



ISSN 2278 – 0211 (Online)

Methods for Teaching Sewing in Junior High Schools in the Sekondi-Takoradi Metropolis, Ghana

Esther Laurinda Akomaning

Lecturer, Department of Family and Consumer Sciences,
University for Development Studies, Tamale, Ghana

Abstract:

The study explored the views of Junior High School (JHS) teachers from Sekondi-Takoradi Metropolis of Ghana on methods used for teaching sewing. The research design was a descriptive survey. The study objective identified the methods for teaching sewing at the JHS. Through purposive and cluster sampling, 78 teachers were chosen for the study. A questionnaire and observation checklist was used for data collection. The Statistical Package for Social Sciences version 21 was used for data analysis. Frequencies, percentages, means, and standard deviations were generated and presented in the table. A t-test was used to determine whether there was a significant difference between methods used for teaching sewing.

The study results showed that teachers used methods like project work, group activities, discussion, lectures, and demonstration. A significant difference was found in the use of field trips as a teaching method in Sekondi and Takoradi circuits. The study concluded that teachers used various methods in teaching sewing. It was recommended that teachers could add to their teaching methods by employing various methods such as field trips, fashion shows, and exhibitions in the teaching and learning of sewing to make lesson delivery more participatory, real, and interesting.

Keywords: Sewing, junior high school, teachers, teaching methods, teacher-centred, student-centred

1. Introduction

Education transmits knowledge, skills, and attitudes. It is a powerful tool for bringing changes (Farrant, 2004). Education can be measured by the qualities and traits the educated person displays through schools, colleges, institutes, and faculties of education (Akinpelu, 2010). As a profitable investment, education develops abilities and skills and imparts knowledge to individuals to meet the challenges of living (Kyriacou, 2009; Okorie, 2009). The future of a nation depends on educated and skilled citizens who are aware of their individual and collective responsibilities. When a person is educated, he/she can contribute to the cultural, spiritual, social, economic, and political development of a nation and, ultimately, the world. It, therefore, befits an educational process to function effectively so that its beneficiaries become useful to themselves and the society they live in (Akyeampong, 2017; Anamuah-Mensah, 2013).

According to Abanador, Guillian, Buesa, and Guada (2014), teaching methods used by instructors can be done in three basic ways. These are teacher-centred, student-centred, and content-focused approaches. The teacher-centred approach is a learning situation where the teacher creates a learning environment to motivate learners (Agno, 2009). A student-centred approach is a participatory form of teaching and learning where learners are the focus of the learning activity (Laguador, 2013). Finally, with the content-focused approach, the teacher and the learners are expected to consciously bring themselves into the subject matter (Salandanan, 2013). Abanador et al. stressed that teaching methods for instructional delivery are important because learners are allowed to maximise learning experiences for quality education.

Clothing is one of the most basic needs of human beings, and sewing as a subject addresses the issue of putting pieces of fabrics together to make articles for use. Sewing is mainly used to make clothing and home furnishings. It is envisaged that the sewing subjects would allow learners to acquire vocational skills that will serve as a foundation for advanced training in technical/vocational institutes. Advance knowledge and skills acquired in sewing can help a learner to be able to create unique styles for self and others. If the sewing curriculum is to be taught well for the learners to acquire the necessary knowledge and skills, various teaching methods must be employed.

2. Statement of the Problem

Sewing is a skill and activity-oriented subject, which, if well-taught, will equip learners with skills that could make them self-reliant. However, for the needed knowledge, abilities, attitudes, and skills to be exhibited, instructors need to adopt different teaching methods, whether it is teacher-centered or student-centered. The Basic Design and Technology (BDT) Home Economics curriculum specifies some specific methods for handling certain topics in sewing (Ministry of

Education [MOE], 2014; MOE, 2007). However, some teachers tend not to follow, which results in the deficiency of the required knowledge, skills, and attitudes of learners in the subject. It was against this backdrop that the study sought to investigate teaching methods used by teachers in teaching sewing in JHS in the Sekondi-Takoradi Metropolis of Ghana.

3. Research Question and Hypothesis

The study was guided by the research question and hypothesis as:

- What teaching methods were used by the BDT (Home Economics) teachers in teaching sewing in Junior High Schools in the Sekondi-Takoradi Metropolis of Ghana?
- H₀: There is no significant relationship between methods of teaching sewing among BDT (Home Economics) teachers in Sekondi and Takoradi Circuits.

