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Development of instructional material for practical research

Desarrollo de material didáctico para investigación práctica

Desenvolvimento de material instrucional para pesquisas práticas

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ABSTRACT

The study aimed to develop a framework for teaching Practical Research and to find out the most appropriate instructional design to use in the development of instructional material for Practical Research 1. It utilized a qualitative research design. The research instrument includes two (2) curriculum guides and forty-five (45) literature searches on the best practices in teaching Practical Research 1. Data analysis used document analysis and thematic analysis. The findings revealed the components of the framework. Among these components are the learning competencies, enhancement/ measurement of prior knowledge, use of instructional material, feedback, and research writing. The most appropriate instructional design for developing the module in Practical Research 1 is the use of 5Es. The 5Es instructional design is used in science instruction and anchored on the principles of constructivism which follows procedural application of knowledge suitable to teaching Practical Research 1 which is deemed science-related. The following recommendations were made: the module in Practical Research 1 should be implemented and evaluated by Grade 11 Practical Research 1 instructors and students; materials containing contents specific to the learner's strand be developed; it is ideal to develop and produce audiovisual materials to add convenience in teaching Practical Research 1, and Practical Research 1 should be taught by teachers who have at least postgraduate units.

Keywords: 5Es, Practical Research 1, instructional design, module

RESUMO

O estudo teve como objetivo desenvolver uma estrutura para o ensino de Pesquisa Prática e descobrir o design instrucional mais adequado para usar no desenvolvimento de material instrucional para Pesquisa Prática 1. Utilizou design de pesquisa qualitativa. O instrumento de pesquisa inclui dois (2) guias curriculares e quarenta e cinco (45) pesquisas bibliográficas sobre as melhores práticas no ensino da Pesquisa Prática 1. A análise dos dados utilizou a análise documental e a análise temática. Os resultados revelaram os componentes da estrutura. Entre esses componentes estão as competências de aprendizagem, aprimoramento / medição de conhecimento prévio, uso de material instrucional, feedback e redação de pesquisa. O design instrucional mais adequado para desenvolver o módulo em Pesquisa Prática 1 é o uso de 5Es. O design instrucional 5Es é usado no ensino de ciências e ancorado nos princípios do construtivismo que segue a aplicação processual de conhecimentos adequados para o ensino de Pesquisa Prática 1 considerada relacionada à ciência. Foram feitas as seguintes recomendações: o módulo em Pesquisa Prática 1 deve ser implementado e avaliado por instrutores e alunos de Pesquisa Prática 1 da Série 11; materiais contendo materiais específicos para a vertente do aluno sejam desenvolvidos; é ideal para desenvolver e produzir materiais audiovisuais que agreguem praticidade no ensino da Pesquisa Prática 1; e a Pesquisa Prática 1 deve ser ministrada por professores que tenham pelo menos unidades de pós-graduação.

Palavras-chave: 5Es, Pesquisa Prática 1, design instrucional, módulo

1 INTRODUCTION

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The implementation and adoption of the K-12 Program in the Philippines took place in 2012. The implementation is anchored on the belief that mastery of concepts and skills, development of a lifelong learner, and preparedness for higher education lie on providing adequate time. In addition, the program also aims to respond to the increasing demand of international communities and targets to improve the competitiveness of our Filipino graduates through enhanced basic education. (Department of Education, 2012)

Moreover, the additional two years in the curriculum refers to the inclusion of senior high school which was first implemented in the Philippines in the school year 2012-2013 with the selected model schools of the Department of Education. However, stakeholders have posed various issues, sentiments and even faced several challenges brought by the full implementation of the new curriculum in the school year 2016-2017. One of the undeniable issues is that several public and private schools nationwide were unable to open and offer all the tracks and specialization mainly due to the unavailability of resources and facilities. Similarly, it has also been reported that teachers receive limited training for senior high school courses and instructional materials are also insufficient. This was further stressed in the monitoring reports of Seameco Innotech (2012) wherein they have cited that as of 2012-2013, DepEd has not developed instructional materials for Senior High School Modelling. To compensate for the lack of materials, teachers opted to use printed modules, digitized resources, printed text or workbooks, online resources and conduct their research on how they could enrich the learning materials they use.

To assist in its implementation, CHED has initiated the development of teaching guides for Senior High schools in cooperation with the Philippine Normal University (PNU). The teaching guides were made available in printed forms and online versions in 2016. Likewise, DepEd's portal called the Learning Resources Management and Development System (LRMD) was also said to be a resource that would support learning, teaching, and professional development. However, upon checking, several learning materials for senior high school are still not available in their portal to date.

Instructional materials highly influence the teaching and learning process and so as the academic performance of the learners. As to teaching, IMs help teachers clarify and make their lessons explicit. Materials themselves also assist in transmitting information and ideas to learners that supplement the instructional process as a whole. To learners, IMs also help them retain what was taught and learned. They become more interested in acquiring knowledge, skills, ideas, habits, facts, and principles through instructional materials (Nadinegwe,2000). Moreover, IMs are also used to assess learners' development and help them translate their competence into reality. Hence, the importance of instructional materials as a tool that improves the teaching and learning process is indisputable. It must be supplied and produced in an adequate quantity and quality particularly for applied subjects, specifically, Practical Research 1 (Qualitative Research).

