

Adequacy of Instructional Materials Used by Teachers in Teaching Technology and Livelihood Education

Shela H. Albarico, Mirasol O. Tagura, Riah L. Visitacion, Prof. Vanessa B. Zabala, Dr. Judith A. Magnetico, and Avril Joy R. Ramayan

Abstract--- This study aimed to look at the adequacy of the Instructional Materials used in Teaching TLE as Perceived by the 4th year BSE TLE Students. It sought to answer the following questions: (1) Do the instructional materials support the achievement of the BSE- TLE curriculum as perceived by the respondents?; (2) Are the instructional materials in BSE- TLE adequate as perceived by the respondents?; (3) Are the instructional materials in teaching TLE are appropriate and updated?

A modified questionnaire was used in gathering the data. There were 47 fourth year students currently enrolled in BSE TLE program at MSU-IIT who served as the respondents of the study. The data gathered was computed using the weighted mean and frequency count. Based on the results, it was found out that the instructional materials used in teaching TLE limited with the needs of the curriculum. This unalignment implies that there is a need to review the instructional materials to suit the needs of the curriculum. The overall mean rating of 3.48 indicates that the respondents agree on the statements regarding the help of the instructional materials in the achievement of the BSE TLE program, its goals and objectives and content standards. Concerning the adequacy of the instructional materials used in teaching TLE, it was revealed that there are available instructional materials for all the areas in the TLE program and there is enough classroom and space utilized for placement of instructional tools, machine and equipment. However, the overall mean of 2.36 shows that there is an inadequate instructional material in relation to the number of students enrolled. The following subjects

were rated as the top 5 having inadequate books/published or printed instructional materials: (1) Carpentry, (2) Electricity and Electronics, (3) Agriculture, (4) Clothing Construction, (5) cosmetology. This is followed by the top 5 subjects with inadequate units of tools, equipment and machines: (1) Computer Aided Drafting, (2) Carpentry, (3) Clothing construction, (4) electricity and Electronics, (5) Agriculture. Because of this inadequacy, the students experienced buying their own materials and tools. The following shows that the top 5 TLE subjects where students bought their own materials and tools are: (1) Clothing Construction, (2) Electricity and Electronics, (3) Handicrafts, (4) Carpentry, (5) Cosmetology. These findings must be given attention by the school administrators to be included in the purchase of tools and equipment for instructional purposes.

Keywords—Adequacy, Instructional, Livelihood, Technology

I. INTRODUCTION

THE school is a very important institution which can provide career pathways for students. Offering Technology and Livelihood Education is a response to the need of the community considering that the nature of the course would provide practical knowledge and skills of vocational and technological efficiency and problem solving in daily life.

Technology and Livelihood Education is a program which equips learners with knowledge and information, skills and process, right work values and life skills in the field of Home Economics, Computer Aided Design, Carpentry, Clothing Construction, Electricity and Electronics, Agriculture, Foods and Beverage, Handicrafts, Cosmetology, Home Nursing, Industrial Arts, Agri-Fishery Arts, and Information Communication Technology (ICT), (K to 12 Toolkit). The alignment of TLE curriculum in the escalating demand of skilled employees will enable the graduate to obtain certification and employment. Thus the need for the realistic and experiential learning aided by the right and adequate tools, equipment and machines for instruction is necessary.

Instructional materials are the tools teachers use to teach their students. Excellent instructional material has a big impact on the students learning since students learn most by doing. Together with the excellent instructional materials are its adequate numbers of units in proportion with the number of the students. Engaging in hands on activities gives the learners idea on how this experience can be applied in a real life

Shela H. Albarico is with the Department of Home Technology Education, MSU-Iligan Institute of Technology, Philippines sheila.albarico@g.msu.iit.edu.ph

Mirasol O. Tagura is with the Department of Home Technology Education, MSU-Iligan Institute of Technology, Philippines mirasol.tagura@g.msuiit.edu.ph