4. Review of Literature

The study was based on the theory of John Dewey's philosophy of progressive education propounded in 1894. Dewey advocated that learners can learn best through a hands-on approach. Thus, the necessity to learn by doing helps learners adapt to their environment and generally conclude about specific observations (Baldacchino, 2013). The focus of Home Economics and its related subjects (e.g., sewing) are based on inductive reasoning. As learners practise with real objects in their studies, they develop more intellectual and practical skills and are in the position to grasp concepts better.

Teaching methods can be seen as the principles and the instructional methods used by teachers to achieve desired learning outcomes for learners (Westwood, 2008). To Westwood, teaching strategies can be put into teacher and student-centred approaches. In the teacher-centred method of teaching, the teacher is the focus. The teacher's primary role is to pass knowledge and information on to learners, who receive whatever the teacher communicates, unreceptively (Huba & Freed, 2000). In the student-centred approach, on the other hand, the teacher ensures that learners get involved in the teaching process (Westwood, 2008; Collins & O'Brien, 2003).

The lecture method has a one-way channel of communication of information. The lecturer does most of the talking while the learner listens and puts down notes. It can be used to teach new knowledge and provide background information, ideas, and concepts. A range of topics can be covered within the shortest possible time at one sitting (Kochhar, 2013; Bligh, 2000). However, the lecture method does not guarantee effective learning due to its passive (teacher-centred) nature. Learners could devote much time to notes such that little or no attention is given to the substance under presentation for clarification and hardly provides adequate feedback (Fry, Ketteridge, & Marshall, 2009).

The discussion method of lesson delivery involves the exchange of ideas between the teacher and learners or among group members. The form of lesson delivery brings to bear various ideas and experiences during class interactions (Kochhar, 2013). As a result, rote learning is minimised, and creativity is developed among learners (Jacobsen, Eggen, & Kauchark, 2009).

The demonstration method of teaching is a method that involves the teacher showing learners how to do something while they observe (Millar, 2011). The teacher has to show learners how to do something to bring out a skill. Careful preparation is needed for demonstrations based on clear set objectives (Kochhar, 2013; Fry et al., 2009). Fry et al. added that planning should cover instructional materials, seating arrangement, and lighting for learners to view what is being demonstrated.

Giving out assignments and attending workshops are other techniques for teaching and learning. Written assignments assist learners to organise information, assimilate facts and prepare better for examination (Jacobsen et al., 2009; Kochhar, 2013). Attending a workshop or educational seminars helps learners in their learning processes. The meeting place helps participants integrate learning and exchange information as they interact (Jacobsen et al., 2009; Kochhar, 2000). Jacobsen et al. added that at workshops, lessons are normally delivered by the use of tools and equipment which were hitherto not accessible to learners.

A field trip or excursion is a method of teaching that sends learners outside the classroom where portions of their learning take place (Salandan, 2013). He pointed out that with field trips; learners find themselves face-to-face with the real-life situation on what has been previously learnt. Field trip promotes deeper understanding which enhances retention. Learners can develop the attitude of critical observation because new ideas may be revealed (Kochhar, 2000).

DeGrave, Dolmans, and Vleuten (2016) asserted that putting learners in small groups is an important technique used to plan learning experiences for the intended learning objective. They added that learners are put into groups to learn from each other and be team players. According to Slavin (2011), with group learning, learners can help each other more, especially in a competitive environment. Nervous learners are also encouraged to participate more readily due to academic cooperation.

The project work method is a technique that makes learning real by presenting a real task for learners to tackle through the supply of concrete objects for learners to know at the end if they had succeeded (Farrant, 2004). The project work method aids discovery and makes learning social as several learners work together to foster interaction among themselves irrespective of their background (Laguador & Dizon, 2013).

Information Technology (IT) is a technique used in teaching and learning (Forsyth, 2013). Forsyth added that the use of IT through the internet is proficient in the search for information from all around the world. Thus, IT offers a collaborative environment for independent learning.

The use of instructional material is a technique that can be used in teaching and learning. It brings about variety into teaching and motivates both the teacher and learner in the teaching and learning process (Odu, cited in Shonmo, 2006). Odu advised using teaching resources in the form of audio-visuals to enhance better understanding of learners.

Palmer (2005) mentioned that teaching and learning materials should be used in the teaching and learning process for effective change in learners.