Considering the nature of the subject, it calls for a tool-mediated process wherein appropriate, sufficient, and context-appropriate instructional tools and materials are needed to achieve its goals. Without instructional materials, it would be difficult for teachers to encourage learners to participate, share, explore, collaborate, negotiate, present, critically reflect, and co-assess (McConnel,2006).

In Digos City, it was often expressed that instructional materials are inadequate, particularly for Practical Research 1. Limited reference materials are available that would make the course more comprehensive and suitable to the level of students. However, the development of supplemental materials for the subject is a challenge. It is mainly due to the workload of subject teachers and the inadequacy of fund and time to support it. Hence, there is the need for the development of

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additional instructional materials for Practical Research 1. The result of this study is beneficial to both teachers and students. The instructional material created through this study will add to the available learning references and assist in the teaching and learning process. In addition, it hopes to make research lessons less difficult for learners and help them build a strong foundation of knowledge and skills for the course. Hence, they will be able to achieve their educational goals and meet the requirements and standards of the subject.

Objectives:

This study intends to develop instructional materials for Practical Research 1. Specifically, its central questions are the following:

1. What framework can be developed for teaching Practical Research 1?
2. What instructional design is appropriate for the development of instructional materials for Practical Research 1?
3. What instructional materials can be developed in Practical Research 1?

2 THEORETICAL FOUNDATION

To provide the theoretical bases for this study, Jerome Bruner's theory of constructivism and Vygotsky's Zone of Proximal Development were considered in discussing the process of developing instructional materials for Practical Research 1. This study on the development of instructional material for Practical Research 1 is supported by Jerome Bruner's constructivist theory. This view has heavily influenced both the teaching-learning process. Bruner's theory of constructivism denotes that "learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge"(Bruner,1996). He also added that selection and transformation of information, construction of hypotheses, decision-making are done by the learners as they rely on a cognitive structure. In addition, Mogashoa (2014) also said that constructivism is used for research, learning, and teaching and it involves essential aspects such as culture, context, literacy, language, learners' interests and needs, personal experiences, interpretation of reality, as well as application of knowledge. Thus, the application of a constructivist approach and the provision of learning activities in a constructivist setting that is characterized by active engagement, inquiry, problem-solving, and collaboration with others will help fulfill the aim and competency required in Practical Research 1 which is to develop learners' problem-solving and critical thinking skills.

On the other hand, Vygotsky's zone of proximal development, to define, refers to "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peer" (Vygotsky,1978 as cited in Shabani, Khatib & Ebadi,2010). Further, following the principles of Vygotsky's ZPD, the development of module for Practical Research 1 shall consist and be characterized with activities that will require learners' large participation under the guidance of the teacher or a more competent person and eventually put them in the process wherein they will be working independently without the teacher scaffolding.

Hence, the application of Vygotsky's scaffolding approach to instruction will be evident in facilitating students' learning of the concepts and methods of writing and conducting a qualitative research study and in the developed module wherein learners are provided with several exercises and learning tasks that they will be performing independently and collaboratively with peers and teachers when needed.

3 METHODOLOGICAL PROCEDURES

3.1 Research Design

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This study employed the qualitative research design and coupled it with document analysis. Document analysis in qualitative research is concerned with the systematic procedure for reviewing or evaluating documents-both printed and electronic material. This research method examines and interprets data to draw out meaning, gain understanding and develop empirical knowledge (Corbin & Stauss,2008 as cited in Bowen, 2009). In this study, the documents utilized are the curriculum guide for English 10 and Practical Research 1 where were accessible online. These curriculum guides contain the competencies required for the grade 10 English and Grade 11 Practical Research 1 formulated by the DepEd's curriculum developers, produced and shared online while others are handed in hard copies by certain school officials and focal persons for the utilization of the curriculum implementers; the teachers. In line with this, searched and reviewed related literature on the best practices in qualitative research was also incorporated in the document analysis. Hence, all these documents are used for systematic evaluation as part of the study to come up with the development of instructional materials for Practical research 1.

3.2 Research Instrument

This study involves the use of the curriculum guides for Grade 10 English, Grade 11 Practical Research 1, the K-12 frameworks, and the related literature searched for the Best Practices in Qualitative Research. The Grade 10 English and Grade 11 Practical Research 1 curriculum guides stipulate the competencies required for the aforementioned courses. As for Grade 10 English, its competencies are divided into 8 major divisions namely reading comprehension, listening comprehension, viewing comprehension, vocabulary development, literature, writing and composition, oral language and fluency, and grammar awareness. On the other hand, Grade 11 Practical Research 1 curriculum guide (CG) articulates the content standards, performance standards, and learning competencies. In addition, the CG for Practical Research 1 comprises 8 major content topics namely; Nature of Inquiry and Research, Qualitative Research and Its Importance in Daily Life, Identifying the Inquiry and Stating the Problem, Learning from Others and Reviewing the Literature, Understanding Data and Ways To Systematically Collect Data, Finding Answers through Data Collection, Analyzing the Meaning of the Data and Drawing Conclusions, and Reporting and Sharing the Findings. Thus, these documents and their content were processed, analyzed, and served as the tool and basis for the design and development of the module for Practical Research 1.

3.3 Data Gathering Procedure

The following procedure in the data gathering was performed.

1. *Permission to Conduct the Study*. The permission to conduct the study was requested from the Office of the Dean of the College in the University of Southeastern Philippines for the researcher to formally begin with the research.
2. *Retrieval of Curricula Guide.* The researcher retrieved and downloaded the curricula guide for Grade 10 English and Grade 11 Practical Research 1 from the Department of Education's official website.
3. *Related Literature Searches.* The literature searches on best practices in qualitative research were obtained from ProQuest Research Library, Google Scholar, other websites as enumerated in the references of this study.

