Development of a Grade 7 K to 12 English viewing courseware

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Abstract

This qualitative study which employed the evaluative research method aimed to develop a courseware for English Grade 7 K to 12 curriculum and assess its effectiveness in the viewing competencies. Three experts were designated to evaluate the principles, approaches, and strategies in the courseware. Two sections of the Grade 7 level of a private school in Cebu City were selected to serve as respondents to evaluate the design, activities, and technicalities of the courseware. The level of performance in the viewing competencies was measured through the exercises in the viewing courseware developed by the researcher. The results showed that 1) the viewing courseware used the ADDIE Instruction Design model. 2) The viewing courseware was developed through a Communicative CALL approach embedded in the ADDIE Instructional Design Model. 3) The experts' evaluation of the courseware was Excellent. 4) The respondents' evaluation of the courseware was Excellent. 5) The level of performance of the respondents in the viewing competencies targeted in the viewing courseware was Above Average. In conclusion, the viewing courseware had positive reception from the experts and students, and it enhanced the viewing skills of the learners. Therefore, a constructivist CALL-based courseware following the ADDIE model is effective in fulfilling the language proficiency of learners especially on the viewing skill

Keywords: *K to 12 curriculum, viewing, courseware, ADDIE model, English language teaching, UNESCO ESD themes*

Introduction

In the Philippines, there are too little educational resources for too many students (Meinardus, 2003).[*] But, with the legality of the K to 12 curriculum, the country revamped the educational system with a fair concentration in the promotion of the use of information and communication technology (ICT) in every learning area. The Philippine Education for All (EFA) promises the Computerization Program, which provides computers and peripherals to recipient schools. With this, the use of computer, especially Computer-Assisted Language Learning (CALL), would be an opportunity for the teachers and schools to teach language productively.

Recently in the area of language teaching, one macro skill has been added to the list of skills in which an English language learner should gain adequate competence—viewing. According to Considine and Haley (1992):

> Being literate in this contemporary society means being active and critical users not only of print and spoken language but also of the visual language of film and television, commercial and political advertising, photography, and more… (p. 5)

Visual images are becoming the predominant form of communication across a range of learning and teaching resources (Bamford, 2003). Although the Internet is flooded with great stimuli of good viewing materials, there are no significant lessons, instructional materials, modules and course handouts which are prepared to teach and learn the newly drafted viewing competencies from the Department of Education. These competencies are designed after the K to 12 framework, which highlights the learner's acquisition of information and media and technology skills under 21st century skills. With viewing as a mandated language learning skill and with no identified learning materials for viewing skill acquisition, creating materials deemed needed.

It is the purpose of this research to look into the creation of actual lesson modules for the viewing competencies in the Grade 7 K to 12 English curriculum. The researcher created coursewares which exhibit CALL and adapted the Analysis-Design-Develop-Implement-Evaluate (ADDIE) model throughout the process of creation as related studies suggest such. Authored coursewares are in line with theories in second language acquisition and teaching while tapping Education for Sustainable Development (ESD) in order to acclaim Philippine Literature as a thrust in the G7 K to 12 English curriculum. The pinnacle of this research was discerning the suggestions and implications to improve the set of developed coursewares as evaluated by experts and students. An enhanced set of coursewares for some viewing competencies served as a general process material and product of this research paper.

Theoretical Background

This study was anchored on the Communicative Language Ability theory, Constructivist approach, Dual-Coding theory, and Communicative Computer-Assisted Language Learning. The theories were cited to help in the overall formulation of the viewing courseware. Following the ADDIE instructional design model as the framework of the courseware creation, the researcher was guided from the analysis to the evaluation of the intended instrument of this research. According to several literatures and studies, making coursewares will entail the practice of the ADDIE framework in instructional design.

Analysis

The first step of the ADDIE framework is Analysis. During analysis, the teacher as the "engineer" analyzes the students, the learning environment, teaching content and intended competencies, and teaching aims. One of the notable theories of learning and teaching which supports the accommodation of every student in class is the Communicative Language Ability Theory. Bachman and Palmer (1996) state that understanding individual learning characteristics include (1) personal characteristics such as sex, age, and mother tongue, (2) topical knowledge, (3) affective schemata, and (4) language ability. McKay (2006) reiterates that students bring to their language learning their own personalities, likes and dislikes and interests, their individual cognitive styles and capabilities, and their own strengths and weaknesses. These factors should be

determined and teachers as courseware engineers should always take into consideration this information before designing and developing any language material, which in this case is the courseware.

Design

The second step of the ADDIE framework, Design, concentrates on subject matter, lesson planning, and materials selection. As Russell and Haghi (2010) restate, courseware designers have to choose specific topics to be inputted in the courseware and be able to come up with lesson plans as guides in relation to the analysis done in the first part of the framework. During the design stage, the courseware will be divided into specific lessons—each lesson will have specific objectives, a method of presenting the topic, test items, etc. as if the teacher is virtual.

The subject matter can be inferred from the competencies so the teacher should analyze beforehand these competencies. Additions to the subject matter are themes which may be reflected in the literature and tasks included in the lesson plan and materials. Themes for this research are identified from the United Nations Educational, Scientific, and Cultural Organization—Education for Sustainable Development (UNESCO-ESD). Researchers carefully sought that the courseware in general promoted socio-cultural awareness as we want our 21st-century learners to be socially aware, responsive to the local and global community, and sensitive to multiculturalism and different viewpoints.

The use of the themes from the UNESCO-ESD is an integration of Content-Based Instruction, particularly Theme-Based Language Instruction (TBLI). Kasper (1997) cites that the goal of TBLI is to assist learners in immersing themselves with general academic language skills through relevant content.

In light of socio-cultural awareness is the idea that teachers select materials for social interaction, cultural diffusion, and regulation of thinking as they want learners to act according to real-world contexts and thus form well-thought constructs. These tenets are central of constructivism approaches in education. Constructivism is the view in teaching and learning, which states that the various knowledge representations of learners may all be varied but they are all valid. The focus of this view is more on knowledge construction rather than just transmission. Dalgarno (1996) illustrates this view by providing examples of tutorial systems in constructivist approaches. Although the computer is a "tutor" and thus should reflect behaviorism (contradicting constructivism), the approach was more constructivist because the software provided a structure that encourages the learner to follow certain instructional sequences but allows them to choose alternatives or to use the materials as a discovery learning resource if they are interested and inclined to them. He further concludes that computer-assisted learning softwares which incorporate the constructivist theory are broad and varied but educators need to be more discerning about their purchases of softwares for there are still numerous packages that are built on behaviorist assumptions. A necessity to be attuned to courseware design with emphasis on designing a constructivist sequence of teaching and learning is recommended.

With this, he adds that the categories should not be thought of as exclusive but rather informative in drawing constructivism using computers in English language learning. In addition, courseware developers must always decide on lesson plans which are in line with constructivist approaches that support individual cognition and responsibility of own learning.

Reiterating constructivism, which tries to activate the prior knowledge or schema of learners in meaningful contexts, the intended courseware was themed according to the issues tackled in UNESCO's Education for Sustainable Development (ESD). The courseware promotes

and incorporates the ideology, morals, and practices in achieving sustainable development and learning as a whole. Ward, according to Whitmore and Goodman (1996), conforms that this aspect of language is facilitated by its more student-centered approach since the curriculum starts with learners, building on who they are, what they know and believe, and where they are going. The development of the courseware and the learner's experience in the courseware intends to tap the ideals of social development to create a whole and humanist learner.

