

EAP-Based Instructional Material For Agriculture

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Abstract

Reading is the cornerstone for a student's success in school and throughout life. This study delved on EAP-based Instructional Material for Agriculture. It examined the reading skills and competencies of Senior High School students of the Technical-Vocational-Livelihood (TechVoc) track in Agri-fishery Arts strand in the three campuses of Pangasinan State University and came out with an instructional material for agriculture. The descriptive research method was used in this study. Findings showed that the Senior High School students lack mastery of reading skills. The developed instructional material for Senior High School is valid as to its face, content, and readability.

Keywords: Content-based Instruction; EAP-based instructional material; reading skills; Senior High School

“No one is born a reader nor a human being is born with reading skills”

Introduction

Man lives in a reading world where he is surrounded by letters and words. Undeniably, there is no single day that man does not read anything. He, perhaps, reads text messages every day. He reads street signs, signboards and advertisements when he walks down the streets. He reads menus when he orders in restaurants. He reads newspapers when he wants to know the issues happening in the country and throughout the world. He reads non-fiction books or magazines to get better information when he wants to know more about people, places, or things. He does a lot of reading, which is one of the basic requirements, when he studies. Therefore, reading is an indispensable skill which is the ground of almost all processes of learning and is necessary for a man throughout his life. Reading, of course, is the magic wand to the world of enlightenment and enjoyment.

Viewed as a tool for learning and communication, reading is important in scholastic success, job success, continuing education and personal improvement and pleasure. No one could deny the fact that students must read in order to learn. Not surprising, a student who knows how to read well has an advantage over those who do not in the field of learning. Educational researchers found out that there is a strong correlation between reading and academic success. In other words, a student who is a good reader is more likely to do well in school and pass exams than a student who is a poor reader.

More often than not, researchers and authors claim that reading is a crucial tool for living, especially in this world of advancement and rapid change. The world is now in the 21st century where the demand of education is to prepare learners to deal with the challenges of the changing world. To combat these challenges a learner must be armed and equipped with the skill — reading. Reading has become one of the most essential language skills for both the academic and business world in a world of information and technology.

However, according to Imam (2014) despite the use of today's technologies to get information, these could not replace the essential language skills in reading, which one needs to utilize to acquire knowledge. Students must be prepared to compete in a global economy, understand and operate convoluted communication and information systems, and apply higher level thinking skills to make decisions and solve problems.

The use of Content-Based Instruction (CBI) prepares the learners for self-reliance and survival skills. In the study of Omoto (2013) revealed that teachers and students have a positive attitude towards the use of CBI. It makes learning easy, arouses the learner's interest, facilitates understanding and enhances communicative competences. The learner's acquire knowledge without difficulty. Content from other subjects and learner's experience rekindled the learner's schemata. CBI provides teachers with a wide choice of knowledge to teach. It enhances synthesis of information and mastery of content. Hence, content-based offers opportunities for teachers to match the learner's interest and schemata with meaningful content, thus facilitating the learning of language.

There are at least four reasons for incorporating content into English as a Second Language (ESL) in class. First, content provides students with an opportunity to develop important knowledge in different subject areas. Second, students are able to practice the language functions and skills needed to understand, discuss, read about, and write about the concepts developed. Third, many students exhibit greater motivation when they are learning content than when they are learning language only. Therefore, content provides a context for teaching students learning strategies (Omoto, 2013).

The CBI is also supported by Krashen's "Monitor Model," that is, if students are given comprehensible input, it is less difficult to learn the target language, and as a result, they can acquire it. Krashen (1982) emphasized ways

of decreasing learner anxiety, such as providing interesting texts as well as meaningful activities, which are comprehensible to learners, and CBI has language through academic content, engaging activities, developing proficiency in academic discourse, fostering the development of effective learning strategies.”