3.4 Data Analysis

Data were analyzed using document analysis and thematic analysis. It focused on the articulated learning competencies both for English 10 and Practical Research 1 which are found in DepEd's curriculum guide. In addition, literature searches about the best practices in qualitative research were also analyzed. Through this approach, the aforementioned documents were interpreted and evaluated and led to the description and coding of the data gathered. On the other

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hand, as defined by Braun and Clark (2006), thematic analysis is the identification, analysis and reporting of patterns (themes) within data and thus assist in interpreting various aspects of the research topic. In the course of this study, thematic analysis was done after obtaining, describing and coding all the necessary information from the documents reviewed. Moreover, these information and inputs obtained during the document analysis consequently produced basis for the design and development of the instructional material for Practical Research 1.

3.5 Ethical Consideration

A permit to conduct the study was secured from the Office of the Dean of the College in the University of Southeastern Philippines before the researcher commenced on the data gathering. Furthermore,no research participants were involved in the study as data source comes from literatures, journals and government documents available online. Authors of literature searched were also cited and listed in the reference section. Hence, there is no known conflict of interest between the researcher, the university and the adviser.

4 RESULTS AND DISCUSSION

A Framework for Teaching Practical Research 1

The framework for teaching Practical Research 1 was developed from the result of the document analysis of the learning competencies, standards, and expected outcomes of 2 curriculum guides; Curriculum Guide in English 10 and Curriculum Guide in Practical Research 1. In addition, a total of forty-five (45) documents of literature searches related to the method, approaches, theories, and practices in teaching Practical Research 1 were also analyzed that became the basis in developing the framework. The developed framework serves to demonstrate the step-by-step process that teachers may follow to effectively deliver the instruction, to give a description of how qualitative research can be taught to the senior high school students, and to present the design suited to the instructional material for the said course. Figure 1 below represents the framework in teaching Practical Research 1 which has seven (7) main components. It is also organized according to the steps to be taken in the teaching-learning process of Practical Research 1. Its components include the Learning Competencies, Enhancement/Measurement of Learners' Prior Knowledge, Use of Instructional Materials, Feedback, Students' Performance, 5Es, and Research Writing. These elements of the framework are critical to ensure that every learner can develop and apply their problem-solving skill and critical thinking skill in writing qualitative research with the aid of the instructional material and suitable instructional approach.

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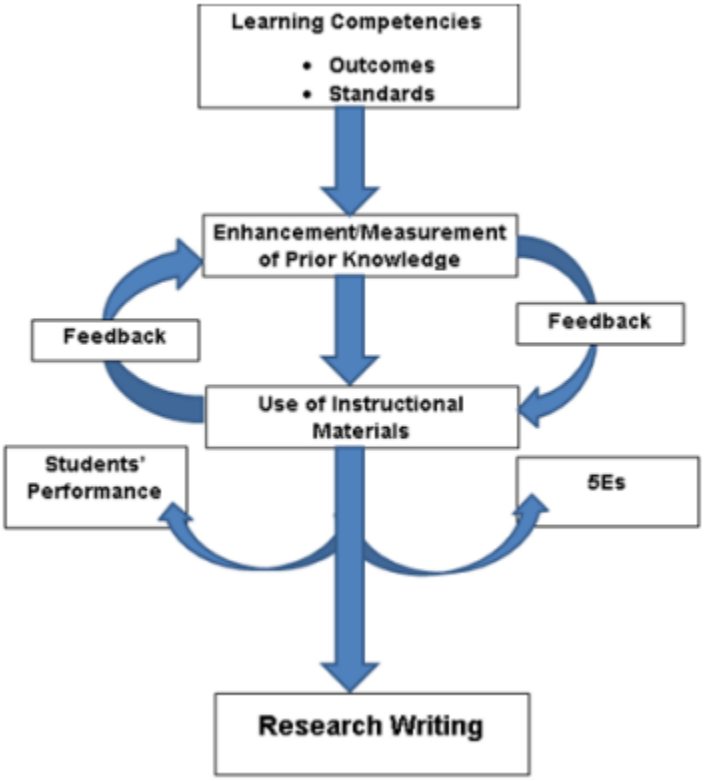
Figure 1: Framework for Teaching Practical Research 1



Learning Competencies

The learning competencies in English 10 are derived from its key stage standards, program standards, grade level standard, content standards, and performance standards as shown in table1 below.

Table 1: Standards for the 4th Quarter of English 10

Key Stage Standard	Students should be able to interpret , evaluate and represent information within and between learning area texts and discourses.
Program Standard	The learner demonstrates communicative competence through his/her understanding of literature and other texts types for a deeper appreciation of Philippine Culture and those of other countries.
Grade Level Standard	The learner demonstrates communicate competence through his/her understanding of Philippine Literature **:** and other texts types for a deeper appreciation of Philippine Culture.
Content Standard	The learner demonstrates understanding of how world literature and other text types serve as instruments to resolve social conflicts, also how to use the language of research, campaigns and advocacies.
Performance Standards	The learner competently presents a research report on a relevant socio-cultural issue.

