

# Design, Extent of Use and Usefulness of Instructional Materials by Student Teachers on Teaching Practice – The Mentors’ Assessment

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**Abstract:** Instructional materials (IM) play an essential role in the teaching and learning process. This study aimed at assessing Mentors’ assessment of the design and utilization of instructional materials by Student Teachers of St. Joseph’s College of Education, Bechem who were on a four months teaching practice in selected Basic Schools in the Tano North and South Municipalities of the Ahafo regions as well as the Ahafo-Ano South-East District and Ahafo-Ano North Municipality of the Ashanti region. The study adopted the survey research design. 150 mentors in 50 partner (Junior High) schools were used for the study. Three mentors were randomly selected from each school for the study. The research instrument was a five-point scale questionnaire with 9 items adopted from the Pattern Prince Edward Island Evaluation and Selection of Learning Resources survey form. The instrument had three domains; Instructional Design, Extent of Use and Usefulness. Data collected were analyzed using descriptive statistics including mean, standard deviation and simple percentages. The analysis indicated that instructional materials prepared by the Student Teachers were *Very Useful* (Mean = 3.73), effective, engaging and well designed. They strongly agreed that the Student Teachers *Very Often* (Mean = 3.77) used instructional materials in their lesson delivery.

**Key words:** Mentors’ Assessment, Student Teachers, Instructional materials, Design, Utilization, Usefulness

## I. INTRODUCTION

Learning is the process of gaining new information, ideas, skills, beliefs, and experiences that enable an individual to change and/or adapt his behaviour (NTI Manual, 2006). Learning is a long process, and each learning concept must be presented in such a way that it appeals to learners of various interests and abilities, progressing from the familiar to the unfamiliar, and promoting active class involvement. The teacher cannot claim to have met his teaching goals until the desired change in the student's behaviour has occurred. Effective teaching and learning necessitates the use of instructional materials and practical activities by the teacher in order to make learning more vivid, rational, realistic, and pragmatic (Amadioha, 2009). As a result, the teacher is required to use everything at his or her disposal to help the student learn through the use of instructional resources/materials. Instructional materials, according to Abdu-Raheem (2016), are "important and crucial instruments needed for teaching and learning of school subjects in order to improve teachers' efficiency and students' performance." This

definition aligns with that of Abiodun-Oyebanji and Adu (2007), who define instructional material as "all things that are used to support, facilitate, influence, or encourage acquisition of knowledge, competency, and skills." In addition to these criteria, instructional materials are everything that a teacher or learner employs in the process of learning to make learning simple, easy to understand, retain, and recall whenever it is needed. Enaigbe (2009) noticed that, as vital as instructional resources are, fundamental materials like text books, chalkboards, and essential equipment like computers, projectors, televisions, and video are not commonly available in schools. Audio, visual, audio-visual, and information and communication technology (ICT) are the three major categories of instructional materials (Information and Communication Technology). Audio educational resources include radio, audio tapes, VCDs, DVDs, and other media that appeal to the aural senses. Visual educational tools appeal to the sense of sight and include photographs, prints, real objects (models), and more. Films, television, audio-visual tapes, and CDs are examples of audio-visual materials that blend the auditory and visual senses to appeal to the student and heighten interest. ICT has produced a number of packages that can assist teaching and learning in achieving desired learning outcomes. These packages can be found in mobile devices such as smart phones, PCs, and internet access, among other things. ICTs offer a wide range of learning opportunities to students of all interests and abilities. Pictorial depictions aid in the student's understanding and grasp of the ideas represented by the invisible abstract by connecting and relating abstract notions to objective visual facts. Information and specialized experiences that are required for the development of feasible concepts can be conveyed using projected graphics. Films have the power to change people's motives, interests, attitudes, and opinions. Relia (actual things) or three-dimensional models can be useful in teaching and learning since the student learns a lot by looking at and manipulating them. Instructional materials, according to Olumiran, Ajidagba, and Jakeyinfra (2010), come into direct contact with the sense organs.

### *Background to the study*

During the four years of training in the Universities and Colleges of Education, Student Teachers are taught how to design and use Instructional materials in the classroom. In the

first semester of the fourth year, the Student Teachers are sent to Basic Schools for teaching practice. They are assigned to professional teachers with a minimum of three years teaching experience to mentor. At the Basic Schools, the Student Teachers are expected to put into practice all that they have been taught in College, with guidance of the mentors. They are expected to design and use quality instructional materials for their lessons delivery.

#### Statement of the Problem

Instructional Materials are important and crucial for effective teaching and learning, as well as improve teachers' efficiency and pupils' performance (Abdu-Raheem (2016). Every teacher should be able to select, design and use quality instructional material for a successful teaching and learning process. As part of the College or University training, Student Teachers are taught how to select, design and use appropriate instructional materials. The Student Teachers are also given the opportunity to undertake teaching practice, where they are attached to professional and experienced teachers to mentor them. During the teaching practice, Student Teachers are expected to put into practice their knowledge and skills in selection, designing and utilisation of instructional materials in their lessons. The current study sought to find out whether the Student Teachers on teaching practice are putting into practice what they learned from the University of College regarding selection, design and utilisation of instructional materials and whether the materials are of good quality and of relevance.