Undoubtedly, CBI is very popular among English for Academic Purposes (EAP) teachers as it helps students to develop valuable study skills such as note-taking, summarizing and extracting key information from texts (noting details). It can make learning a language more interesting and motivating. Students can use the language to fulfill a real purpose, which can make students both more independent and confident. Through CBI, students can also develop a much wider knowledge of the world which can feed back into improving and supporting their general educational needs. Hence, many researchers contend content-based instruction to be an effective and realistic way to teach English by combining language and content learning. Advocates of CBI claim that students are motivated to learn when the instructional materials are based on topics that they find interesting and relevant. In addition, CBI's focus on addressing students' needs, especially when the curriculum helps students fulfill immediate academic requirements, can be inherently motivating.

This study investigated the needs of the Senior High School students on Senior High competencies, inventory of reading competencies developed by content teachers, instructional material can be produced to address the students' reading needs and validation of instructional materials based on face, content, and readability.

The researcher endeavors to shed light on the importance of reading skill and it is in this light that the present study focuses on an EAP-based instructional material for agriculture students taking Technical-Vocational-Livelihood (TechVoc) track in the Agri-fishery Arts strand to improve the comprehension and to enhance the reading skills of the Senior High School students of Pangasinan State University.

Theoretical Framework

Content-based instruction is also based on the theory that language proficiency derives from integrating the four language skills: reading, writing, speaking, and listening (Eyjólfsdóttir, 2011). Nunan (2003) supports that this reflects what happens in the real world, where interactions involve multiple skills simultaneously.

As key tools in language teaching, Content-based instruction proposes three different models that can be applied in second language classes, these models are:

1. **Theme-based instruction.** This model refers to language teaching in which the content centers on themes drawn from one academic subject (e.g.,

science) or from across the curriculum (the environment, nutrition, the family, etc.). Stoller and Grabe (1997) use the term "theme-based instruction" as a synonym for content-based instruction in general, claiming that "all CBI is fundamentally theme-based" (p. 81). Snow (2001), on the other hand, reserves the term for programs in which "selected topics or themes provide the content from which teachers extract language learning activities" (p. 306), and which are therefore driven more by language than by content.

2. **Sheltered content instruction.** A CBI model in which second language learners are separated or "sheltered" from native-speaking students for the purpose of academic content instruction. The focus is on presenting content in such a way that it will be comprehensible to language learners. Examples include "ESL Science" or "ESL Math" classes.

3. **Adjunct language instruction.** A CBI model in which students simultaneously enroll in a language course and a content course. These courses mutually coordinated materials and assignments so that the language course supports students' learning in the content course. Second language learners may be sheltered in the language course, whereas they may be integrated with native speakers in the course content. The adjunct model has typically been employed at the university level, where such linking or "adjuncting" of courses is possible (Snow, 2001).

Content-based Instruction is consistent with the theory that language structure and language in general are acquired through comprehension, that is, when students understand messages (Krashen, 1985). According to Krashen, the only path to second language acquisition is through comprehensible input, not conscious grammar learning based on form-focused instruction. He posits that ESL classes that promote second language acquisition focus on meaning not form. English learners in content-based ESL classes naturally and incidentally acquire English and its structure because they comprehend the language expressed in content-related concepts.

Therefore, when students are exposed to various content-based reading materials they acquire the target language that they need to learn. As a result, they could easily comprehend what the texts are conveyed and eventually identify the meaning of the texts. According to the theory of learning, CBI makes an assumption that learners learn best when they are given a language in a meaningful, contextualized form with the primary focus on acquiring information. In addition, content-based approach holds a principle that people learn a second language more successfully when they use the language as a means of acquiring information rather than as an end in itself.

Many researchers say that in a content-based class, students are often involved in activities that link the skills, because this is how the skills are generally involved in the real world. Thus, reading a content-based material will

greatly help a reader acquires the language and will help improve his comprehension and develop different skills, one of which is reading.

In this study, the researcher used the theme-based instruction model which is one of the models of CBI that provides a good basis for an integrated skills approach because the topic selected provide coherence and continuity across skill areas and allows work on higher-level language skill—integrated reading and writing skills.