Similarly, learning competencies in Practical Research 1 were also drawn from the performance standards required by the course as presented in table 2

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Table 2: Performance Standards in Practical Research 1

1. Use appropriate kinds of research in making decisions.
2. Decide on suitable qualitative research in different areas of interest.
3. Formulate clearly statement of research problem.
4. Select, cite, and synthesize properly related literature.
5. Use sources according to ethical standards.
6. Present written review of related literature.
7. Describe qualitative research designs , sample, and data collection and analysis procedures.
8. Apply imaginatively art/design principles to create artwork.
9. Gather relvant information with intellectual honesty.
10. Analyze and draw out patterns and themes with intellectual honesty.
11. Form logical conclusions.
12. Make recommendations based on conclusions.
13. Write and present a clear report.
14. Execute best design.

Looking at the tables, it can be gleaned that both the performance standards in the last quarter of English 10 and the performance standards in Practical Research 1 centers on enabling students towards research writing. To be able to perform the standards for English 10, its learning competencies were divided into eight different areas namely reading comprehension, listening comprehension, viewing comprehension, vocabulary development, literature development, writing and composition, oral language fluency, and grammar awareness. Each of the learning competencies in every area was aligned with the learning content in Practical Research 1 where it is deemed required.

As shown in the competencies for reading comprehension, its focus is on gathering and synthesizing vital information about a chosen issue from primary and secondary sources which they would also evaluate to check its accuracy and thereby draw conclusions. The competencies in reading as shown in Table 3 serve as initial skills needed once learners engage in reviewing related literature.

Table 3: Competencies for Reading Comprehension in English 10

1. Use locational skills to gather information from primary and secondary sources of information.
2. Get vital information from various websites on the internet.
3. Synthesize essential information about a chosen issue.
4. Distinguish facts from beliefs.
5. Evaluate the accuracy of given information.
6. Draw conclusions from the set of details.
7. Point out relationships among statements.
8. Distinguish between general and specific statements.

Likewise, the competencies in literature development, as shown in Table 4 practices learners in using literary techniques to evaluate literature and to develop a theme. The know-how in developing themes is also significantly necessary in taking Practical Research 1 especially that the subject deals with Qualitative Research Writing wherein one of the methods of analyzing data comes in the form of thematic analysis. This learning competency in PrEactical Research 1 is required for learning the content in “Analyzing the Meaning of the Data and Drawing Conclusion” and in “Learning from Others and Reviewing the Literature”.

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Table 4: Competencies in Literature Development in English 10

1. Explain how the elements specific to a genre contribute to the theme of a particular literary selection.
2. Express appreciation for sensory images used.
3. Explain the literary devices used.
4. Determine tone, mood, technique, and purpose of the author.
5. Evaluate literature as an instrument to express and resolve conflicts within between and among societies.
6. Explain how a selection may be influenced by culture, history, environment , or other factors.
7. Draw similarities and differences of the featured selections in relation to the theme.

Moreover, as reading and literature development go together, inputs taken from these two processes are also meant to be put into writing. As shown in Table 5, the learning competencies for Writing and Composition in English 10, students are introduced to composing research reports wherein they employ the different writing techniques, use principles of cohesion and coherence, and acknowledge the sources they have referred to by preparing a bibliography. These competencies are generally aligned with the competencies in Practical Research 1 wherein students are taught the writing styles in research such as the use of APA, MLA, and Chicago Style. In addition, the final output required in the course Practical Research 1 which is a Qualitative Research can also be referred to as a research report which specifically deals with issues related to their chosen tracks.

Table 5. Competencies in Writing and Composition in English 10

1. Expand ideas using principles of cohesion and coherence.
2. Use a variety of informative, persuasive, and argumentative writing.
3. Acknowledge sources by preparing a bibliography.
4. Use writing conventions to acknowledge sources.
5. Compose a research report on a relevant social issue.

On the other hand, competencies in listening comprehension are also seen aligned with the competencies in data gathering wherein observation and interview are the main methods of collecting data. As shown in Table 6, the competency in listening comprehension teaches students to listen critically to be able to react intelligently and raise questions on different viewpoints or societal issues.

Table 6. Competencies in Listening Comprehension in English 10

1. Listen to simplify, reorganize, synthesize and evaluate information to expand, review, or update knowledge.
2. Get different viewpoints on various local or global issues.
3. Distinguish the important points from less important ones in any listening text.
4. Summarize important points discussed in the text listened to.
5. React intelligently and creatively to the text listened to.
6. Raise questions and seek clarifications on issues discussed in the text listened to.
7. React to the falsity or soundness of an argument.
8. Describe the emotional appeal of a listening text.

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Furthermore, the competencies in oral language and fluency as shown in Table 7 are skills deemed necessary for learners speaking activities. In Practical Research 1, the competencies apply as learners conduct an oral 51 presentation of their qualitative research report or known as their research paper defense wherein, they would interact to respond to questions and justify the decisions they have made about their study.

Table 7: Competencies in Oral Language and Fluency in English 10

Oral Language and Fluency
1. Use appropriate language when delivering campaign speeches.
2. Show courtesy and politeness when delivering campaign speeches.
3. Demonstrate the appropriate stage stance and behaviour when persuading others in a campaign speech.
4. Produce the sounds of English correctly and effectively.
5. Use the correct prosodic features of speech.
6. Use appropriate multimedia resources that accompany language.
7. Deliver self-composed campaign speeches on advocacies, social issues and concerns.