#### Objective of the Study

The current study sought to assess the quality of design, extent of use and the usefulness of the instructional materials by Student Teachers of St. Joseph's College of Education, Bechem, on teaching practice for the 2021/2022 academic year, from the mentors' point of view.

## II. METHODOLOGY

#### Research Design

The study applied the descriptive survey design. This is because it involves assessing opinions, preferences, and perceptions (Cohen, Manion, & Morrison, 2011). The survey design was used for gathering data on Mentors' opinions and assessment of the design and utilization of instructional materials by Student Teachers on Teaching practice.

#### Sample

The respondents of the survey were mentor in the partner Basic Schools of St. Joseph's College of Education, Bechem. A total of 150 mentors out of about 280 mentors in 50 Partner Basic Schools within four Municipalities and/or Districts (Tano North and South Municipalities of the Ahafo region, and Ahafo-Aano North Municipal and Ahafo-Ano South-East District of the Ashanti region) were used for the study. Three Mentors were randomly selected from each school to respond to the questions.

#### Research Instrument and Data Collection

Patternon Prince Edward Island, Evaluation and Selection of Learning Resources survey form used by Funcion (2019), was adopted with slight modifications. The questionnaire composed of three (3) domains; Instructional materials design; Extent use of instructional materials and Effectiveness of using instructional materials. The questionnaire was designed using the five-point Scale. The questionnaires were given out to Mentors in the 8<sup>th</sup> week of the teaching practice programme. Mentors responded and returned the questionnaires on the same date. The responses were subjected to statistical analysis, using Excel (2010 Edition). The ratings and limit scales used for this study are found in Tables 1 and 2.

Table 1: Qualitative Description for Instructional Design, Extent of use and Effectiveness of Instructional Materials

Rating	Qualitative Description		
	Instructional Design	Extent of Use	Effectiveness
5	Strongly Agree	Always	Extremely Useful
4	Agree	Very Often	Very Useful
3	Undecided	Sometimes	Somewhat Useful
2	Disagree	Rarely	Slightly Useful
1	Strongly Disagree	None	Not Useful

Table 2: Limit scale and the qualitative description for the Design, Extent of use and Effectiveness of the Instructional Materials

Frequency Distribution	Qualitative Description		
	Instructional Design	Extent of Use	Effectiveness
4.21-5.00	Strongly Agree	Always	Extremely Useful
3.41-4.20	Agree	Very Often	Very Useful
2.61-3.40	Undecided	Sometimes	Somewhat Useful
1.81-2.60	Disagree	Rarely	Slightly Useful
1-1.80	Strongly Disagree	Never	Not Useful

## III. RESULTS AND DISCUSSION

#### Instructional Material Design

Table 1 shows the assessment of the Mentors of the design of instructional materials. They strongly agreed to the fact that Instructional materials designed by the Student Teachers were suitable for a wide range of learning/teaching styles, promoted student engagement, encouraged pupils' participation and allowed Pupils to work independently. They also agreed that the Instructional materials designed and used by the Student Teachers were well organized, encouraged pupils' creativity, and promoted retention of key concepts. With a mean rating of 4.11, the mentors *Agreed*, the Instructional materials were of good quality. The results are in line with those of Ayerteye, Kpeyibor & Boye-Laryea, 2019; Amuzu, 2018 and Gene & Acquah, 2020. It means that in designing instructional

materials, especially for basic school pupils, they should be engaging and allow pupils to work independently as well as promote harmonious group interaction.

Table 3: Weighted Means and Qualitative Description of the responses on the Instructional Material Design

STATEMENTS The Instructional material.....	WEIGHTED MEAN	QUALITATIVE DESCRIPTION
1. Is suitable for a wide range of learning/teaching styles.	4.30	Strongly Agree
2. Promotes Pupils' engagement	4.24	Strongly Agree
3. Encourages group interaction	4.22	Strongly Agree
4. Encourages Pupils' creativity	3.80	Agree
5. Allows/encourages the Pupils to work independently.	4.25	Strongly Agree
6. Are well organized and structured.	4.10	Agree
7. Promotes retention	3.86	Agree
GRAND MEAN	4.11	
Qualitative Description	Agree	

Pupils in basic schools learn better and faster through activity oriented instructions involving well prepared instructional materials (Adalikwu & Iorkpilgh, 2013), especially Pupils with learning disabilities (Igbo & Omeje, 2014) . Hence, teachers are encouraged to create instructional materials for teaching/learning that are useful, easy to use, and enjoyable to the learners (Donkor, 2011). The instructional material should stimulate student interest, encourage participation, and make learning more meaningful and fun (Adeyemo, 2017; Morgan, 2017; Mohammed, 2016; Olayinka, 2016; Onu, 2015; Isidor, 2015). There is also the need to take into consideration individual differences of the pupils in the design of instructional materials (Akpan & Onoh, 2017).