The third part of the design stage is selection of materials. Gagne, Briggs, and Wager (1984) renamed the selection of materials for courseware development as "media selection." Media selection is determined because of the availability of media resources fitting for courseware learning such as videos, pictures, authentic texts, and other online materials. It may include such tasks: collection of variety of learning materials, use of already available materials online, and even creation of new "raw" materials. The researchers further suggested criteria in the selection of media and these include (1) exportability or transportability of materials from source to other applications, (2) convenience or easy access, (3) availability, (4) cost, and (5) replicability. These learning materials should be always consistent with learning objectives and learners' characteristics identified in the analysis stage. Also, a study by Guo, Kim, and Robin (2014) limits the number of minutes for a video to six minutes, which is the optimal video length for student engagement, after initial analyses in math and science recorded discussion courses and students' undivided attention during the course of playing these videos.

To uplift the importance of viewing as a macro skill, Paivio (1991) and Wik (2011) discussed the Dual-coding theory. The theory states that the human information-processing system consists of two separate independent channels: an auditory channel for processing auditory and verbal information, and a visual channel for processing visual input and pictorial representations. Memory for verbal information is enhanced if a relevant visual is also presented and words that are associated with objects or imagery techniques are more easily learned than those without. This is why appropriate media selection is very relevant in courseware design. With this reiteration, there is a need to teach viewing in order to learn more through the other macro skills which incorporate viewing in both subtle and bold ways.

Development

Development is the third step of the ADDIE framework. In the development stage, crucial choosing of teaching strategies to include integration of ESD should be considered with greater amount. The author-teacher starts to prepare the specific teaching materials. Visual designs and message designs have to be taken into consideration based on chosen materials or medium. Thus, the chosen videos, pictures, authentic texts, and activities will be encoded and uploaded in the selected software, which is Author Plus. Author Plus is an operating software specifically designed for educational purposes. It consists of two separate windows: the Author Plus Teacher, which allows courseware developers to design and formulate their lesson in the format pre-readied, and the Author Plus Learner collaborative application, where students interact and answer lessons, activities, and tasks prepared by the developer in the Author Plus Teacher. With this process, the Communicative Computer-Assisted Language Learning is employed.

Haider and Chowdhury (2012) commended Hymes's theory of communicative competence in 1972 by reiterating that learning a language involves using the language in context, particularly in terms of social demands of performance. The communicative syllabus for English language learning should consist of activities that concentrate on fluency or use than accuracy. Although actual communicative classrooom strategies may be produced and provided by language

teachers in numerous quantities, modern linguists and teachers agree that the use of the computer would create a more communicative approach towards language learning. Thus computer-assisted language learning emerged.

Computer-assisted language learning is a term used by teachers and students to describe the use of computers as part of a language course (Hardisty & Windeatt, 1989). Lun (2004) differentiates CALL from Computer-aided Instruction (CAI) in that it emphasizes language learning from the learner's perspective, and it is not necessarily computer-based but computer-assisted and therefore is more flexible in delivery. According to Shafaei (2012), CALL is a tool to enable teachers to facilitate the language learning process. CALL can be used not just to remediate or reinforce what has been learned in the classrooms and to help learners with limited language proficiency but also to serve as the main learning instrument for interaction and experience.

Warschauer (1996) acknowledged that CALL has developed gradually over the last 30 years and that its development can be categorized in three phases: behavioristic, communicative, and integrative. Behavioristic CALL is based on the behaviorist theories and denotes the computer as a tutor which provides practices and drills. Communicative CALL focuses on the computer, which will serve as the stimulus that provides motivation and stimulations for discussion, writing, and critical thinking. Lastly, integrative CALL involves the computer as a tool or workhorse, which may not necessarily give any language material but rather empower the learner to use and understand the language. Word processors, grammar checkers, and desktop publishers are examples of the third phase. This history of CALL suggests that the computer can serve a variety of uses for language teaching. Teachers should make it a point to encourage variety in teaching the English language, especially in CALL, and that teaching the language should foster intrinsic motivation and interactivity to tap functionality and maximum usage.

Because this research focuses on the development of a courseware, the Communicative CALL becomes the specific approach related with computer language learning. To discuss further Warschauer (1996), Communicative CALL involves the provision of input as an essential aspect to develop the learner's mental language system. In recent years, developers are geared towards the socio-cognitive view wherein learners acquire from new genres or discourses. Communicative CALL activities should be multi-modal or allow different senses to be tapped during computer-student interaction in order to meet richer contexts. These activities should also develop practice with a greater degree of student choice, stimulate discussion, writing or critical thinking, and use computer as a tool (Davies et al., 1997).

The development stage of making the courseware according to CALL and other theories being considered becomes a real challenge for teachers in general as factors would possibly include lack of competence in the use of the computer and the application, little exposure and training about ICT in education, and difficulty with the compatibility of video and picture formats, among others.
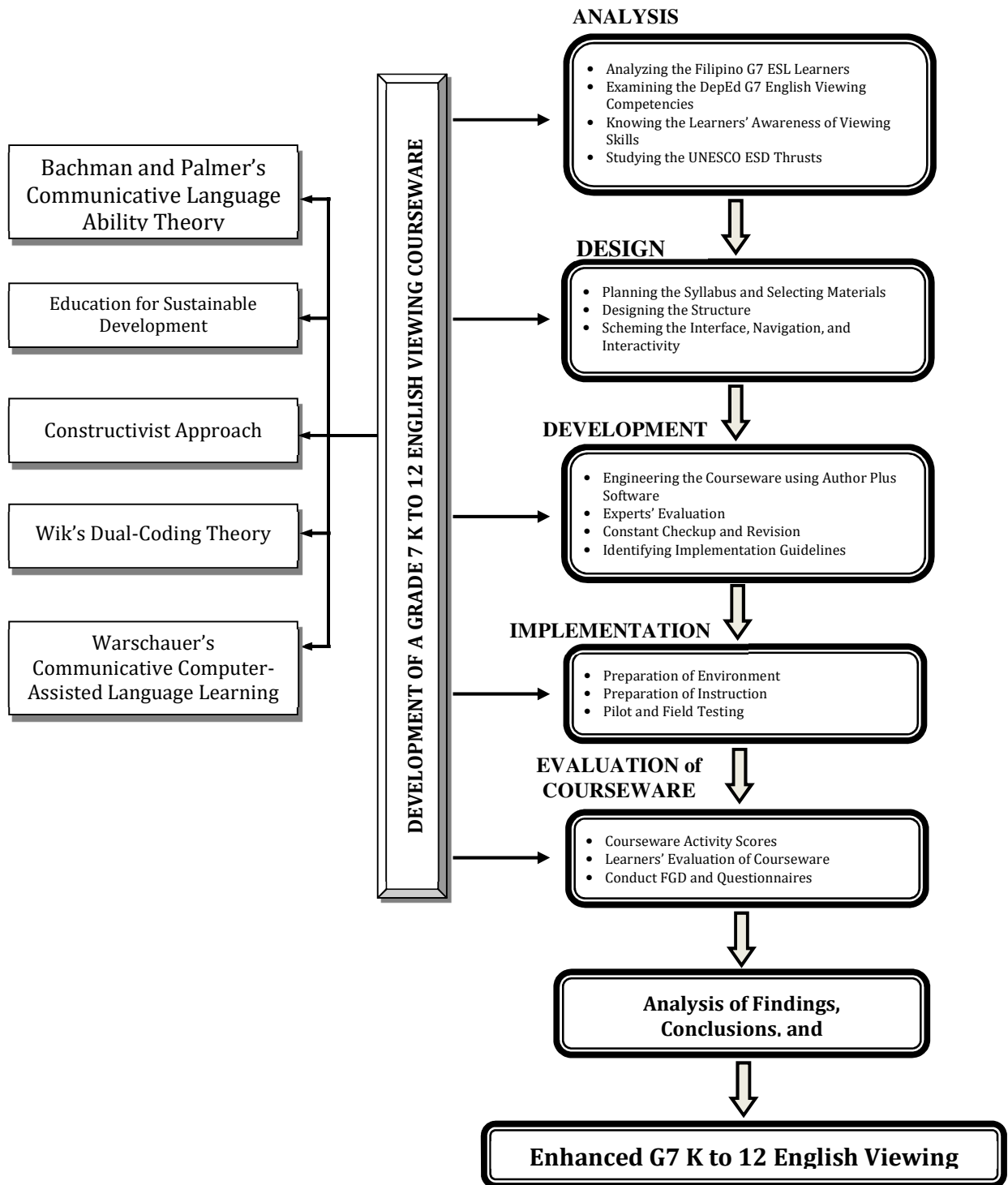
ANALYSIS