Lastly, competencies in grammar awareness and vocabulary development are also focused on the language of research and its technical terms. By being familiar with the terminologies in research and how ideas are expressed in research avoids learners from getting into confusion. Acquiring these competencies also enables learners to develop understanding and prior knowledge as they face more of the research terms in Practical Research 1.

Table 8: Competencies in Grammar Awareness and Vocabulary Developmet in English 10

Grammar Awareness
1. Observe the language of research, campaigns and advocacies.
Vocabulary Development
1. Get familiar with technical terms used in research

The alignment of the competencies, standards, and expected outcomes of the subjects English 10 to Practical Research 1 goes to show that if learners learned it well and were taught well, they have acquired 52 necessary knowledge which they could use as they take a more advanced course such as that of Practical Research 1. Without any amount of prior knowledge, the introduction of new concepts in research may pose difficulty to the students and may hinder their learning achievement.

Enhancement / Measurement of Students' Prior Knowledge

The second component of the framework pertains to the enhancement and measurement of learners' prior knowledge. In Senior High School wherein Practical Research is an applied subject, knowledge of its concepts should be learned for learners to apply it in real-world problems and their research writing. Due to the alignment of the competencies found between English 10 and Practical Research 1, a deep-level understanding and acquisition of knowledge and skills in English 10 are extremely important as this can promote good quality learning as learners proceed to a more advanced course such as that of Practical Research 1 which greatly involves the application of problem-solving skills and critical thinking skills.

As cited by Hailikari and Ylanne (2008) the ability of learners to apply high order cognitive problem-solving skills and the acquisition of knowledge can be influenced by the amount and quality of learner's prior knowledge. In this case, the competencies in English 10 that serve as a

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base for learning the contents in Practical Research 1 but were not acquired by the learners may hamper their learning.

By determining what knowledge gained is retained among learners, it would provide opportunities for the enhancement of the learning process. Likewise measuring students' prior knowledge can also determine the level of support that students would need as they take Practical Research 1. This is supported by Dochy and McDowell (1997), Dochy, Moerkerke, and Martens (1996), and Martens and Dochy (1997) who said that measuring prior knowledge is a tool for instructional support. Thus, there is the need to take prior knowledge into account when teaching Practical Research 1.

Use of Instructional Materials

The use of the instructional material in Practical Research 1 requires the application of the 5Es instructional approach which is made evident in the presentation of inputs and learning tasks through the module. In addition, the use of instructional material serves as a guide that elicits and directs students' performance.

In the use of the instructional materials, various learning activities that aim at learners being able to master the objectives and meet the learning competencies are included. These activities embedded in instructional material are anchored on the constructivist point of view where learners are exposed to problem-based learning activities. As revealed by various literature such as that of Wiggins and Burns (2009), they cited in their study "Research methods in practice: The development of problem-based learning materials for teaching qualitative research methods to undergraduate students" that problem-based learning is highly suited in teaching qualitative research methods since it involves a constructivist and procedural aspect of knowledge application.

Moreover, the application of 5Es in the instructional material learners begin by engaging learners in these interactive activities that activate their prior knowledge, permitting learners' exploration of the models and examples of qualitative texts and studies, explaining the new concepts and ideas and clarifying misconceptions, letting learners elaborate on what they know by exposing them to new sets of real-world problems wherein they will have the opportunity to apply and transfer what they have learned in the previous phases and lastly, being evaluated for what they can perform using all their acquired learnings. Likewise, all these learning episodes during the use of the instructional material also reflect the content standards, performance standards, and learning competencies in Practical Research 1.

Therefore the use of the instructional material mediates the teaching and learning process of Practical Research 1 as it encourages and enables students to explore and address real-world problems and provide students with practical situations wherein they can practice solving authentic data sets and develop their critical thinking, problem-solving and research writing skills. Without appropriate material to explore, students' performance and their future works might vary and could fail to meet the expected outcomes.

Through the material, the abstract concepts of qualitative research were given clarity and turned into concretive knowledge which makes its content more comprehensible for the learners. Explanations integrated into the material also scaffolds learners which they could refer to in case there is a need for clarification. With this learners become even more motivated, interested, encouraged and make learning more permanent. Lastly, the use of the instructional material also guides the teacher in the delivery of instruction which makes it less difficult for a teacher to make the learning process effective.

Feedback

The fifth important component of the framework refers to feedback. Feedback has been widely cited as an important facilitator of learning and performance (Bandura, 1991; Bandura &

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Cervone, 1983; Fedor, 1991; Ilgen, Fisher, & Taylor, 1979 as cited in Shute,2007). According to Mory (1996) as cited by Gouli (2005) feedback is one of the key aspects of learning and instruction. However, in some studies such as that of Bangert-Drowns et al(1991), Kluger and DeNisi (1996), and Mory (2004), they have reported that not all feedbacks are formative such as those that are critical, involves scoring, grades, and marks and characterized by low specificity (Fedor, Davis, Maslyn, & Mathieson, 2001)

In the learning process, feedback plays an important role in learners' achievement once given, timely, and constructively. Aside from giving learners direction on how the target goals of the lesson that improves students' outcome and increase learning, feedback also encourages learners to reflect, to be confident, and to be enthusiastic for learning which thereby improves their performance in the future. Likewise, Nicol and Mcfarlane-Dick (2005) mentioned too that to make the feedback even more effective, the need for it must also be initiated by the students. To develop in them such willingness to discuss their misunderstandings and misconceptions, a classroom culture that promotes trust and respect must also be sustained by the teacher.