Riah L. Visitacion is with the Department of Home Technology Education, MSU-Iligan Institute of Technology, Philippines riah.visitacion@g.msuiit.edu.ph

Prof. Vanessa B. Zabala is with the Department of Home Technology Education, MSU-Iligan Institute of Technology, Philippines vanessa.zabala@g.msuiit.edu.ph

Dr. Judith A. Magnetico is with the Department of Home Technology Education, MSU-Iligan Institute of Technology, Philippines judith.magnetico@g.msuiit.edu.ph

Avril Joy R. Ramayan Magnetico is with the Department of Home Technology Education, MSU-Iligan Institute of Technology, Philippines avriljoy.ramayan@g.msuiit.edu.ph

situation. This instructional material serves as an aid for instruction. Through this, the teacher will be able to make his/her strategies in teaching more effective and meaningful. It is much easier also for students to learn and understand their lesson as well as acquire the skills necessary in the field. Further, the adequacies of instructional materials that will support the student's effective learning also have its own demand in the educational system. Thus, the study is conducted to determine the adequacy of the instructional materials in teaching Technology and Livelihood Education in the College of Education of MSU- Iligan Institute of Technology.

II. LITERATURE REVIEW

A. Instructional Materials

While a teacher's job does not end in managing the classroom, planning and evaluating, the instructional materials also has a big part in teaching learning process. Student's enthusiasm, involvement and willingness to learning process greatly relies on the material that the teacher used in the classroom. Instructional materials must serve as a vehicle for improving the quality of learning for every student. The following guide questions cited by Corpuz and Lucido (2008) express the standards to consider in the selection of instructional materials:

Instructional Materials give a true picture of the idea/subject presented.

Instructional Materials contribute meaningful content to the topic.

The instructional materials help the teacher achieve the instructional objectives.

The instructional materials are appropriate for the age, intelligence, and experience of the learners.

The physical condition of the instructional material is satisfactory.

Instructional materials help to make students better thinker and develop their critical faculties.

The instructional materials worth the time to expense and effort involved.

B. Basis for the Design and Selecting of Media

When the questions "why use media?" are asked, teachers will respond with almost as many different answers as there are respondents. "because students learn more", "because the class gets tired of lectures only", "because pictures are better than words", and so forth, are typical answer to this question. There probably is some validity to those of most statement, but none of them adequately satisfies the need for a functional rationale for the use of media in the classroom (Bullough, 1987).

C. Reasons for Use of Instructional Materials

The use of instructional materials greatly helps the students in remembering important information. When properly used, they help gain and hold the attention of students. With the availability of the audio-video materials it can be very useful in supporting a topic, and the

combination of both audio and visual stimuli is particularly effective since the two most important senses are involved. Instructors should keep in mind that they often are salesmen of ideas, and many of the best sales techniques that attract the attention of potential clients are well worth considering. The instructional material should keep student attention on the subject; it should not be a distracting device. A good instructional material also can help solve certain language barrier problems considering the continued expansion of technical terminology in everyday usage. This, coupled with culturally diverse backgrounds of today's students, makes it necessary for instructors to be precise in their choice of terminology. Words or terms used in an instructional material should be carefully selected to convey the same meaning for the student as they do for the instructor. They should provide an accurate visual image and make learning easier for the student. Another use for instructional material is to clarify the relationships between material objects and concepts. When relationships are presented visually, they often are much easier to understand. For example, the subsystems within a physical unit are relatively easy to relate to each other through the use of schematics or diagrams. Symbols, graphs, and diagrams can also show relationships of location, size, time, frequency, and value. By symbolizing the factors involved, it is even possible to visualize abstract relationships. Instructors are frequently asked to teach more and more in a smaller time frame. Instructional material can help them do this. For example, instead of using many words to describe a sound, object, or function, the instructor plays a recording of the sound, shows a picture of the object, or presents a diagram of the function. Consequently, the student learns faster and more accurately, and the instructor saves time in the process.

