sought to determine the mechanism for contending overschooling among students of Building/Wood Technology in Akwa Ibom State. Specifically:

- Determine School Industry Link Mechanism for contending overschooling among student of Building/Wood Technology.
- Determine New Skills Standard/Curriculum Revitalization for contending overschooling among students of Building/Wood Technology.
- Determine Standard Delivery Strategies for contending overschooling among students of Building/Wood Technology.

**Research Questions:**

- What are School Industry Link Mechanisms for contending overschooling among students of Building/Wood Technology?
- What are New Skills Standard/Curriculum Revitalization for contending overschooling among students of Building/Wood Technology?
- What are Standard Delivery Strategies for contending overschooling among students of Building/Wood Technology?

**MATERIALS AND METHODS**

**Design of the Study**: Three research questions were developed and answered in line with the purpose of the study. Survey research design was adopted for the study. According to Nworgu [8] survey design is the study of a group of people, collecting and analyzing data from a few people considered to be representatives of the entire group. The design was therefore appropriate for the study since it was to solicit information from Building/Wood Technology instructors through the use of questionnaire on mechanism for contending over schooling.

**Area of the Study**: The study was carried out in Akwa Ibom State. The study was conducted at the six Technical Colleges in Akwa Ibom State, i.e. (Uyo, Abak, Ikot Akata, Oron, Ikpa Eket and Ikot Uko Ika). The Choice was informed by the fact that these Institutions trained students on Building Technology, with a large population of teachers and resource materials needed to carry out the research study.

**Population for the Study**: The population of the study was all Building/Wood Technology Instructors and Technologists obtained from the colleges under the study comprising of thirty three (Technical Instructors/Technologist).

**Sample and Sampling Technique**: The sample was made of all 21 Technical Instructors and 12 Technologists in the Building/Wood Departments. Since the sample size was small the entire population was used.

**Instrument for Data Collection**: A 29 item structured questionnaire developed from the literature reviewed was used for the data collection. The questionnaire was divided into two categories of overschooling and adequate schooling. The overschooling category was assigned four point response scale of highly overschooling (4), averagely overschooling (3), slightly overschooling (2) and no overschooling at all (1). The adequate schooling category was assigned a four point
Validation of the Instrument: The instrument was face validated by three experts from the Department of Vocational Education, University of Uyo. Their suggestions were used to improve the final version of the questionnaire. Split-half technique and Cronbach Alpha reliability method were involved in determining the internal consistency of the instrument. An overall reliability coefficient (r) of 0.79 was obtained.

Method of Data Collection: Thirty three (33) copies of the questionnaire were administered on the respondent with the help of five hired research assistants on a one on one basis and retrieved with a 100% return rate.

Method of Data Analysis: The data collected was analyzed using weighted mean of Overschooling Index (OSI) and Adequate schooling Index (ASI) to answer the research questions, to determine the mechanism for contending overschooling among students of Building Technology. The following decisions were taken:

- The weighted mean of each overschooling item was taken as (XOS).
- The weighted mean of adequate schooling of respondents for each item was taken as (XAS).
- The difference between the two means that is (XOS and XAS) was determined to indicate schooling gap.
- Thus, a difference of zero (0) indicates that there is adequate schooling because the level at which the schooling is required is the same as the level to which students of Building/Wood Technology had been trained,
- A positive (+) difference implies that there is over schooling because the level at which students of Building/Wood Technology had been trained is greater than the level at which it is required,
- A negative (-) indicates that there is under schooling because the level at which the schooling is required is less than the level at which the students Building/Wood Technology had been trained. This difference may range from low to average depending on the value of the schooling gap.

RESULTS

The result of the study obtained from the research questions are presented in Tables 1-3.

Research Question 1: What are School Industry Link Mechanisms for contending overschooling among students of Building/Wood Technology?

The result in Table 1, revealed that adequate schooling was seen on item 2. While overscholing gap existed on item 6, with a weighted gap of 1.40, the remaining items have their underscholing gap ranges from -0.05 to -0.14. This indicated that there is both overscholing and underscholing among students of Building/Wood Technology. Therefore students of Building Technology need adequate schooling in all the mechanism identified to contend overschooling.


The result in Table 2, showed that out of the new skills /curriculum revitalization item 9 had neutral value (adequate) and two items on numbers 12 and 17 had positive value (overscholing), while items had negative value (underscholing), ranges from 0.09-1.91. This indicated that students of Building Technology require adequate schooling. Technically, it is impossible to isolate the neutral item during training without creating a gap because of overlapping nature of new skills standard, thus at training less emphasis would be placed on the neutral item.

Research Question 3: What are standard delivery strategies for contending overschooling among students of Building/Wood Technology.