- Analyzing the Filipino G7 ESL Learners
- Examining the DepEd G7 English Viewing Competencies
- Knowing the Learners' Awareness of Viewing Skills
- Studying the UNESCO ESD Thrusts

DESIGN

- Planning the Syllabus and Selecting Materials
- Designing the Structure
- Scheming the Interface, Navigation, and Interactivity

DEVELOPMENT

- Engineering the Courseware using Author Plus Software
- Experts' Evaluation
- Constant Checkup and Revision
- Identifying Implementation Guidelines

IMPLEMENTATION

- Preparation of Environment
- Preparation of Instruction
- Pilot and Field Testing

EVALUATION of COURSEWARE

- Courseware Activity Scores
- Learners' Evaluation of Courseware
- Conduct FGD and Questionnaires

Analysis of Findings, Conclusions, and

Enhanced G7 K to 12 English Viewing

Bachman and Palmer's Communicative Language Ability Theory

Education for Sustainable Development

Constructivist Approach

Wik's Dual-Coding Theory

Warschauer's Communicative Computer-Assisted Language Learning

DEVELOPMENT OF A GRADE 7 K TO 12 ENGLISH VIEWING COURSEWARE

Figure 1. *Theoretical-Conceptual Framework of the Study in Schematic Diagram*

Implementation and Evaluation

Then in the fourth step Implementation, the teaching process takes place. The strategies and processes are presented to the students based on the organization that had been done previously. The plan which was designed and developed in the previous stages is put into action, and a procedure for training the learner and teacher is developed (Russell and Haghi, 2010). Lastly, evaluation is facilitated every now and then—expert checking, pilot testing, etc. to seek for improvement in the teaching of English viewing skills. For the purpose of this research, both of these stages are embedded as one vast process as it may entail more than one trial for the improvement and revision of the courseware. These stages of the framework are important to assess if the courseware met the goals and objectives which were set in the analysis stage. Besides, this research presses more on the evaluation of the coursewares as effective learning materials for the teaching of the viewing macro skill.

In the framework in Figure 1, the theories that were taken into consideration were Communicative Language Ability Theory by Bachman and Palmer, Constructivism by Dalgarno, and Communicative Computer-Assisted Language Learning by Warschaeur. These theories backed up the researcher's contention on the use of ADDIE for the teaching of Grade 7 English Viewing Competencies. After using coursewares for the teaching of viewing competencies for Grade 7, the students' raw scores were computed to identify appropriateness of the material. Other data that were analyzed were the learners' comments and responses during the FGD. After analyzing, conclusions and recommendations were drawn out in order to improve the developed courseware of the researcher regarding English Viewing skills for Grade 7.

Related Literature and Studies

When we talk about related literature and studies, Ward (1997) asserts that CALL is best considered as a tool with the teachers actively and intrinsically involved in the learning process. This contention summarizes the idea that courseware development is a serious undertaking with utmost diligence by the language teacher. Both the method (constructivist-communicative with the consideration of Chapelle's criteria) and the medium (the computer technology and courseware) are important factors in CALL.

Restating the principle of the dual-coding theory, many CALL courseware engineers advocate integrating videos in listening and that there is a complementarity in listening and viewing Mayor (2009). They discussed that perception is emerging on the intimate relationship between viewing and listening comprehensions. This evidently conveys English language learning which focuses on meaning by gestures, expressions, and body language as the dual-coding theory pervades. In the general design and development of educational coursewares, the courseware engineer should always consider that the student is guided through information use, is scaffolded until he/she practices independently, and is assessed in his/her learning (Pellone, 1995 in Vilbar, 2012b).

Inasmuch as the language macro skills in English are concerned, there has been limited attention given to the macro skill of viewing. With its emergence this century, linguists saw its relevance in our technology-based and computer-enhanced society thus making it a part of the macro skills relative to reading and listening. Concerns of teachers and linguists in viewing are the minimal research studies done on the effectiveness of teaching the macro skill, lacking or few materials for teachers, and varied assessment schemes. Also, the recurrent problem of drastic changes of technology and the critical definition of what authentic visual materials seem cumbersome for language teachers to take into account.

Digital visual literacy is further defined by Spalter and Dam (2008) as follows:

> … as the ability both to create and understand certain types of visual information. It also involves the ability to evaluate critically digital visual material, to make decisions on the basis of digital visual representations of data and ideas, and to use computers to create effective visual communication (pp. 93-101).

The benefits of CALL were examined in many studies in different cultures. Dang (2011) listed these advantages he compiled from different literatures about CALL: motivating students to learn more and gain real-world experience, enhancing communication and interactivity, learning with authentic materials and audience, promoting learner autonomy, receiving prompt feedback, promoting critical thinking skills, and opening multiple learning avenues, possibilities, and opportunities. Although several barriers were also cited, a major implication was brought up—accommodating the needs and characteristics of individual learners of different backgrounds and cultures. Alongside this thinking about the learner's culture is the open-mindedness in promoting several related cultures. Thus, UNESCO-ESD themes are tapped in language learning. The courseware lessons are based on the competencies of the K to 12 Grade 7 English Language curriculum, which centers on the different Filipino literary works from the locality and regions across eras and genres.

Contemporary studies have been made regarding coursewares and similar applications. In Cardinales' (2013) research on the evaluation of computer applications and their benefits, the researcher found out that English language learners perceive computer applications as very helpful in language learning. Of the seven criteria in evaluating such applications, five criteria got a rating of Excellent, which reveals that the educational applications including quiz softwares, in which our courseware could be classified, are suitable for English language teaching and learning. It could be inferred that 21st-century learners prefer to learn the English language with sensually appealing technology as it involved multiple modalities and interests.

A dissertation by Vilbar (2012b) presents the development of computer-assisted language learning courseware for Filipino English learners. The study used questionnaires, pre-test and post-test, and focus-group discussion to determine the effects of the courseware on students' learning. Results of the research show that the courseware was an alternative educational material for learning English, its use improved the reading skills of the three student groups (low, average, high-performing), and it developed the students' intercultural communicative competence. The researcher recommends that the ADDIE Model may be employed in producing an interactive courseware as the model clearly defined a framework in designing and developing a CALL material such as the courseware.