In teaching Practical Research 1 student must be given opportunities to receive feedback on their work to inform them of their learning and development. This feedback can be given during and after the learner's use of the instructional materials and exposure to 5Es instructional approach to instruction wherein, they are led to presenting outputs as evidence of their learning. The result of the assessment of learners' outputs and performance, either formative or summative, shall form the basis for the formulation of feedback.

Moreover, such feedback must also offer constructive criticism and be given a keen effort eventually reducing the gap between their current ability and paves way for the enhancement of the teaching and learning process (Hattie & Timperley,2007).

Research Writing

The endpoint of the framework in teaching Practical Research 1 is research writing. Learners' research writing is a performance standard required in the course. Further, it is being able to write a qualitative research paper employing the qualitative research skills, problem-solving skills, and critical thinking skills which they have learned and acquired during the earlier phases of instruction. In the process of writing and conducting their qualitative research paper, collaborative work is suggested as an ideal practice since it has positive effects on the learning outcomes and enable students to be grouped in small size (Johnson & Johnson,1991; Slavin, 1995; & Kagan, 1999 as cited 57 in Zhang,2010). They further added that in collaborative work, a group is composed of only 2 or 3 members or 4 at most. Working in a small group, students are given the same learning goals which they could work together and eventually accomplish learning tasks with ease and quality.

In addition, in research writing, it is also suggested that learners be grouped heterogeneously. As supported by Kagan (1999) and Slavin (1990) grouping the learners heterogeneously result in equal access to instruction, positive effects on students' achievement, self-esteem, leadership skills, and positive relations with peers. Moreover, research writing also involves learners being knowledgeable of the stages in writing. In a course such as Practical Research 1, it is necessary to look into how learners are carrying out the qualitative procedures and how they put it all into writing. It might be that learners can gather all the information needed and conduct the study completely however erroneous and incoherent writing of the data could still be possible since students do not have sufficient experience in doing qualitative research using a second language.

However such close monitoring of learners' work often fails due to the inadequacy of time. Due to this, learners written outputs are less checked, monitored, and given corrective feedback.

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Given this, it can be argued that research writing needs to make use of scaffolding. Through a scaffolded approach, learners can be strictly assisted during the process of writing not until mastery of writing styles takes place; scaffolding is gradually removed and transfers to the learners the responsibility of completing the task independently (Murtagh & Webster,2010). By doing such, Holand and Garfield (2012) said that it will definitely increase learners' confidence, develop academic research skills, further improve students' higher level of understanding, and eventually ensure that standards are met. Additionstudentshrough scaffolding learners are kept from getting frustrated and rather give them the feeling of being supported and challenged which maintains their engagement in the tasks (Larkin,2002 as cited in Garfield 2012).

Instructional Design for the Development of Instructional Materials in Practical Research 1

The 5Es instructional model contains several characteristics that qualify it as the most suitable instructional design for the development of instructional materials in Practical Research 1. Being used in a science curriculum and instruction, 5Es suit itself to Practical Research 1 since both are founded on the principles of constructivism. Second, Practical Research 1 itself is also a course relevant to Science. Similar to science where 5Es are often used, Practical Research involves the teaching of procedural application of knowledge or the step-by-step procedure of gathering information and analyzing data to give an explanation to inquiries and develop a solution to existing problems and issues.

In addition, 5Es also consist of meaningful and relevant phases suited to teaching Practical Research such as that it provides an opportunity to engage learners, making them explore, enabling them to explain, elaborate, and be evaluated. Unlike too with 4As which is intended for teaching values education and UbD which focuses only on learners making meaning and transfer of learning, 5Es has been tested against other forms of science instruction which proves that its effective implementation can actually increase learners' mastery of subject matter, develop learners' problem-solving and critical thinking skills, and thus increase learners' curiosity and interest (Jobrack,2010). Hence, the use of 5Es can make learning qualitative research meaningful and useful in changing learners' negative perception of research

As it was cited by Liu and Breit (2013), research has been considered by many students to be a daunting and uninteresting task that causes learners to feel anxious about taking the subject. Moreover, qualitative research, as its name implies also gives learners the impression that it would be a difficult subject to get through since it would involve the clear organization and expression of ideas by skillfully using the 2nd language. However since learners, particularly those of grade 11 students, often do not have adequate experience of using the 2nd language in writing a highly academic paper, anxiety and intimidation towards the subject are often expressed which could hinder one's learning. (Choi,2013)

In line with that, the use of 5Es shall cater to these worries and assist learners in fully developing their knowledge, skills, and understanding of the concepts and ideas of qualitative research. The engagement phase of 5Es which is similar to motivation serves as an initial move to activate learners' schema. Most especially that before Practical Research 1, learners, if we're taught and learned well, have already acquired certain competencies in English 10 which already prepares them in taking a research course such as Practical Research 1. Through this initial stage, learners are allowed to express what they know which captures their interest and make them engaged in concept, processes, and skills to be learned.

Likewise, the 5Es exploration phase also allows the use of modeling. In the context of learning research, not every student may have sufficient prior knowledge of what qualitative

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research may look like or how qualitative research may be done. However, with the exploration phase in 5Es, students are provided with models of qualitative studies which they can explore and examine. Guiding their exploration are questions that lead learners to further identify the specific concepts of qualitative research. Learners may also get to know how certain investigations and studies can be designed and how data can be gathered, analyzed, and presented through the models. Recognizing the need to provide learners models of qualitative studies aligns with that of Piaget's assertion on cognitive development that before learners could develop abstract thinking, one must have to go through essential learning experiences that allow them to manipulate and explore objects, to ask, and to find out the answer on their own.