The data in Table 3, revealed that the overschooling gap with positive value on items 19 and 26 were 0.10 and 1.56, while the rest of the items had negative value which ranges from -018 to -1.09. The overschooling and underschooling gaps identified showed that students of Building/Wood Technology need adequate schooling to ameliorate over tutored and overstimulation of student’s brain.

Discussion of the Findings: Based on the result obtained, it was found that students of Building/Wood Technology required adequate schooling in 27 out of 29 items identified as a mechanism for contending overschooling. The result is in concordant with the study of Bea and Song [9] on Youths Unemployment and the role of Career Education. He found out that students of Technical Education should give adequate attention on school industry link with a view on provider demand driven skills
Table 1: School Industry Link mechanisms gap analysis for contending overschooling among students of Building/Wood Technology

<table>
<thead>
<tr>
<th>S/No</th>
<th>School industry Link mechanism</th>
<th>-XOS</th>
<th>-XAS</th>
<th>OSG-(XOS-XAS)</th>
<th>Rmks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Institution and workplace training are competency based.</td>
<td>3.56</td>
<td>3.69</td>
<td>-0.13</td>
<td>US</td>
</tr>
<tr>
<td>2.</td>
<td>Develop a range of practical training.</td>
<td>3.15</td>
<td>3.15</td>
<td>0.00</td>
<td>AS</td>
</tr>
<tr>
<td>3.</td>
<td>Relates students’ work with theory and practice.</td>
<td>3.86</td>
<td>3.95</td>
<td>-0.09</td>
<td>US</td>
</tr>
<tr>
<td>4.</td>
<td>Encourage technological awareness.</td>
<td>3.24</td>
<td>3.18</td>
<td>-0.14</td>
<td>US</td>
</tr>
<tr>
<td>5.</td>
<td>Foster attitudes of cooperation.</td>
<td>3.11</td>
<td>3.16</td>
<td>-0.05</td>
<td>US</td>
</tr>
<tr>
<td>6.</td>
<td>Develop importance of technology in the society.</td>
<td>2.89</td>
<td>2.15</td>
<td>0.74</td>
<td>OS</td>
</tr>
<tr>
<td>7.</td>
<td>Graduates given equipment grant to establish business after training.</td>
<td>3.22</td>
<td>3.30</td>
<td>-1.12</td>
<td>US</td>
</tr>
<tr>
<td>8.</td>
<td>Enhance multi-stakeholder partnership.</td>
<td>3.15</td>
<td>2.01</td>
<td>1.40</td>
<td>OS</td>
</tr>
</tbody>
</table>

Note: Overschooling (OS), Underschooling (US), Adequate schooling (AS)

Table 2: New Skills Standard/Curriculum Revitalization mechanism gap analysis for contending overschooling among students of Building/Wood Technology

<table>
<thead>
<tr>
<th>S/No</th>
<th>New skills standard and curriculum revitalization</th>
<th>-XOS</th>
<th>-XAS</th>
<th>OSG-(XOS-XAS)</th>
<th>Rmks</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>Identify skills needed by industrial sector.</td>
<td>2.56</td>
<td>2.56</td>
<td>0.00</td>
<td>AS</td>
</tr>
<tr>
<td>10.</td>
<td>Identify demand driven model.</td>
<td>2.98</td>
<td>3.59</td>
<td>-0.71</td>
<td>US</td>
</tr>
<tr>
<td></td>
<td>Identify training needs that foster lifelong learning.</td>
<td>2.01</td>
<td>2.98</td>
<td>-0.97</td>
<td>US</td>
</tr>
<tr>
<td>11.</td>
<td>Link technological training to employment.</td>
<td>3.06</td>
<td>2.90</td>
<td>0.16</td>
<td>OS</td>
</tr>
<tr>
<td>12.</td>
<td>Map clear vision on skills and poverty development.</td>
<td>1.26</td>
<td>3.17</td>
<td>-1.91</td>
<td>US</td>
</tr>
<tr>
<td>13.</td>
<td>Develop importance of job related skills.</td>
<td>2.99</td>
<td>3.59</td>
<td>-1.91</td>
<td>US</td>
</tr>
<tr>
<td>14.</td>
<td>Fostering creativity and knowledge construction.</td>
<td>2.65</td>
<td>3.51</td>
<td>-0.86</td>
<td>US</td>
</tr>
<tr>
<td>15.</td>
<td>Re-configuration of technical education for sustainable development.</td>
<td>3.21</td>
<td>3.30</td>
<td>-0.99</td>
<td>US</td>
</tr>
<tr>
<td>16.</td>
<td>Focus training scheme on self-employment.</td>
<td>3.54</td>
<td>1.98</td>
<td>1.56</td>
<td>OS</td>
</tr>
<tr>
<td>17.</td>
<td>Develop green technology approach in technical education.</td>
<td>2.40</td>
<td>2.59</td>
<td>-0.10</td>
<td>US</td>
</tr>
<tr>
<td>18.</td>
<td>Exploring global realities</td>
<td>2.66</td>
<td>3.51</td>
<td>-0.85</td>
<td>US</td>
</tr>
</tbody>
</table>