After investigating computer-assisted language learning and courseware development, identifying constructivist approaches and strategies, studying ESD, and concluding the limited literatures in viewing and its actual relevance as a macro skill, the researcher is equipped in developing a courseware that presented English viewing competencies for the K to 12 Grade 7 second language learners.

Research Design and Method

This is a qualitative research employing the evaluative method, which aimed to develop a courseware for English Grade 7 K to 12 curriculum and assess its effectiveness in the viewing competencies.

The study was conducted in Play House Preschool and B.R.I.G.H.T. Academy, a private non-sectarian institution in Cebu City with the thrust of a balanced and family-like environment for optimal learning. This is located in Gov. M. Cuenco Avenue, Brgy. Banilad, Cebu City.

The main respondents were the Grade 7 students of B.R.I.G.H.T. Academy High School for school year 2014-2015. The Grade 7 students were chosen because the viewing competencies of the DepEd K to 12 curriculum, which were analyzed for the courseware, were intended for English Grade 7. The Grade 7 students were also expected to have ample background on computer applications for they were taught in their Computer 7 subject office applications, encoding skills, networking, and troubleshooting, which are needed in responding to the courseware.

Part of the research was the evaluation of the courseware by designated evaluators. The evaluators were of two types. The first type was the preliminary expert/consultant, who gave constant comments while the researcher was developing the courseware in progress. The researcher asked a Professor of M.Ed. Teaching English as a Second Language and a renowned expert in ICT-based teaching and learning to serve as the preliminary consultant of the courseware. After several meetings with him, a courseware that suited the intent and technical soundness of a Communicative CALL-software was produced.

On the other hand, the final evaluators were three designated teacher-experts, who evaluated the courseware. They come from highly regarded universities, have master's or doctoral degrees, have taught English language and professional education courses for years, and have a fair share of achievements and seminars attended, and facilitated sessions related to education and technology in teaching and learning.

The big lump of the procedure of this research is taken from the three stages of the ADDIE model: (1) Development of the courseware, (2) Implementing the courseware, and (3) Evaluation of the courseware.

In the development of the courseware, the content of the courseware focused on the themes from the United Nations Education for Sustainable Development. For its objectives, the courseware utilized the viewing competencies provided for in the Grade 7 K to 12 curriculum. For its viewing materials and selections, students' interests and the ESD theme were taken into consideration, which would mean that videos, images, texts, and some lesson themes were patterned after Philippine Literature (Grade 7 English focus) while integrating international and global concepts. The software Author Plus Pro was used to create the courseware.

After the development of the courseware, the courseware consultant, assessed the courseware and became instrumental in the improvement of the courseware before having it field tested. As a researcher and expert in ICT-based language teaching, he provided numerous inputs and suggestions for the revision and development of the courseware, too. Then, three experts used the CALL Software Supplementary Evaluation Form (Hubbard, 1988) to evaluate the courseware. Revisions and suggestions were again considered before it was finally field tested to student-participants.

In the implementation phase of the research procedure, the researcher secured a written permit which was duly signed and approved by the Founding Director of B.R.I.G.H.T. Academy. After which the researcher installed the computer software program Author Plus Pro and the courseware to the computers in the Computer Laboratory of the school, prepared the evaluation materials, answer sheets, and other relevant paraphernalia (like headphones) for the students and checked the availability of schedules in the laboratory. Then, the student-participants were facilitated in the conduct of the courseware. The two sections of Grade 7 spent their English classes in the Computer Laboratory interacting with the courseware for one whole week. During the

implementation of the courseware, the students were requested to put the answers to the activities in a separate piece of paper, which serves as an answer sheet so that their scores and progress in every course could be checked and traced.
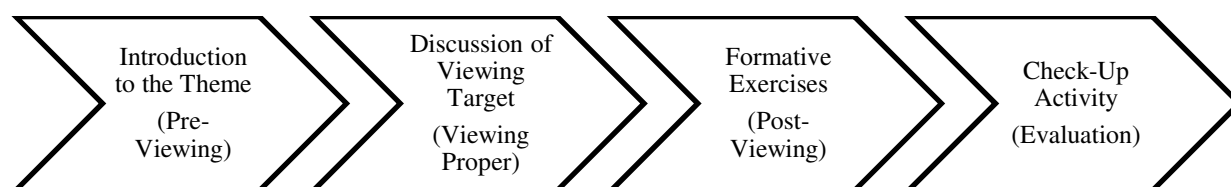
The last phase of the research procedure is Evaluation. After every course, the students were asked to evaluate it using the Software Evaluation Checklist by Davies, et al. (2007). A Focus Group Discussion (FGD) was conducted to retrieve respondents' comments. The researcher then collated the scores from the answer sheet, the evaluation checklists, and the FGD answers for interpretation.

The main instrument used for this study was the Viewing Courseware personally developed by the researcher for the G7 K to 12 English Curriculum. Table 1 shows the ESD Thrusts and the themes identified by the courseware developer.

Table 1

The Competency-ESD Theme Matrix of the Viewing Courseware

Course No.	Viewing Competencies	Themes	ESD Thrust
1	Tell the big ideas/key concepts from gestures of the interlocutors	Filipina Sports Legends	Gender Equality
2	Follow a series of directions while viewing	Combatting Hunger in the Philippines	Health Promotion
3	React appropriately to a program viewed	Rights of the Filipino Child	Children Protection
4	Grasp the message conveyed by the program viewed	Religious Tolerance in Philippine Context	Intercultural Faith
5	Decode meaning of unfamiliar words	Preserving Local Filipino Culture	Cultural Diversity
6	Form mental images of the information conveyed by the program viewed	Crushing Poverty in the Filipino Urban Areas	Poverty Reduction and Sustainable Urbanization
7	Extract information from a program viewed	Filipino Resilience during Natural Disasters	Disaster Risk Reduction

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 Introduction       Discussion of        Formative         Check-Up
 to the Theme          Viewing            Exercises         Activity
                        Target
  (Pre-                                    (Post-         (Evaluation)
  Viewing)           (Viewing             Viewing)
                      Proper)
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Figure 2. *The Structure of Each Viewing Course Module*

To illustrate the lesson structure based on Figure 2 above, Course 1 (Witness Sports Legends) begins with an introduction of the ESD theme on Gender Equality by showing a video

of a report by the Philippine Commission on Women. A multiple-choice activity follows on the next screen to check the student's comprehension about the video. There are two questions in the multiple choice that asked about the reporters' gestures during the report video. Then, a discussion is given about knowing the meaning of gestures and movement of a speaker through a discussion video. A drag-and-drop task trails, which asks students to identify what each gesture might mean in a speaking situation. This task aims to tell if students understood the discussion. After the viewing target discussion, an interview video of an empowered woman in sports Coach Ani will be watched by the students, followed by a multiple-choice test about Coach Ani's gestures. Next, students will view a clip of a television program featuring Asia's Fastest Woman Elma Muros-Posadas and will answer a set of multiple-choice items about Elma's effective use of gestures. As a creative writing response task, the students are asked to write about their sports hero and how he/she maximizes gender empowerment.