Again, it is stressed by Odu, cited in Shonmo (2006), that selecting different types of teaching resources as a tool for teaching can be categorised into three. These are through direct experiences, pictorial experiences, and those that are symbolic or highly abstract. These experiences were used in a Clothing and textile lesson to identify fibres. She noted that in a laboratory, when a learner undertakes an experiment on the identification of fibres, the learner undergoes a form of experience that is direct. During the process of viewing the different fibres under the microscope, the pictorial experience is used. When the learner refers to an identified and documented fibre, the experience is symbolic and pictorial. She, however, cautioned that in the selection of teaching aid, the teacher needs to assess and determine the reliability of the material and how the presentation should go. Another equally important aspect is how to use the teaching aid to arouse learners' interest and how the materials should be organised.

Fleck cited in Kochhar (2000), advised that departments of Home Economics should have an organised classroom where teaching aids can be displayed and used to enhance the teaching and learning of the programme. An example is given of an article displayed as an exhibit collection of fabrics, learners' work, new equipment, and books. Millar (2011) added that appliances in the home, household furnishings, and clothing materials could be used in teaching learners to differentiate between what is to be known and what learners should know about.

Jacobsen et al. (2009) listed some instructional materials which can help with teaching. They include verbal symbols, visual symbols, and recordings. Verbal symbols can be oral or written. Examples of written ones include basic textbooks, reference books, and other supplementary books for reading. Jacobsen et al. added that visual symbols are used to arouse the interest of both teachers and learners in teaching and learning. Examples include overhead projections and pictures. Palmer (2005) stated that recordings through videotapes and tape recordings assist in teaching and learning.

Fleck, cited in Shonmo (2006), pointed out that televised lessons are a useful tool in lesson delivery for the acquisition of knowledge and skills. Fleck indicated that using television to teach is becoming a technique deployed by Home Economics teachers to give learners more knowledge and experiences from the normal classroom situation. Fleck points out that the teaching and learning materials can be improvised in a practical subject area. What it calls for is the resourcefulness of the teacher to explore available avenues.

Sewing or clothing and textile is one of the main branches of Home Economics (IFHE, 2008). Clothing is used to meet one of the necessities of life. Sewing as a subject addresses the issue of putting pieces of fabrics together to make clothing articles and home furnishings. Sewing as a subject allows learners to acquire vocational skills, which opens them up to a wide range of opportunities for productive work (Akomaning, 2017; MOE, 2014). The major areas of study in sewing include sewing tools and equipment, sewing fabrics, sewing processes, garment construction, and clothing maintenance (MOE, 2007). At the basic level of education in Ghana, sewing is a subject component in BDT (Home Economics). Sewing/Clothing and Textiles related activities enable learners to acquire skills, knowledge, abilities, and attitudes to function effectively for the development of self and society (MOE, 2008).

In summary, various methods are used by teachers in lesson delivery. They include lecture, discussion, demonstration, assignment, group work, project work, field trips, exhibition, use of videos, and televised lessons.

5. Method

The descriptive survey design was used for the study, which was conducted in 2018. Sekondi-Takoradi Metropolis was the study area. Sekondi-Takoradi is a twin-city comprising Sekondi and Takoradi. It is located in the Western Region of Ghana, the capital of the Sekondi-Takoradi Metropolitan Assembly, as well as the regional capital of the Western Region. Sekondi-Takoradi is the largest city in the region. It is an industrial and commercial centre with several schools, such as basic, secondary, and tertiary levels of education (Ghana Statistical Service [GSS], 2012).

The population for the study was the entirety of teachers in 11 circuits from public JHSs in Sekondi-Takoradi Metropolis teaching BDT (Home Economics). The population was 97. Two circuits out of the 11 circuits were randomly selected through the lottery method for pretesting the instrument. Through cluster and purposive sampling, 78 teachers were sampled from nine circuits for the study. Cluster sampling because participants were found at the JHS level and schools were grouped in clusters called circuits in the same geographical area. Purposive sampling was mandatory for a Home Economics teacher at the JHS teaching Basic Design and Technology (BDT) to teach sewing. A questionnaire and observation checklist was used to collect data to answer the research question posed in the study. The Statistical Package for Social Sciences (SPSS) version 21 was used for data analysis. Frequencies, percentages, means, and standard deviation were generated and presented in a table. Furthermore, a t-test was employed to analyse the mean differences in teaching methods.

6. Results and Discussion

6.1. Background Characteristics of the Respondents

The respondents for the study had attained qualifications ranging from certificate to second degree. The teachers with either certificate 'A' or 'B' were 12.8%, while the diploma was 20.5%; first degree was 20.5%, and second degree was 6.4%.