Note: Overschooling (OS), Underschooling (US), Adequate schooling (AS)

Table 3: Standard Delivery Strategies gap analysis for contending overschooling among students of Building/Wood Technology

<table>
<thead>
<tr>
<th>S/No</th>
<th>Standard delivery strategies</th>
<th>-XOS</th>
<th>-XAS</th>
<th>OSG-(XOS-XAS)</th>
<th>Rmks</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.</td>
<td>Experimental strategy</td>
<td>3.54</td>
<td>1.98</td>
<td>1.56</td>
<td>OS</td>
</tr>
<tr>
<td>20.</td>
<td>Value strategy</td>
<td>1.68</td>
<td>2.77</td>
<td>-1.09</td>
<td>US</td>
</tr>
<tr>
<td>21.</td>
<td>Enquiry learning strategy</td>
<td>2.35</td>
<td>3.35</td>
<td>-1.00</td>
<td>US</td>
</tr>
<tr>
<td>22.</td>
<td>Appropriate assessment strategy</td>
<td>2.40</td>
<td>2.84</td>
<td>-0.44</td>
<td>US</td>
</tr>
<tr>
<td>23.</td>
<td>Community problem solving strategy</td>
<td>2.70</td>
<td>2.88</td>
<td>-0.18</td>
<td>US</td>
</tr>
<tr>
<td>24.</td>
<td>Learning outside classroom strategy</td>
<td>2.14</td>
<td>2.50</td>
<td>-0.36</td>
<td>US</td>
</tr>
<tr>
<td>25.</td>
<td>Cognitive apprenticeship strategy</td>
<td>2.34</td>
<td>2.54</td>
<td>-0.20</td>
<td>US</td>
</tr>
<tr>
<td>26.</td>
<td>Project method</td>
<td>2.49</td>
<td>2.39</td>
<td>0.10</td>
<td>OS</td>
</tr>
<tr>
<td>27.</td>
<td>Cooperative learning strategy</td>
<td>2.67</td>
<td>3.32</td>
<td>-0.65</td>
<td>US</td>
</tr>
<tr>
<td>28.</td>
<td>Edutainment strategy</td>
<td>3.27</td>
<td>3.57</td>
<td>-0.030</td>
<td>US</td>
</tr>
</tbody>
</table>

Note: Overschooling (OS), Underschooling (US), Adequate schooling (AS)

by industries for proper lifelong training/and for self employment, since the government cannot employ all graduates.

On the new skills standard/curriculum revitalization, there is need for reconfiguration of technology curriculum, this is to align students for skills required by the industries not skills provided by the Training Institutions. The study by Usoro and Ogbuanya [6] on Creativity Technique: A Missing Link for Self-reliance is in consonance with the present study as they called for creativity curriculum to ensure graduates of Technical Education generate employment as enshrined in the National Policy on Education [1]. For sustainable development and poverty reduction, Technical Colleges should be made to bridge the gap between unemployment and self-reliance through contending with the prevalent situation of overschooling which has eaten into the fabric of Technology Education.
The result of finding on new delivery strategy is also in parripsausa with the work of Udofia [10] on the Effect of Edutainment on Academic Achievement and Interest of Students in Introductory Technology. He maintained that when novelty is introduced into teaching/learning situation student’s interest is stimulated for internalization of key concepts for self-reliance and job generation competencies.

CONCLUSION

Today, Technical Education in Nigeria has reached a state where some drastic measures need to have taken for effective teaching/learning situation in view of the overschooling which results in poor performance and lack of needed skills and competencies for work place. To make learning environment more attractive, educators should lecture less while integrating technology into the teaching process.

Reconfiguration of Technology Curriculum need careful planning, preparation and essentials understanding of how to form positive interdependent concept, maintained and develop appropriate competency based assignment. The 21st century students need a type of Technical Education that will provide them with knowledge and skills necessary for entrepreneurial, information technology and career skills.

Recommendation: To off-set overschooling among students of building technology the following were recommended that:

- Technology Education should be more responsive to students’ needs and more concerned about how well students are prepared to assume future societal roles.
- Technology Education should provide a well-focused training activities and task which are responsive to student’s work place and employability skills.
- Teachers of Building/Wood Technology should create valuable and enjoyable learning experiences which would enable students to work effectively on challenging task.
- Teachers of Building/Wood Technology should assess students’ contribution, class work, homework and provide clear with succinct advice on how to improve on skills needed by the industries.

REFERENCES