What appear in Figures 3.1 and 3.2 are screenshots of the authoring program Author Plus Pro the researcher used in order to develop the Viewing courseware while Figures 4.1 and 4.2 show the interactive program that learners respond to. Author Plus Pro is a multimedia program which helps teachers and learning materials developers design their own courseware. It embeds videos, pictures, and texts and allows 12 different text/test formats to match the intent of an activity or a learning objective.

The participants will be asked to answer the entire courseware, and their scores will be tallied in order for the researcher to identify the level of their performance with the use of the courses on the viewing competencies.
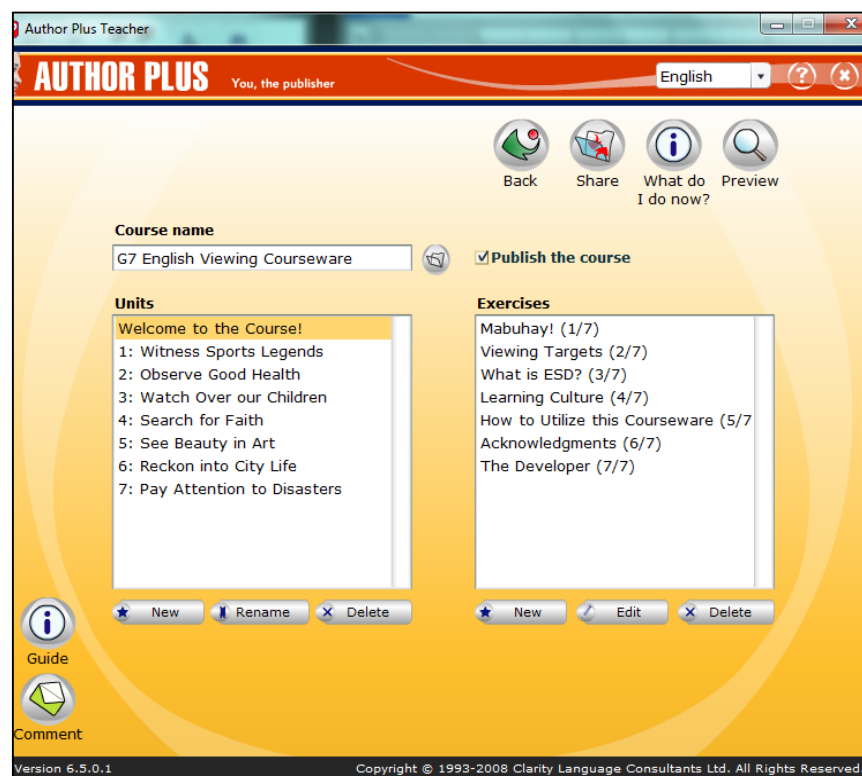
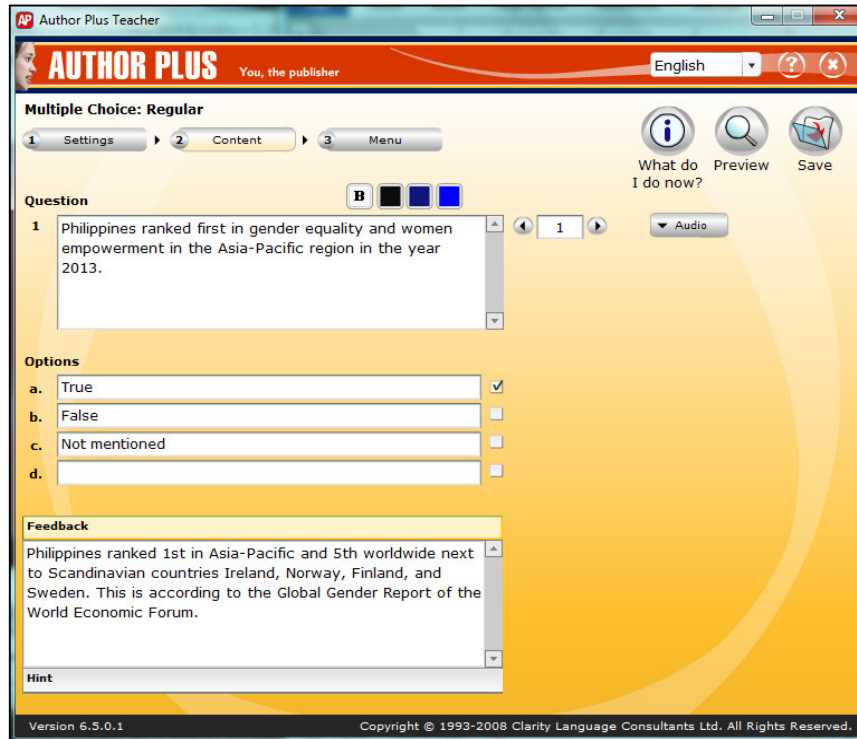

Figure 3.1. *Author Plus Teacher Menu*

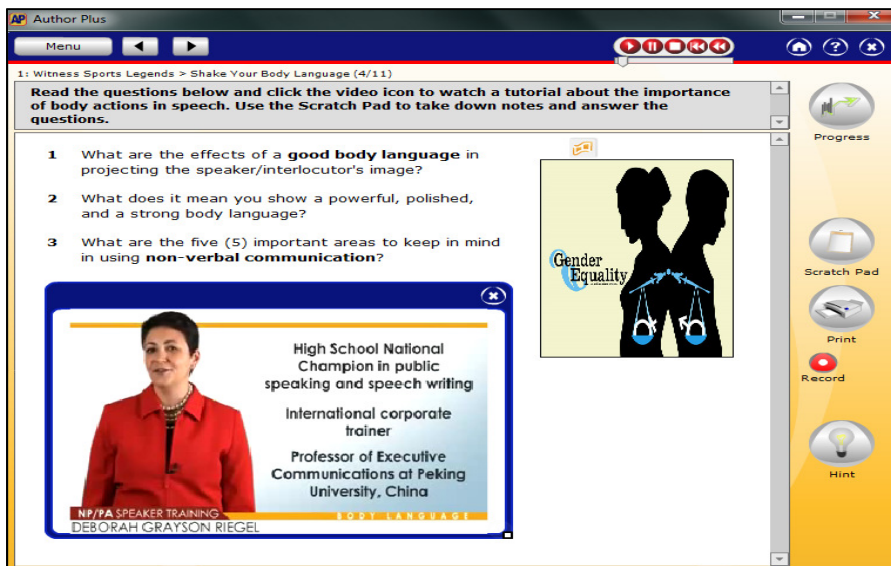Figure 3.2. *Author Plus Teacher Exercise Menu*

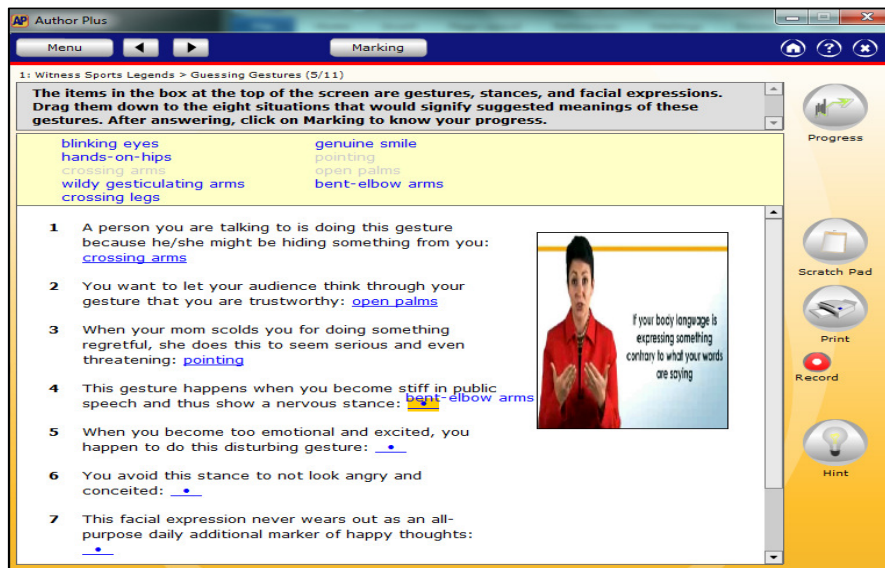Figure 4.1. *Author Plus Interface Presentation for the Learner*

Figure 4.2. *Author Plus Exercise Interface for the Learner*

The participants were asked to answer the entire courseware and their scores were tallied in order for the researcher to identify the level of their performance with the use of the courses on the viewing competencies.