6.1.1. Teaching Methods Used by Teachers Teaching Sewing in JHSs

The teaching methods used in the teaching of sewing in JHSs are presented in Table 1.

Method	Teacher (N=78)					
	SA	A	D	SD	\bar{X}	Std. Dev.
Lecture	19 (24.4)	30 (38.5)	19 (24.4)	10 (12.8)	2.26	.97
Demonstration	18 (23.0)	22 (28.2)	17 (21.8)	21 (27.0)	3.50	.77
Discussion	34 (43.6)	36 (46.2)	4 (5.1)	4 (5.1)	3.28	.79
Field trip	8 (10.3)	21 (26.9)	30 (38.5)	19 (24.4)	2.23	.94
Questions and Answers	29 (37.2)	43 (55.1)	4 (5.1)	2 (2.6)	3.27	.68
Group activities	40 (51.3)	33 (42.3)	4 (5.1)	1 (1.3)	3.44	.66
Project work	40 (51.3)	33 (42.3)	4 (5.1)	1 (1.3)	3.44	.66
Fashion show	5 (6.4)	8 (10.3)	41 (52.6)	24 (30.8)	1.92	.82
Use of resource persons	22 (28.2)	31 (39.7)	13 (16.7)	12 (15.4)	2.81	1.0
Assignment	41 (52.6)	32 (41.0)	4 (5.1)	1 (1.3)	3.45	.66

Table 1: Teaching Methods Used by the Teachers in Teaching Sewing

Note: Rating Scale, SA (Strongly Agree) = 4, A (Agree) = 3, D (Disagree) = 2, SD (Strongly Disagree) = 1. Figures in Parentheses Are Percentages, Figures Not In Parentheses Are The Number of Respondents. \bar{X} Is Mean, Std. Dev. Is Standard Deviation

The finding of the study, as shown in Table 1, indicates that 62.9% (\bar{X} =2.26; Std. Dev. =.97) of the respondents agreed they frequently used the lecture method in teaching sewing. The degree of variation was quite low, implying that more than half of the respondents were certain about using the lecture method in teaching sewing. Moreover, it was observed that the teachers mostly used the lecture method to teach both theory and practical lessons. Therefore, the hands-on approach to learning for skill acquisition was lacking, as indicated in Dewey's theory and explicit in the BDT curriculum.

To ascertain why lessons meant to be taken as practical had to be lectured, 60% of teachers indicated that they did not have the needed skills to demonstrate and guide learners. Therefore, it can be inferred that teachers were more comfortable with the lecture method when it came to teaching. The views of Kochhar (2000) are consistent with the findings that in the lecture method, facts are presented straightforwardly and logically, and experiences gained inspire and give room for critical thinking, which can sometimes lead to an open discussion.

Further, Table 1 shows that half of the respondents, about 51.2% (\bar{X} =3.50; Std. Dev. =.77), agreed that they frequently used demonstration as a method of teaching sewing at the JHSs. It can be seen from the standard deviation figure that more than half of the respondents did not vary much in their opinions as regards the use of demonstration lessons in teaching sewing. Although 48.8% of respondents disagreed with the use of the demonstration method in teaching, it can be inferred from the percentages recorded for the 'agreed' that some teachers carried out demonstration lessons as required of them by the sewing syllabus MOE (2007). The teachers who used demonstration lessons to teach were those who specialised in Clothing and Textile/Fashion. The findings are similar to the views shared by Millar (2011) that sewing is an activity-based subject that demands hands-on practice. Therefore, it is expected of teachers to demonstrate that learners observe and follow the same procedure later to complete the activity.

Again, Table 1 shows that 89.8% (\bar{X} =3.28; Std. Dev. =.79) of respondents agreed to use the discussion method to deliver sewing lessons in their schools. It implies that, on average, respondents did not vary much in their opinions, as attested by the standard deviations. The findings can be compared with Braskamp's (2014) views, who indicated that a discussion is a form of brainstorming for generating ideas and stimulating participants' creative thinking. The discussion method allows more participation of learners as every learner gives off his/her opinion, thereby making learning more effective (Kochhar, 2013). It implies, therefore, that the discussion method of teaching develops creativity among learners. BDT (Home Economics) teachers saw sewing as a participatory subject that demands the participation of both the learner and the teacher.