In addition, Hutchinson and Waters (1987) model was also used in the preparation of the EAP-based instructional material for agriculture. This model consists of the following elements: input, content, language, and task.

Figure 1 below shows the Hutchinson and Waters model which the researcher based on making the EAP-based instructional material for agriculture.

The Hutchinson and Waters Model

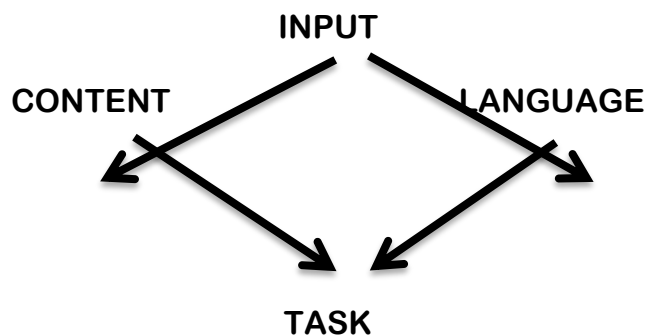


Fig. 1. Framework of Task-Based Instructional Material

Overall, the theoretical framework shows the interconnectedness of each theory which aided the researcher to conceptualize to develop an EAP-based instructional material for the Senior High School students taking Technical-Vocational-Livelihood (TechVoc) track in the Agri-fishery strand.

Figure 2 below represents the schematic diagram of the conceptual framework of the study using the Input-Process-Output Model of the study. In line with the input are the reading skills that the students need to develop and the reading competencies developed by the content teachers. On the other hand, the output of this study is an EAP-based instructional material for Senior High School students taking Technical-Vocational-Livelihood (TVL) track in Agri-fishery Arts strand of Pangasinan State University-Sta. Maria campus, Infanta campus and San Carlos campus.

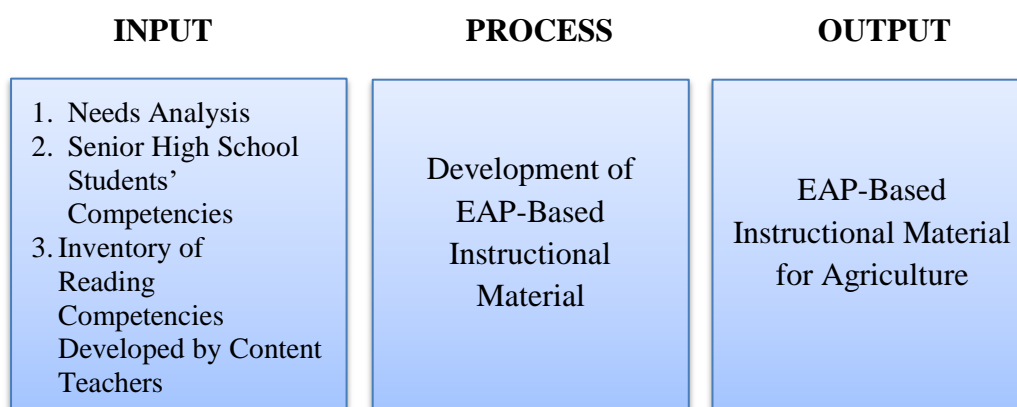


Fig. 2 Paradigm of the Study

Methodology

This study is a descriptive research method to describe, record and interpret the reading skills of the respondents. Therefore, this method is the most appropriate to use when an output of the study such as the module is to be developed, validated and tried out.

There are three types of questionnaire data gathering tool used in the research namely reading skill test, inventory reading skill checklist and adopted teacher made rubric for the content validity of the test material.

Weighted means were utilized to answer the research problem on the needs of the Senior High School students' reading competencies and inventory of reading competencies developed by content teachers.