To establish clarity of the concepts that learners have learned, 5Es also provide an explanation phase which serves advantageous for both teachers and learners. In this phase, learners are given chance to manifest what they have understood from what they have explored by explaining and verbalizing their understandings. Having done that, this also allows teachers to interact with the students and provide clarification for misconceptions that may have taken place. In addition, concepts are also better learned since discoveries during the exploration are given meaning at this phase. This phase introduces learners to technical terms in research and a more in-depth explanation of the concepts and processes involve in qualitative research. Thus learners develop useful insights and more logical thinking at this phase.

Furthermore, 5Es also provides an opportunity for learners to strengthen and transfer what they have learned through the elaboration phase. Unlike the usual lecture method utilized in teaching research wherein students are directly moved towards actual writing, 5Es require learners to be able to practice first on what they have learned. In this phase, learners can be provided with data sets, authentic scenarios or cases, and real-world problems which they could analyze and solve using the knowledge and skills they have acquired before they immerse themselves in a bigger community, interact with people significant in their study and engage in the actual research writing.

On top of that, 5Es also include the evaluation phase wherein learners provide evidence of their learning in a form of performance, project, and observation of displayed learnings/skills in which the result of teacher’s evaluation reveals the amount of understanding and abilities that learners have acquired and developed. Hence, in designing the instructional material for Practical Research 1 using the 5Es instructional model it makes learning dynamic and interactive. Learners are also moved towards redefining, reorganizing, elaborating, and changing their initial concepts through interaction with the materials and with their peers thereby providing quality to instruction and education.

Module in Practical Research 1

After a thorough literature search and document analysis, a module in Practical Research 1 has been deemed to be the most matching instructional material to be developed. As revealed by the result of analysis and evaluation of the coursebook used by the Grade 11 senior high school students, inputs in the textbook covered a very broad and general discussion of the qualitative research method which could have been too time-consuming for learners to study which then may compromise learners strong foundation due to confusions caused by how knowledge is presented to them. Likewise, most information presented was not also supported by concrete examples such as published researches which could be more difficult for learners since materials needed are not at hand. Moreover learning tasks and activities that align with the competencies cited in the curriculum guide are also insufficient and do not generally establish an organized connection with the previous tasks. Moreover, there were also no data sets that could have allowed learners to practice analysis and problem-solving.

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Furthermore, a module in Practical Research 1 is developed to supplement the present instructional material and to provide a more basic introduction to the methods in qualitative research in which terms and concepts are explained in a manner that is easier to decipher in consideration of learners' level of language use and ability. In addition, the development of the said module in Practical Research 1 also incorporates problem-based activities which are achievable within the given time frame. Hence, this development of module in Practical Research 1 aims to serve as a supplement for the textbook used and present the basic methods in doing qualitative research, giving students a quick insight on how they could perform and create their qualitative research study. The development of the module in Practical Research 1 follows the 5E's which is an instructional model based on the constructivist approach to learning. Each of the 5Es represents the phases of learning namely Engage, Explore, Explain, Elaborate, and Evaluate. In the module, sections of each lesson are stated differently and in a manner that is more relaxed and engaging to the students. To cite, the section headings are "Let's Warm Up", "Let's Explore", "Let's Learn", "Let's Do More" and "Checking for Understanding". Furthermore, the content and input found in the module covers every topic stipulated in the curriculum guide developed by the Department of Education and addresses the lack identified in the textbook used.

The module in Practical Research 1 contains a single unit divided into eight lessons with specific titles namely "The Nature of Inquiry of Research", "Qualitative Research and Its Importance in Daily Life", "Identifying the Inquiry and Stating the Problem", "Learning from Others and Reviewing the Literature", "Understanding the Data and Ways to Systematically Collect Data", "Finding Answers through Data Collection", "Analyzing the Meaning of the Data and Discussing the Conclusions" and "Reporting and Sharing the Findings". To discuss further, each section in the lessons is explained in the next paragraphs.

Let's be Able to Do. Every lesson in the module starts with the objectives. These objectives are mainly derived from the learning competencies stipulated in the curriculum guide and are stated in behavioral and measurable terms. An example of the objectives written for lesson 1 states that learners must be able to (a) share research experiences and knowledge, (b) explain the importance of research in daily life, (c) Differentiate quantitative from qualitative research, and (d) Describe characteristics, processes, and ethics of research.

Let's Warm-Up. In the 5E's instructional design, the module's "Let's Warm Up" activities are intended to engage and gauge learners' knowledge and connect it to the information presented to them. A few examples of the warming up activities in the module include the use of organizational charts such as K-W-L charts, concept maps, and tables. This is to help students in organizing and structuring their prior knowledge and concepts to relate with the other concepts. Moreover, through the use of these graphic organizers, learnings are achieved and become meaningful (McElroy and Coughlin,2009 as cited in Zaini, Mokhtar, & Nawawi,2010) resulting in learners being able to perform better than when they merely take notes, outlines or discuss with peers(Zaini, Mokhtar, & Nawawi,2010).