Aside from the Viewing Courseware, the research employed other instruments such as: (1) CALL Software Supplementary Evaluation Form (Hubbard, 1988), (2) Software Evaluation Checklist (Davies, et al., 1997), (3) a 164-item test embedded on the seven coursewares to determine the level of performance of the respondents in terms of the viewing competencies, and (4) Focus Group Discussion.

The data gathered through the use of different instruments were subjected to statistical computations and analyses.

Weighted mean was computed to determine the evaluation of the teacher-experts on the courseware through the CALL Software Supplementary Evaluation and the evaluation of the student participants on the courseware through the Courseware Evaluation Checklist.

To identify the performance of the Grade 7 students in terms of viewing competencies as targeted in each courseware, the z-test of single and large samples was applied. A 0.05 level of significance with a two-tailed test was used to reject the null hypothesis.

Assumption

There is no significant difference between the hypothetical and actual mean of the Grade 7 students in terms of their viewing competencies as targeted in the courseware.

Results and Discussion

Design of the Courseware

In structure design, the researcher decided on how to structure the lesson while the courseware remains a facilitative agent in teaching viewing. Figure 5 details the whole teaching-learning structure.

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┌─────────────────────────┐       ┌─────────────────────────┐
│     Learning Target     │       │       Pre-viewing       │
│   * Viewing Competency  │ ────▶ │ *UN-ESD Theme Introduction │
└─────────────────────────┘       └─────────────────────────┘
            │
            ▼
┌─────────────────────────┐       ┌─────────────────────────┐
│     Viewing Proper      │       │        Exercise         │
│ *Viewing Skill Discussion │ ───▶ │  *Viewing Skill Activity │
└─────────────────────────┘       └─────────────────────────┘
            │
            ▼
┌─────────────────────────┐       ┌─────────────────────────┐
│       Assessment        │       │      Post-viewing       │
│ *Viewing Skill Check-up │ ────▶ │     *Writing Task       │
└─────────────────────────┘       └─────────────────────────┘
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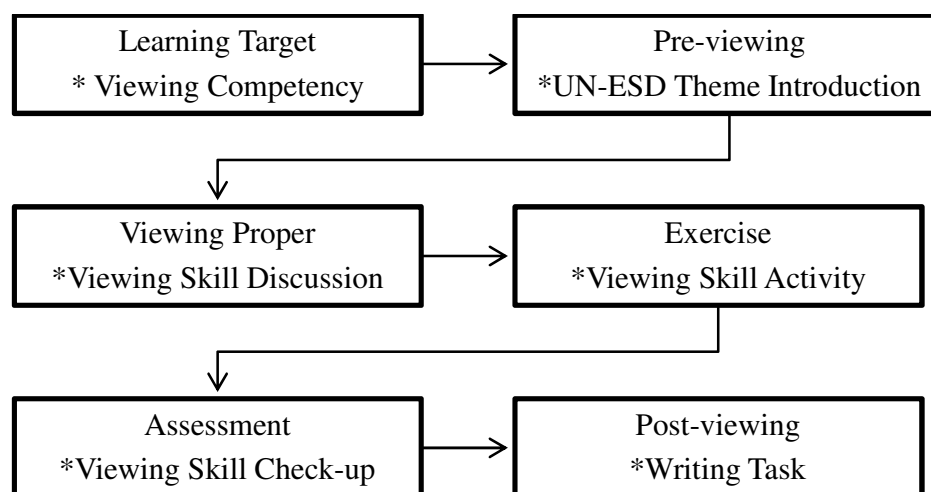
Figure 5. *Teaching-Learning Structure for Each Course*

This teaching-learning structure is supported by Shafaei (2012) that CALL can be used not just to remediate what has been learned in classrooms and help learners with limited language proficiency but also to serve as the main learning instrument for interaction and experience.

In interface design, the developer is concerned with the layout of the screen as the learner interacts with the courseware. This is in connection with Paivio in Wik (2011) on the dual-coding theory with the use of pictures and texts related with the theme of the course.

In navigation and interactivity, the courseware made efficient use of its features like the scratch pad and feedback systems. The learner-centeredness shown in these features agree with Bancheri et al. (2006), who stated that CALL teachers should create an environment which is meaningful and an affective support through technology. In this case, the courseware allows students also to control the learning material to create an interactive experience. Dang (2011) listed the advantages of CALL in this courseware, which promotes learner autonomy, receives prompt feedback, promotes critical thinking skills, and opens learning avenues.

This courseware also includes interesting materials that students find very relatable and enjoyable, too. This inclusion of materials reinforces Bachman and Palmer (1996), which states that learners bring with them their own personalities, likes and dislikes, interests, etc.

The utilization of navigation and interactivity features and the inclusion of interesting materials vis-à-vis the focalization of the UN-ESD themes in the coursewares are centered from constructivist approaches. The constructivist theory in education asserts that the learner's own knowledge construction is valid despite the variety and rawness because this is part of the entire learning process.

For the courseware to be able to allow learners to construct correct knowledge patterns themselves, it should be facilitative and scaffolding enough for learners to interact with. Therefore, the researcher supports the ideas of research studies, especially with the recommendation of Vilbar (2012b) that the ADDIE Instructional Framework helps in designing an interactive courseware for language learning. After carefully designing the courseware intended for Grade 7 and prudently adopting the ADDIE framework, the researcher was able to produce a quality courseware after inquiring evaluations from experts and the respondents.

Development of the Courseware

The Development process is concerned with the actual production of the courseware as planned in the design phase. The development of the courseware followed this procedure: engineering the courseware using software, experts' evaluation, constant checking and revision, and identifying implementation guidelines to intended respondents.

First, the courseware used Author Plus Teacher to create the courseware and input all texts, videos, and pictures that were selected in the design phase. During the use of the software, the researcher was concerned that because the courseware is a stand-alone program in which the learner interacts alone with it while the teacher remains to be facilitative in the entire computer-based endeavour, the learner should be guided all throughout his/her contact with the courseware. Again, the constructivist approach was put into action. Scaffolding considerations such as putting numbers in the Menu interface, inclusion of a screen to introduce the learner to the courseware, metacognitive questions before the start of a set of exercises, specific instructions, and well-explained feedbacks all contribute to the constructivist CALL approach of the courseware. This principle augmented the individualistic intention of the courseware.