Results

Needs of Senior High School Students

Table 1. Reading Needs of the Senior High School Students (N=52)

Skills	M	DR
1 Noting Details	4.89	S
2 Identifying Main Ideas	2.31	F
3 Making Inferences	2.75	F
4 Identifying Facts from Opinions	1.21	P
5 Sequencing ideas/Ordering events	2.08	F
6 Drawing Conclusions	2.42	F
7 Recognizing Cause and Effect	2.67	S

Legend:

<i>Skill 1,3,4,5</i>	<i>Skill 2</i>	<i>Skill 6</i>	<i>Skill 7</i>	<i>Descriptive Rating</i>
<i>Rating Scale</i>	<i>Rating Scale</i>	<i>Rating Scale</i>	<i>Rating Scale</i>	
7.5 – 8.00	6.5 – 7.00	4.5 – 5.00	5.5 – 6.00	Excellent (E)
5.5 – 7.45	5.5 – 6.49	3.5 – 4.49	4.5 – 5.49	Very Satisfactory (VS)
3.5 – 5.49	3.5 – 5.49	2.5 – 3.59	2.5 – 4.49	Satisfactory (S)
1.5 – 3.49	1.5 – 3.49	1.5 – 2.49	1.5 – 2.49	Fair (F)
0 – 1.49	0 – 1.49	0 – 1.49	0 – 1.49	Poor (P)

Based on the results, noting details (skill 1) is the highest score obtained by the respondents with a mean of 4.89 described as satisfactory followed by recognizing cause and effect (skill 7) with a mean of 2.67. This indicates that the Senior High School students had a good performance in skill 1 and skill 7 based on their scores. This denotes further, that the majority of the respondents are good in finding specific information or noting details and recognizing cause and effect when they read.

However, the rest of the reading skills as clearly shown in table 1 show the low competency level of the students. Four of which were described as fair. These are making inferences (2.75); drawing conclusions (2.42); identifying main ideas (2.31) and sequencing or ordering events (2.08). Moreover, most of the respondents obtained the lowest score in identifying facts from opinions (1.21).

Same findings have found out by Imam (2014) when she conducted reading comprehension skills and performance in science among high school students in the Philippines. It was revealed in her study that the high school students got a low mastery level in four reading skills. One of which is drawing conclusions.

Accordingly, DepEd disclosed that a majority of the students had a low mastery level in reading comprehension skills with a Mean Percentage Score (MPS) of 47.37 which is equivalent to a failing mark (Imam, 2014).

It can be gleaned from the data that of the seven reading skills administered to the Senior High School students only two skills show the respondents' competency while five reading skills came out at least mastered competencies. This result is based on the student's performance in their reading skill test.

Inventory of the Reading Competencies

Table 2. Inventory of Reading Competency

Reading Skills	f		
	n=34	%	Rank
1 Noting Details	9	26.5	1.5
2 Identifying Main Ideas	0	0	7
3 Making Inferences	2	5.9	6

4	Identifying Facts from Opinions	4	11.8	5
5	Sequencing Ideas/Ordering Events	9	26.5	1.5
6	Drawing Conclusions	5	14.7	3.5
7	Recognizing Cause and Effect	5	14.7	3.5

Table 2 presents the inventory of reading competency (multiple response) of the faculty members in the Senior High School in the Technical-Vocational-Livelihood (TechVoc) track in the Agri-fishery strand. It clearly shows that noting details and sequencing ideas or ordering events ranked first as the most frequently used by the faculty members. This indicates that these reading skills are most developed as reading strategies employed by the nine faculty members teaching in the TechVoc track in their classes. Evidently, the data in table 1 show that there is a linked between the performance of the respondents in the reading skill test as they obtained the highest score in noting details to the reading skill frequently used by the faculty members of TechVoc track. This implied that there is strong significant relationship between the reading skill developed by the content teachers and the reading skill of the students. Noting details is a reading skill where specific information or answers can be found from the text.

According to Cekiso, (2012) recent studies on reading comprehension stressed that teachers at primary high school and tertiary institutions should use different reading strategies and should have knowledge on it as learners are exposed to huge volumes of reading material. As Cayubit (2012), singled out that those learners who use a wide range of reading strategies comprehend the texts. They read better than those who use limited reading strategies. This requires that teachers should help learners identify their reading strategies. This could be achieved by using reading skill inventories. Such inventories are likely to inform the teachers and learners as to which reading skills learners currently use. Having that information will assist the teachers in developing reading strategies instruction that focuses on reading skills that are new to the learners.