(<http://www.scribd.com/doc/19423301/Instructional-Materials>)

D. The Various Roles of Instructional Materials in the Different Modes of Teaching/Learning

The roles of instructional materials can be divided into three broad groups, which may be described as the following: mass-instruction techniques, individualized-learning techniques and group-learning techniques.

E. Mass Instruction

Within the context of the various techniques that can be employed as vehicles for mass instruction, audiovisual and other instructional materials can play a number of roles. In some cases (e.g. the use of visual aids, handouts or worksheets in a lecture or taught lesson), their role will probably be mainly supportive; in others (e.g. video or multimedia presentations or off-air broadcasts) they can constitute the very essence of the method itself.

In both cases, however, it is important that the materials be chosen because of their suitability for achieving the desired instructional objectives, and not merely because they 'happen to be available' or because the teacher or trainer wants to 'fill in time'. Some of the specific ways in which instructional

materials can be used in lectures and other mass-instructional situations are as follows:

- Forming an integral part of the main exposition by providing 'signposts', guidance for note-taking, illustrative material, work-sheets, etc;
- Providing students with ready-made handout notes on what is being covered, or with skeleton or 'interactive' handouts that they have to complete themselves;
- Providing supplementary material (background reading, remedial or extension material, enrichment material, and so on);
- Increasing student motivation by sensory stimulation, introducing visually- attractive, interesting or simply 'different' material into an otherwise routine lesson;
- Illustrating applications, relations, integration of one topic with another, and so on. As we will see later, a large number of different presentation media and instructional materials can be used to fulfill these various functions.

F. Individualized Learning

The role of instructional materials in individualized learning is radically different from that in a mass-instruction system. In the latter, their role is generally supportive, with the main vehicle of instruction being the teacher or trainer in control of the class; in an individualized-learning system, on the other hand, the materials themselves constitute the vehicle whereby instruction takes place. Thus, it is particularly important that such materials should be designed and produced with the greatest care, for, if they are not, the system could (at best) fail to achieve all its instructional objectives and (at worst) break down completely. Some of the specific ways in which instructional materials can be used in individualized learning are given below:

- Providing instructions and/or guidance on how the learner should carry out a particular course or program of study;
- Providing the actual material that has to be learned or worked on during the course or program;
- Providing the learner with exercises for diagnostic or assessment purposes;
- Providing supplementary or enrichment material. As in the case of mass instruction, a large number of different types of

media and materials can be used to fulfill these various functions.

III. METHODS/DESIGN

We used the descriptive research which aims to find out the adequacy and effectiveness of the instructional materials used by the TLE program in teaching the 4th year BSE TLE students in MSU-IIT, College of Education. Descriptive research design is a type of research method that is used to get information on the current status of a person or an object. It is used to describe what is in existence in respect to conditions or variables that are found in a given situation. Descriptive method is used in collecting data to demonstrate the relationship and collect the necessary information needed in the study.

We used the purposive sampling method in choosing the respondents. The subjects of the study were the fourth year BSE-TLE students. The said students were chosen as the respondents of the study as they are already in their fourth year level; and have taken 80% of the major subjects required by the TLE program. The respondents were also considered knowledgeable about the concept and purpose of the study.

IV. INSTRUMENT USED

We used a modified questionnaire which was based on the criteria for evaluating instructional materials. The researchers presented the questionnaire to faculty members who are experts in the field of professional education for dry run, testing and validation. The questionnaire is made up of four parts which discusses the adequacy of the instructional materials used in teaching Technology and Livelihood Education. The first part deals with the evaluation on the instructional materials whether it supports the learning of the student; the second part is concerned whether the materials support the curriculum of the TLE program; the third part contains questions related to the adequacy of the available instructional materials in all areas of the of the TLE program; and the last part is about the accuracy and update of the instruction materials in the TLE program.