It is further seen that the majority of teachers, 93.6% (\bar{X} =3.44; Std. Dev. =.66), agreed they assigned project work to learners as a method of teaching sewing. The means score indicated that, on average, respondents agreed to the use of project work and did not vary much in their opinions. The researcher observed that learners were given project work to do which was handed over at a stipulated time within the study period in the term. The 2007 educational reform of Ghana requires project work to be done in subject areas to enhance development by encouraging works of art through creativity, technique, and product development. As suggested in Dewey's theory, project work in teaching makes learning real to learners. For better understanding, learners perform a real task with concrete objects from their environments (Farrant, 2004).

It can also be seen from Table 1 that 93.6% of teacher respondents agreed that they engage learners in group

activities as a form of teaching method. The respondents who disagreed with using the group method were only 6.4%. The mean was 3.44 with a standard deviation of .66. The finding implies that teachers saw group activities as a medium to enhance teamwork and a spirit of tolerance. Hence they did not vary much in their views. Some learners get concepts clearer when their peers help them. DeGrave et al. (2016) confirmed that when learners are put into smaller groups, learners can learn from each other.

About the usage of specialists (resource persons) in sewing to support lesson delivery, 67.9% (\bar{X} =2.81; Std. Dev. =1.0) of the teacher respondents agreed that the BDT (Home Economics) teachers use resource persons in their teaching. The respondents did not vary much in their opinions even though the usage of resource persons depended on teachers' skill level. The researcher observed that quite a few teachers could not handle the practical component of sewing. Mention was made of freehand cutting, which resource persons were mostly invited to handle. In doing so, the resource persons employ various teaching strategies for learners. This is in support of MOE's (2014) suggestion that the mode of delivery of content may be done through the use of resource persons.

Further, Table 1 portrays that 62.9% of teacher respondents disagreed that educational field trip was a technique for teaching. On the other hand, 37.2% agreed to an educational field trip as a teaching method. The mean was 2.23, and the standard deviation was .94. They did not vary much in their opinions. It implies that the teachers who agreed saw the importance of an educational visit to enhance teaching and learning. Learners understand concepts better if they visit spots to get first-hand information, an idea cherished in Dewey's theory. However, the majority who disagreed might not have been using field trips because of the cost implications and the bureaucracy involved in seeking permission to send learners outside their schools. The finding agrees with the views of Salandanan (2013) that field trips enable learners to have a face-to-face encounter with the real-life situation on what has been previously learnt to make a more complex idea of what was taught through direct observation.

An independent sample t-test was conducted to compare the means between two groups (Takoradi and Sekondi circuits). The statistical test revealed that there was a significant difference between field trips as a method for teaching sewing within the two groups ($M=2.2$ $SD=.94$); $t(76) = -2.287$, $p = 0.025$). The use of field trips to enable learners to have a spot feel of what is learnt in the classroom is significantly different among BDT (Home Economics) teachers in Sekondi and Takoradi circuits.

7. Conclusion

Thus, the findings presented suggest that teaching methods were used in the teaching of sewing in JHSs in Sekondi-Takoradi Metropolis. The methods included project work, group activities, discussion, lecture, and demonstration methods. In instances where teachers are not competent with the required skills in sewing, teachers should not hesitate to engage specialists (resource persons) to help in the facilitation. The practical and dynamic nature of sewing calls for the teachers to apply themselves to continuous learning. To aid learners' comprehension, teachers in consultation with management should consider other unexplored teaching methods such as field trips, fashion shows, and exhibitions.

8. Implications for Policy and Practice

Curriculum Research and Development Division of Ghana Education Service (GES) could spell out specific teaching methods for teaching certain sewing topics for better acquisition of knowledge and skills. In addition, participatory and realistic lesson delivery could also be achieved through the use of resource persons, educational tours, exhibitions, and fashion shows. Therefore, as a matter of policy, the Ministry of Education should make provisions for these to enhance the teaching and learning of sewing.