*Extent of Use of Instructional Materials*

Table 4: Frequency, Mean rating and Qualitative Descriptions of the response on the extent of use of Instructional Materials

How often do the Student Teachers use instructional materials in their lessons?	Always	Very Often	Sometimes	Rarely	Never
Frequency	40	48	50	12	0
Mean Rating	3.77				
Qualitative Description	Very Often				

Table 4 shows the assessment of the mentor on the extent of use of instructional material in lessons by the Student Teachers. A mean rating of 3.77 means the Student Teachers used Instructional materials very often in the teaching and learning process. Several reasons affect the utilization of the instructional material in delivering lessons in basic schools.

Instructional materials are used to develop lesson plan, to assess the knowledge of their Pupils, to offer the teachers some insight into the methods of creating examinations and to provide innovative and creative ways to assess Pupils' performance (Mbaegbu et al. 2021 a). Utilization of instructional materials in the teaching and learning process in basic schools is of great importance to both the teacher and their Pupils (Mbaegbu et al. 2021b) as it improve teachers' efficiency and students' performance (Abdu-Raheem, 2016). Dahar (2011) also says that instructional materials are highly important for teaching, especially for inexperienced teachers.

*Usefulness of Instructional Materials*

Table 5 presents the assessment of the mentors on the usefulness of instructional material designed and used by the Student Teachers for the Teaching and Learning process. According to the mentors, the instructional materials were *Very Useful* with a mean rating of 3.73. It indicates that the instructional materials designed and used by the Student Teachers during their teaching Practicum were beneficial to the pupils' understanding of various concepts in the subjects they taught. Mentors found the instructional materials as engaging, encouraging and effective.

Table 5: Frequency, Mean rating and Qualitative Description of the response to the Usefulness of Instructional Materials

How would you rate the usefulness of the instructional material in the teaching/learning process?	Extremely Useful	Very Useful	Somewhat Useful	Slightly Useful	Not Useful
Frequency	38	46	54	12	0
Mean Rating	3.73				
Qualitative Description	Very Useful				

Funcion (2019) in her study on the extent of the use of instructional materials in teaching Computer organization course among the 2nd year Bachelor of Science in Information Technology (BSIT) students enrolled in the course Computer Organization at Leyte Normal University, reported that the instructional materials were very useful with a grand mean of 4.02. Similarly, in the study by Donkor (2011) the students express high perceived usefulness of video-based instructional materials in learning practical skills in block laying and concreting. The learners also found the documents relevant, useful, enjoyable, and exciting and would recommend them to their fellow students to use.

Table 6: Mean Rating, and Standard Deviation of the three domains of the responses of the Mentors

Domain	Mean Rating	Standard Deviation	Total (N)
Design	4.11	.44	150
Extent of Use	3.77	.72	150
Usefulness	3.73	.67	150

The result in Table 6 indicates that there is no significant relationship of instructional materials at 0.01 level of significance between Extent of use ( $M = 3.77$ ,  $SD = .72$ ) and usefulness ( $M=3.73$ ,  $SD = .67$ ) but significant relationship between usefulness ( $M= 3.73$ ,  $SD = .67$ ) and Design ( $M= 4.1$ ,  $SD = .44$ ). Funcion (2019) saw significant relationship between Utilization and Usefulness as we as between Usefulness and Instructional design of instructional materials used in teaching Computer Organisation Course at the Leyte Normal University, Philippines .

This indicates that the usefulness of having instructional materials as a guide to both the pupils and teachers in the learning and teaching process should cannot be overemphasized. The development of the Instructional materials too, must be a part and parcel of the implementation of the instructional plan to ensure a successful teaching and learning process.

#### IV. CONCLUSION

The selection, design and/or use of appropriate instructional materials are/is advantageous and useful in the teaching/learning process for both the Pupils and the Teacher, most especially in the situation where the teacher is inexperienced (Student Teacher). Instructional materials help the students understand and retain concepts. According to the mentors, the Instructional materials designed and used by the Student teachers of St. Joseph's College of Education, Bechem on teaching practice for the 2021/2022 academic year were well designed, appropriate, effective and very useful. The Student Teacher *Very Often* used instructional materials in their lessons delivery. Pupils' socio-cultural backgrounds, disabilities and learning differences were factored into the selection, design and use of instructional materials. The instructional materials promoted different learning styles and were congruent with the course syllabus as well as promoted learner-centred approaches. The designed instructional materials were much related to the course objectives/learning outcomes and encourage independent and group work.

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