On the other hand, activities such as think-pair-share, guided reading, and writing were also incorporated in the warming up activities. All these activities are cited in most literature and are found to have beneficial effects among the learners. Furthermore, through the aforementioned activities for the engaging phase which gives learners the opportunity for interaction and exchanges, students get fully engaged and thus gives the teacher a chance to come up with a quick diagnosis of learner's knowledge and ability at present that will serve useful as they move on to the next phase.

Let's Explore. This section represents the exploration phase of the 5E's instructional design. This part focuses on problem-solving and critical thinking activities wherein students are faced with comprehension and guide questions as they explore example texts, images, situations, and the like

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which consequently triggers learners' curiosity and allows it to be at work. In addition, through the activities, students also receive guidance in discovering knowledge and information as they go through exposure to different samples of qualitative texts. For instance, Lesson 3, its "Let's Explore" section requires learners to read an excerpt of a qualitative study and explore how the introduction of the problem, research questions, and significance of the study was written and presented. After reading, learners needed to complete their "Exploration Report" which serves as a guide to make sure that learners have attained a complete understanding of the given examples.

Let's Learn. This part of the module represents the Explanation Phase in 5E's. In this section, learners get a comprehensible and concise explanation of terms, definitions, processes, and concepts. In the module, explanations of the concepts were presented in brief and in an enumerated form wherein it would be easier for students to skim and scan for details. Moreover, simpler language was also used to ensure the readability of the content. In lesson 1, for instance, characteristics of qualitative research particularly its strengths and weaknesses were presented through a table which makes it easier for students to recognize the information.

Let's Do More! This section fulfills the fourth phase of 5Es which is to elaborate. This section involves activities that promote independent learning and performance tasks that are done in a smaller group. To clarify, independent learning does not pertain to students merely working on the given tasks alone (Faraday, Meyer, et al, 2008). Likewise, Thomas (2014) as cited in Healey (2014) also added that independent learning is performed by learners after class hours on their own or with others wherein they receive no direct assistance from the teacher. This is to say that students will not write and conduct a qualitative study on their own but rather with a community of learners wherein the teacher's minimal role is still evident. For instance, Lesson 4's Let's Do More activity requires learners to select topics related to their proposed study and write a review of related literature. This activity cannot be fulfilled in an hour and especially if learners are inside the classroom as materials for review could not be available. Hence, there is the need that learners to be sent off classrooms to accomplish tasks indicated in the module and be given adequate time.

Let's Check your Understanding. In 5Es, this is the evaluation phase wherein learner abilities, understanding of concepts, and skill development are thereby evaluated through formative and summative assessments. Let's check your understanding section in the module provides assessments in the form of short pen and paper tests wherein students need only to provide single responses and fixed answers to questions enumerated which is advantageous for the teacher as immediate feedback can be given at the same time. In addition, reflective questions are also included to keep learners monitoring their learnings while others are questions that would require learners' analysis and be put their answers in paragraph writing. For instance, in lesson 1's fifth section, the module provided "true or false" and "identification" types of assessments that require only a single response.

Lastly, as part of the culminating activity and summative assessment, the module also indicated that learners present their qualitative research paper for evaluation. In the oral presentation, assessed are the number of learnings they have acquired which is reflected in the quality of their paper as well as in the way they would answer questions and interact with the panel with regards to their qualitative study.

5 CONCLUSIONS

Based on document analysis and findings, the following can be concluded:

1. The learning competencies for the last quarter of English 10 covers competencies in reading comprehension, listening comprehension, viewing comprehension, vocabulary development,

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literature development, writing, and composition related to the competencies for Practical Research 1.

2. The competencies for Practical Research 1 require learners' development of critical thinking and problem-solving skills which should be manifested through writing a qualitative study.

3. The framework developed for teaching Practical Research 1 includes the analysis of the learning competencies, enhancement and measurement of prior knowledge, use of instructional materials, feedback, application of 5Es, students' performance, and research writing.

4. Every discipline has its appropriate and specific instructional design. In the field of Practical Research, the utilization of the 5Es instructional design model is the most suitable in developing instructional materials.

5. Teaching qualitative research methods means to teach writing the introduction, statement of the problem, review of related literature, the significance of the study, scope and limitation, research design, sample and sampling method, data gathering procedure, data analysis, summary, conclusions, recommendations, and requiring learner oral presentation of their qualitative study.

6 Plan of Action

After a careful examination and analysis of the findings of the study, the implementation and evaluation of the developed instructional material for Practical Research 1 shall be done to ascertain its effectiveness in aiding instruction. Curriculum implementers and instructional material developer should also produce instructional materials in Practical Reseach 1 that contain carefully selected contents related and relevant to the learners' strand such as in Accountancy and Business Management strand (ABM), Science and Technology, Engineering and Mathematics strand (STEM), , Humanities and Social Sciences (HUMSS), Technical Vocational and Livelihood Track (TVL), Sports Track, and Arts and Design Track.

In addition, curriculum implementers and material writers should develop and produce audiovisual materials which contain authentic data sets and scenarios to add convenience in the teaching of the methods in conducting research. In teaching Practical Research 1, one should spend reflective thinking on the activities and materials to be provided to the learners. This is to ensure that there will be no gaps in learning and in the development of critical and problem-solving skill among learners. Hence, it will result to useful learning as students perform research works in the future. Lastly, the course should be taught by teachers who are knowledgeable and skillful in research in order to manage the complexity of the subject and the profoundness of knowledge it needs to deal with.

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