V. FINDINGS/ANALYSIS

TABLE I
EVALUATION OF THE RESPONDENTS ON THE INSTRUCTIONAL MATERIALS USED IN THE ACHIEVEMENT OF THE BSE TLE PROGRAM

| Perceptions | Mean | Description |
|--|------|----------------|
| 1. Instructional materials support the goals and objectives of the BSE TLE Program | 3.70 | Strongly Agree |
| 2. Instructional Materials enriched the curriculum | 3.45 | Strongly Agree |
| 3. Instructional materials are aligned with the needs of the curriculum | 2.43 | Disagree |
| 4. Instructional materials helped in the achievement of the content standard | 3.81 | Strongly Agree |
| 5. Students' varied interest, abilities and maturity levels were taken into consideration when the choice of | | |

| | | |
|---|------|----------------|
| Instructional Materials was made | 3.55 | Strongly Agree |
| 6. Instructional materials stimulate growth of learning in theories and skills | 3.57 | Strongly agree |
| 7. Instructional materials provide a background of information that will enable students to make intelligent decisions in their lives | 3.47 | Strongly Agree |
| 8. Instructional materials engage the students in active learning | 3.64 | Strongly Agree |
| 9. Instructional materials helped students to become lifelong learners | 3.51 | Strongly Agree |
| 10. Instructional materials used in the classroom promote interactive teacher-student learning | 3.64 | Strongly Agree |
| Overall Mean | 3.48 | Strongly Agree |

TABLE II
ADEQUACY OF THE INSTRUCTIONAL MATERIALS IN BSE-TLE AS PERCEIVED BY THE RESPONDENTS.

| Perception | Mean | Description |
|---|------|-------------|
| 1. There are available instructional materials for all the areas in the TLE Program | 2.64 | Agree |
| 2. Students do not have to buy materials and tools as there are readily available. | 1.81 | Disagree |
| 3. There is adequate number of units of tools, equipment and machines used in teaching TLE subjects in relation to the number of students enrolled. | 2.28 | Disagree |
| 4. There is an adequate number of books / published or printed instructional resources for TLE subjects. | 2.47 | Disagree |
| 5. There is enough classroom and space utilized for placements of instructional tools, machines and equipment. | 2.60 | Agree |
| Overall Mean | 2.36 | Disagree |

TABLE III
LIST OF TLE SUBJECTS WITH INADEQUATE BOOKS/PUBLISHED OR PRINTED INSTRUCTIONAL RESOURCES ACCORDING TO RANK.

| TLE Subjects | Frequency | Rank |
|-----------------------------|-----------|------|
| Carpentry | 18 | 1 |
| Electricity and Electronics | 17 | 2 |
| Agriculture | 16 | 3 |
| Clothing Construction | 15 | 4 |
| Cosmetology | 13 | 6 |
| Handicrafts | 13 | 6 |

| | | |
|--|----|----|
| Practice House | 13 | 6 |
| Food Laboratory Subjects | 9 | 9 |
| Home Nursing | 9 | 9 |
| Plumbing | 9 | 9 |
| History and Philosophies of Home Economics | 8 | 12 |
| Entrepreneurship | 5 | 13 |

TABLE II II
LIST OF TLE SUBJECTS WITH INADEQUATE UNITS OF TOOLS, EQUIPMENT AND MACHINES.

| TLE Subjects | Frequency | Rank |
|--|-----------|------|
| Computer Aided Design | 23 | 1 |
| Carpentry | 22 | 2.5 |
| Clothing Construction | 22 | 2.5 |
| Electricity and Electronics | 20 | 4 |
| Agriculture | 14 | 5 |
| Food Laboratory Subjects | 13 | 6 |
| Handicrafts | 12 | 7 |
| Cosmetology | 8 | 8 |
| Home Nursing | 7 | 9 |
| Practice House | 6 | 10 |
| Plumbing | 4 | 11 |
| Entrepreneurship | 2 | 12 |
| History and Philosophies of Home Economics | 1 | 13 |

TABLE II. III
LIST OF SUBJECTS THE STUDENTS EXPERIENCE BUYING OWN MATERIALS AND TOOLS.