Also, the deliberation on the viewing material and activity on separate screens were part of the development of the courseware, which is indicative of Warschaeur's Communicative CALL. This type of CALL focuses on the use of computer as a stimulus which provides motivation for discussion and critical thinking.

Second, the evaluation of experts was done in the development stage of the courseware. After computing and analyzing the experts' evaluation, the courseware was revised to tailor-fit it according to the language content, approaches, and teaching-learning sequence appropriate to the intended learners. The evaluation of the experts is discussed in detail in the next section.

Third, constant checking and revisions were conducted as an integral part of the development process of the courseware. The details of all the revisions are described in Chapter 5. Last, implementation guidelines and materials needed for the courseware were readied by the researcher including the software finalization, peripherals, environment, and deciding the schedule of the courseware use by the respondents.

While developing the courseware, the researcher always thought of the Communicative CALL theory in which the viewing courseware should foster intrinsic motivation and interactivity to tap functionality in computer-based instruction.

Assessment of the Experts of the Courseware

Table 2 lists the evaluation ratings of the experts during the Development phase of the viewing courseware. Each course in the courseware was evaluated according to the following criteria: language learning principle, explicit learning approaches, acquisition approaches, and learning strategy. As shown in the table, the courses got higher ratings in all the criteria, which automatically resulted in higher mean scores of 4.71 in courses 1, 3, 4, 6, and 7 with a standard deviation of 0.32, and 4.79 in courses 2 and 5 with a standard deviation of 0.36. All of the weighted means signify the qualitative description of Excellent, which means that the courseware was excellently developed and reached above-average standards in the criteria given. An overall average of 4.73 or Excellent with a standard deviation of 0.33 was given to the courseware, which sums up the inference that the courseware is an alternative learning material to teach English Viewing skills for Grade 7.

Table 2.

Arithmetic Mean and Standard Deviation of the Courses as Evaluated by the Experts

Courseware No.	*n*	Criteria*				Mean	SD	Qualitative Description**
		P	ELA	AA	LS			
1	3	4.86	4.89	4.75	4.33	4.71	0.32	Excellent
2	3	4.86	4.89	4.75	4.67	4.79	0.36	Excellent
3	3	4.86	4.89	4.75	4.33	4.71	0.32	Excellent
4	3	4.86	4.89	4.75	4.33	4.71	0.32	Excellent
5	3	4.86	4.89	4.75	4.67	4.79	0.36	Excellent
6	3	4.86	4.89	4.75	4.33	4.71	0.32	Excellent
7	3	4.86	4.89	4.75	4.33	4.71	0.32	Excellent
Overall		4.86	4.89	4.75	4.43	4.73	0.33	Excellent

*Criteria of the CALL Courseware Evaluation: **Ranges:
    P – Principle   4.21 – 5.00 (Excellent)
  ELA – Explicit Learning Approaches   3.41 – 4.20 (Very Satisfactory)
   AA – Acquisition Approaches   2.61 – 3.40 (Satisfactory)
   LS – Learning Strategy   1.81 – 2.60 (Fair)
                                      1.00 – 1.80 (Poor)

     Table 2 lists the evaluation ratings of the experts during the Development phase of the viewing courseware. Each course in the courseware was evaluated according to the following criteria: language learning principle, explicit learning approaches, acquisition approaches, and learning strategy. As shown in the table, the courses got higher ratings in all criteria which automatically add to higher mean scores of 4.71 in courses 1, 3, 4, 6, and 7 with a standard deviation of 0.32, and 4.79 in courses 2 and 5 with a standard deviation of 0.36. All of the weighted means signify the qualitative description of Excellent, which means that the courseware was excellently developed and had reached above average standards in the criteria given. An overall average of 4.73 or Excellent with a standard deviation of 0.33 was given to the courseware, which sums up the inference that the courseware is an alternative learning material to teach English Viewing skills for Grade 7.

     This implies that after careful examination and evaluation of the courseware by the experts, they identified the courseware as an excellent material that matches the principles and approaches of English language learning through computer-aided software. Being attuned with language learning theories and ICT-based approaches to teaching and learning, the experts claim professionalism and evaluating the courseware Excellent speaks of a well-developed CALL courseware for the viewing macro skill.

     The result of this assessment is backed up by Colpaert (2004), who reiterates that language courseware engineering adds the dimensions and requirements of linguistics, second language acquisition approaches, among others. The experts evaluated the courseware on the content and pedagogy, which is the concern of Colpaert. This courseware therefore matches the definition of Colpaert on a language courseware. He was seconded by Chapelle (2001), who laid out the criteria to consider in CALL design, selection, uses of technology, and evaluation, which are language learning potential, learner-fit, meaning focus, authenticity, impact, and practicality. These criteria were exhibited in the experts' high ratings on items like the courseware: "maintains learner's attention on the task", "provides sufficient material for mastery", "presents viewing skills

inductively without attempting to teach formulations of rules", "gives meaningful rather than mechanical practice", "gives practice contextualized in a coherent discourse larger than a sentence", and "provides meaningful communicative interaction between the student and the computer".

When it comes to the approaches embedded in the courseware, Expert 2 commented that the courseware represented constructivism in that it encourages the students to reflect on their own learning through the insightful questions given in every viewing material. He added further that "the effective use of technology in this matter also encourages independent learning, which is a necessity in the 21st century." Expert 1 supported Expert 2 by stating that the approach does not employ the structural approach in learning language. Expert 3, on the other hand, reacted that "the courseware is purely student-centered with interesting activities that will enable students learn the intended viewing target."

Expert 1's comment connects with the main idea of Dalgarno (1996) on instructional sequence in constructivist CALL: "*the lesson (module) flow is sequential, leading to the attainment of learning targets set*." As what Dalgarno had discussed, although structure is behaviorist, a courseware or any computer-aided material applies the constructivist approach because it provides a structure that encourages the learner to follow certain instructional sequences while allowing them to choose alternatives or to use the materials as a discovery learning resource. Communicative CALL materials might be varied and broad so Dalgarno reminds educators to choose these kinds of materials over behaviorist (tutorial) softwares. Expert 2 added that the presentation of the courseware was very smooth and organized and that this is helpful in their self-learning. "*The flow is uniform and standardized all throughout the modules in the learning package.*" Expert 3 augmented about the method by maintaining that the courseware used the inductive method where it started from specific to general concepts.

Interestingly, the experts commented more on the selection of videos. Expert 2 commented, "*The integration of Philippine social issues is very evident in all the modules. I personally like how the author injects Filipino values and showcases them.*" Expert 3 affirmed by saying that the selection of videos may affect students' attention and performance and that the videos selected must fit into the background knowledge and context of students. "*Gladly, this courseware exhibits very interesting videos.*" These comments validate the idea that the courseware agrees and complies with the research of Gagne, Briggs, and Wager (1984) on the suggested criteria on the selection of media for learning software such as the courseware. These criteria are exportability of materials from source to application, convenience or easy access, availability, cost, and replicability. Aside from these criteria, the learning materials should be consistent with learning objectives and learners' characteristics as they were identified in the Analysis stage of the ADDIE framework.

Expert 1 gave very insightful thoughts about the research endeavour as a whole. She praised that while the courseware is just part and parcel of the whole research, "*great effort was shown or manifested in the selection, organization, and overall production of courseware input and resources.*" She added that the courseware supports the development of the targeted viewing competencies while it maintains a visually-attractive, interesting, and appealing interface for the learners. This comment is in relation to Cardinales' research (2013) on the benefits of computer applications to English language learners. One criterion that got Excellent while she evaluated computer applications is the preference of 21st-century learners to sensually appealing technology. This implies further that the use of visually stimulating content will aid in learning.