9. References

- i. Abanador, R. Guillian, C., Buesa, D., & Guada, M. (2014). Teaching methods and learning preferences in the engineering department of an Asian University. *Journal of Academic Research in Progressive Education and Development*; 3(1), 2226-6348.
- ii. Agno, L. (2009). *Principles of Teaching*. Pateros Metro Manila: Grand water Publications.
- iii. Akinpelu, J. A. (2010). *Essays in philosophy and education*. Lagos: Stirling-Horden Publishers Ltd.
- iv. Akomaning, E. L. (2017). *Teacher competency in the teaching of sewing in junior high schools in Sekondi-Takoradi metropolis*. Unpublished MPhil Thesis, University of Education: Winneba.
- v. Akyeampong, A. K. (2017). *Vocationalisation of secondary education in Ghana*. Paper prepared for the Regional Vocational skills Development Review, Africa Region Washington, DC: World Bank.
- vi. Anamuah-Mensah, J. (2004). *Vocational/Technical Education for Accelerated Wealth Creation: Critical Issues Facing the Nation*. Paper presented at the 56th New Year School Conference organised by the Institute of Adult Education at the University of Ghana on 30th December, 2004.
- vii. Baldacchino, J. (2013). *Willed forgetfulness: The arts, education and the case for unlearning*. *Studies in Philosophy and Education*, 32(4), 1-16.
- viii. Bligh, D. A. (2000). *What's the use of lectures?* San Francisco: Jossey-Bass Publishers.
- ix. Braskamp's, L. A. (2014). *College assessment program surveys for higher education (CAPS)*, 431, 1-9. Retrieved 22nd September 2018, from www.luc.edu/faculty/lbraska.
- x. Collins, J. W., & O'Brien, N. P. (2003). *Investigating teachers' views of student-centred learning*. *International Education Studies*, 7(7), 1913-1959.
- xi. DeGrave, W., Dolmans, D., & Van der Vleuten, C. (2016). *Student perceptions about the occurrence of critical incidents in tutorial groups*. *Medical Teacher*, 23(1), 49-54.

- xii. Farrant, J. S. (2004). Principles and practice of education. Essex: Longman Group Ltd.
- xiii. Forsyth, T. (2013). Teaching and learning materials and the internet (3rd ed.). London: Routledge.
- xiv. Fry, H., Ketteridge, S., & Marshall, S. (2009). A handbook for teaching and learning higher education. London: Routledge.
- xv. Ghana Statistical Service (2012). 2010 population and housing census: Summary report of final results. Accra, Ghana: GSS.
- xvi. Huba, M. E., & Freed, J. E. (2000). Teacher-centred vs. learner-centred paradigms. Retrieved 6th August 2018, from <http://assessment.uconn.edu/docs/TeacherCenteredVsLearnerCenteredParadigms.pdf>
- xvii. IFHE (2008). Home economics in the 21st Century position statement. Retrieved on 22nd July, 2015, from <http://www.ifhe.org/>Jacobsen, D., Eggen, P., & Kauchark, D. (2009). Teaching methods: Promoting student learning in K-1 classroom (8th ed.). Boston: Allyn and Bacon.
- xviii. Kochhar, S. K. (2013). The teaching of social studies. New Delhi: Sterling Publishers. Pvt. Limited.
- xix. Kochhar, S. K. (2000). Methods and techniques of teaching. New Delhi: Sterling Publishers Pvt. Limited.
- xx. Kyriacou, C. (2009). Effective teaching in schools: Theory and practice (3rd ed.). Delta: Nelson Thornes Ltd.
- xxi. Laguador, J. M. (2013). Developing students' attitudes leading towards a life-changing career. Educational Research International, 1(3): 28-33.
- xxii. Laguador, J., & Dizon, N. (2013). Academic achievement in the learning domains and performance in the licensure examination for engineering among LPU's Mechanical and Electronic Engineering Graduates. International Journal of Management, IT and Engineering, 3(8), 347-378.
- xxiii. Millar S. (2011). A review of the research on practical work in school science. London: DCSF.
- xxiv. MOE (2007). Teaching syllabus for basic design and technology (Junior High school1-3). Accra: Curriculum Research and Development Division.
- xxv. MOE (2008). Teaching syllabus for clothing and textiles (Senior High School 2-4). Accra: Curriculum Research and Development Division.
- xxvi. MOE (2014). Pre-vocational skills (Home Economics Related) syllabus. Accra: Curriculum Research and Development Division.
- xxvii. Okorie, J. U. (2009). Vocational industrial education. Bauchill: League of publishers.
- xxviii. Palmer, S. D. (2005). A motivational view of constructivist-informed teaching. International Journal of Science Education, 27(15), 1853-1881.
- xxix. Shonmo, C. (2006). Teaching home economics by problem-solving approach in Sudanese secondary school for girls. British Journal of In-Service Education, 21(3), 319-330.
- xxx. Salandanan, G.C. (2013). Methods of Teaching. Boston: Lorimar Publishing, Inc.
- xxxi. Slavin, R. E. (2011). Instruction based on cooperative learning. In R. E. Mayer & P. A. Alexander (Eds.), Handbook of research on learning and instruction, pp. 344-360.
- xxxii. Westwood, P. (2008). What teachers need to know about teaching methods? Camberwell, Vic: ACER Press.