| TLE Subjects | Frequency | Rank |
|--|-----------|------|
| Clothing Construction | 41 | 1 |
| Electricity and Electronics | 40 | 2 |
| Handicrafts | 39 | 3 |
| Carpentry | 38 | 4 |
| Cosmetology | 37 | 5 |
| Home Nursing | 30 | 6 |
| Practice House | 28 | 7 |
| Agriculture | 27 | 8.5 |
| Food Laboratories Subjects | 27 | 8.5 |
| Entrepreneurship | 9 | 10 |
| Plumbing | 8 | 11 |
| Computer Aided Design | 5 | 12 |
| History and Philosophies of Home Economics | 1 | 13 |

VI. CONCLUSION

The results of the study shows that the instructional materials helped to carry out the achievement of the BSE- TLE program by engaging students in interactive learning and considering the varied interest, abilities and maturity levels of the student. It is also revealed that there are available instructional materials for all areas in the TLE program and it is used appropriately in the corresponding subjects. On the other hand, the findings also imply that there is an inadequacy in the number of instructional resources as well as the number of the tools and equipments in relation to the number of students enrolled. And for this reason students experienced buying their own materials which is supposedly provided by the school. The instructional tools, machines and equipment used in teaching TLE are not monitored and checked as well as if it is in good running condition. Thus, the result suggests that there is a need to review the instructional materials to suit the needs of the curriculum for the betterment of the course.

VII. RECOMMENDATIONS

Based on the results and conclusion of the study, the researchers recommended the following:

1. The school should allot enough funds for the instructional materials used in teaching TLE subjects specially for laboratory subjects such as Carpentry, Electricity and Electronics, Clothing Construction and Cosmetology since this are the 5 major subjects that are lacking tools and machines.
2. Library should provide adequate number of books/published or printed instructional resources available for the total number of enrolled students.

3. Teachers should check the instructional materials often to ensure that it is still working and in good running condition.
4. Obsolete instructional tools and machines should be replaced with the updated ones.
5. Teachers should be resourceful enough procure instructional materials and tools that are lacking in the laboratories.
6. Administrators should prioritize the purchase of tools and equipment for instructional purposes of the student and faculties members.
7. The same study is conducted to see if there is an improvement on the instructional material, tools and equipment.

REFERENCES

- [1] Corpuz, Brenda B. and Paz I. Lucido(2008). Educational Technology 1. Qezon City, Metro Manila: Lorimar Publishing, Inc.
- [2] Daniel Muijs and David Reynolds (2001). Effective Teaching- Evidence and Practice. London: Paul Chapman Publishing A SAGE Publications Company
- [3] Lascaña Lucelyn D. et.al 2005. Adequacy of Instructional Materials in the Intermediate Grades of Iligan City Central school. Unpublished Undergraduate Thesis. MSU-IIT.
- [4] ALLADO, Glaiza R.et.al. (2007) Arts and Instructional Materials in Teaching Technology Media: An Evaluation. MSU-IIT.
- [5] Lowell T. Pila and Mark Neil P. Rufino. (2007) Evaluation of the Instructional Material in TD 108 Computer Aided Design. MSU-IIT.
- [6] Jewell Ann A. Lubang and Lynette E. Ocer. (2012) Effectiveness of ICT Integration on Students' Performance as Percieved by Parents and Teachers in MSU-IIT. MSU-IIT.
- [7] Daniels, Stephanie.2013.Types of Carpentry Tools. Retrieved September 2013. Retrieved from <http://www.eHow.com/types-of-carpentry-tools>.
- [8] Johnson,Steve.2013. Common Electrical and Electronic Tools. Retrieved September 2013. Retrieved from <http://www.eHow.com/Common-electrical-and-electronic-tools>.
- [9] Allen, Megan.2013. Kitchen Tools and Their Function. Retrieved September 2013. Retrieved from <http://www.eHow.com/kitchen-tools-and-their-function>.