Assessment of the Students on the Courseware
As shown in Table 3, the overall student evaluation of the courseware was 4.56 with a standard deviation of 0.37 and a qualitative description of Excellent. Furthermore, each of the courses, i.e. Course 1 (4.34 with standard deviation of 0.44), Course 2 (4.40 with standard deviation of 0.48), Course 3 (4.55 with standard deviation of 0.47), Course 4 (4.64 with standard deviation of 0.35), Course 5 (4.69 with standard deviation of 0.37), Course 6 (4.71 with standard deviation of 0.41), and Course 7 (4.66 with standard deviation of 0.44) all received an Excellent rating. From the students' perspective, the courseware therefore was an acceptable software program material for teaching English Viewing skills for Grade 7. Moreover, the promotion of the United Nations Education for Sustainable Development themes is a good choice of topic for the learners. The courseware then develops language proficiency while providing meaning-focused use of the target structure (Chapelle, 2001).

Table 3

Arithmetic Mean and SD of the Courses as Evaluated by the Student-Respondents

Courseware No.	*n*	M	SD	Qualitative Description*
1	39	4.34	0.44	Excellent
2	39	4.40	0.48	Excellent
3	38	4.55	0.47	Excellent
4	36	4.64	0.35	Excellent
5	35	4.69	0.37	Excellent
6	34	4.71	0.41	Excellent
7	31	4.66	0.44	Excellent
Overall	31	4.56	0.37	Excellent

*Ranges:
4.21 – 5.00 (Excellent)
3.41 – 4.20 (Very Satisfactory)
2.61 – 3.40 (Satisfactory)
1.81 – 2.60 (Fair)
1.00 – 1.80 (Poor)

This positive rating was validated in the focus-group discussion when the students praised and approved of the interesting and educational content, visually appealing and helpful interface, easy-to-use navigation, and informative feedback mechanism of the courseware. These were explicitly stated in the following FGD statements:

> *The program is educational and understandable to our standard level.*
> *It was very fun and interesting to watch the videos.*
> *This courseware was organized, neat, and understandable.*
> *The software was fun and really interesting. It won't make the students bored.*
> *This course talked about the reality and what is happening in the Philippines and how they live.*

These comments prove the benefits of CALL in motivating students to learn more and gain real-world experience, enhancing communication and interactivity, learning with authentic materials and audience, promoting learner autonomy, receiving prompt feedback, promoting critical thinking skills, and opening multiple learning avenues, possibilities, and opportunities.

The positive rating of the students also validated the study of Vilbar (2012a) on using content learning and ESD framework in courseware design. He asserts that the courseware encourages communicative language learning through Content-Based Instruction, which in this case is the use of UN-ESD themes. The following statements from the FGD validate this contention on the motivation brought by CBI/UN-ESD:

> *My favorites were Ani's and Elma's parts. It is because you could see their perseverance, courage, and sacrifice to become a great athlete*
> *It not only focused on how important the children's rights were, but also how important the children are.*
> *When someone mocks our religion, we have to stand up for ourselves or tell our family.*
> *I liked watching the video about Lea Salonga because she is such an inspiration to Filipinos and I know the broadway shows she was in.*
> *I like the video when it said it was more fun in the Philippines because it just makes me even more proud to be a Filipino.*
> *When they were talking about Typhoon Yolanda, it makes me happy to know that people are helping the survivors.*

These responses show that the use of UN-ESD themes increases students' motivation and empowerment as these themes are related to real-world problems that everyone is concerned of.

Level of Performance of the Students in the Courseware

As reflected in Table 4, all the actual means were above the hypothetical mean. The computed z tests of all viewing competencies were greater than the tabled value of 1.96 at 5% level of significance. These were significant, hence, the rejection of Ho_1. This means that significant differences between the hypothetical mean and the actual mean in all viewing competencies existed, which manifested above average performance. This means that the respondents were way above the hypothetical mean of 60%, which is the standard criteria of the school.

The Above Average performance implies that the respondents were learning effectively and constructively through the independent use of the courseware. This high performance validated the claim that a CALL-based courseware can help learners with even limited language proficiency to learn language through it as a stand-alone and main instrument for interaction and experience. This performance also agrees with the related studies which suggest that computer-aided instruction in the form of the courseware will maximize the performance and proficiency of a student in language: Wyatt in Abdullah, Mahadi, and Ahmad (2009), Dang (2011), Torres (2013), and Vilbar (2012b).

Table 4

Viewing Competencies Mean Scores of the Respondents

Course No.: Competency (No. of Points)	*n*	H.M. *	A.M.	Difference between means	SD	Computed z	Tabled value	Qualitative Description
1: Give the big ideas/key concepts from gestures of speakers (25 pts.)	39	15	19.49	4.49	3.49	8.03**	1.96	Above Average
2: Follow a series of directions while viewing (27 pts.)	39	16.2	20.28	4.08	5.45	4.85**	1.96	Above Average
3: Give an appropriate reaction to a material viewed (21 pts.)	38	12.6	16.79	4.19	3.18	8.12**	1.96	Above Average
4: Identify the message conveyed by the material viewed (23 pts.)	36	13.8	17.25	3.45	3.34	6.20**	1.96	Above Average
5: Decode the meaning of unfamiliar words (20 pts.)	35	12.6	16.83	4.23	2.64	9.48**	1.96	Above Average
6: Create mental images of the information given by the material viewed (21 pts.)	34	13.2	17.38	4.18	4.42	5.51**	1.96	Above Average
7: Get relevant information from a material viewed (25 pts.)	31	15.0	20.13	5.13	3.50	8.16**	1.96	Above Average
Overall (164 pts.)	31	98.4	126.52	28.12	11.60	13.49**	1.96	Above Average

*H.M. = 60% of the test items   **significant

This result on the performance of students in the courseware also strengthens the application of the Communicative Language Ability theory in this material. The theory states that understanding the learner involves analyzing their learning characteristics, which include personal characteristics (i.e. sex, age, and mother tongue), topical knowledge, affective schemata, and language ability. Learners were able to perform the exercises related with the viewing competencies because the courseware incorporated these considerations under the Communicative Language Ability theory. For instance, the courseware included Pinoy children's games, soccer for street kids, and an exercise dance which are common recreational activities for JHS students particularly 12-13 year olds, which are the target respondents of this viewing courseware for G7.

Conclusion

Instructional materials to teach language become more computer-aided, and language skills deal more with the visual stimuli. With this, the new macro skill of viewing will need an advanced, less traditional way of teaching it, and one way is through a teacher-developed courseware adapting the ADDIE instructional design model.

The study found out that the viewing courseware gained positive reception from the experts and students, and it enhanced the viewing skills of the learners. Therefore, a constructivist CALL-based courseware following the ADDIE model is effective in fulfilling the language proficiency of learners especially on the viewing skill.

These findings affirmed the theory of Warschauer (1996) on Communicative Computer-Assisted Language Learning, which focuses on the role of the computer in serving as a visual stimulus that provides motivation, stimulations for discussion in writing and critical thinking.

It is the hope of this research to encourage language teachers to create more materials for the teaching of the viewing skill through a research-based design model as such skill can be integrated to other macro skills and relevant themes such as ESD.

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