It can be noted from the above data that most of the performance of the respondents in the different reading skills as presented in table 1 can be linked with the reading skills used by the faculty members as shown in table 2. Obviously, the reading skills employed by the faculty members in the Senior High School may reflect the reading skills of the Senior High School students.

The result of the reading skill test revealed that the Senior High School students exhibited least mastered competencies in five reading skills. To address the least mastered reading skills that the students' needs the researcher developed more reading selections with comprehension questions in order to enhance the students' least mastered reading skills.

Development of Instructional Material

Based on the results of the reading skill test of the Senior High School students, an instructional material for Senior High School was developed. The instructional material was made with the concept of English for Academic Purposes (EAP). Most of the topics are anchored on the curriculum and learning competencies of Senior High School. It contains seven reading skills along noting details, identifying main ideas, making inferences, identifying facts from opinions, sequencing ideas or ordering events, forming conclusions, and recognizing cause and effect that will help students brush up their reading skills. Each skill contains selected various topics in agriculture focuses on crop production, horticulture, pest management, animal production, organic agriculture and other topics related to agriculture lifted from books, newspapers, magazines, and electronic sources. Topics are made into reading selections in different reading skills where agriculture students could amplify and develop their reading skills.

Moreover, the instructional material is a combination of content-based and a task-based and is patterned from the Hutchinson and Waters model.

Validity of the Instructional Material

Table 3. Face Validity of the Instructional Material

Indicators of Face Validity	M	D
General appearance	4.8	HP
Clarity of diction	4.6	TC

Legend:

<i>Rating Scale</i>	<i>Descriptive Rating</i>	<i>Rating Scale</i>	<i>Descriptive Rating</i>
4.50 - 5.00	Very Highly Presentable (HP)	4.50 – 5:00	Totally Clear (TC)
3.50 - 4.49	Very Presentable (P)	3.50 – 4.49	Very Clear (VC)
2.50 - 3.49	Moderately Presentable (MP)	2.50 - 3.49	Clear (C)
1.50 - 2.49	Fairly Valid (FV)	1.50 - 2.49	Fairly Clear (FC)
1.00 - 1.49	Not Presentable (NP)	1:00 - 1.49	Not Clear at All (NC)

Table 3 reveals the result of the evaluation of the instructional material with a mean rating of 4.8 in general appearance described as highly presentable and a mean of average weighted 4.6 in clarity of diction described as totally clear.

Table 4. Content Validity of the Instructional Material

Indicators of Content Validity	M	DR
Adequacy of topic	4.4	VA
Adequacy of items to elicit the appropriate response	4.4	VA
Consistency of objectives	5	VHC
Appropriateness of distracters	4.6	VHA
Congruency of the content to the syllabus	4.4	VC
Gradation and Organization	4.4	WO

<i>Legend:</i>	<i>Rating Scale</i>	<i>Descriptive Rating</i>
	4.50 - 5.00	Very Adequate (VA), Very Highly Consistent (VHC), Very Highly Appropriate (VHA), Very Highly Congruent (VHC) Very Organized (VO)
	3.50 - 4.49	Well Adequate (WA), Very Clear (VC), Very Appropriate (VA), Very Congruent (VC), Well Organized (WO)
	2.50 - 3.49	Moderately Adequate (MA), Moderately Clear (MC), Moderately Appropriate (MA), Moderately Congruent (MC), Moderately Organized (MO),
	1.50 - 2.49	Fairly Adequate (FA), Fairly Clear (FC), Fairly Appropriate (FA), Fairly Congruent (FC), Fairly Organized (FO)
	1.00 - 1.49	Inadequate (Inad)), Unclear (U), Inappropriate (Inap)Not (NC), Unorganized (Unorg)

The content validity of the instructional material is shown in Table 4. It presents the adequacy of topic and items to elicit the appropriate response of the instructional material with a mean of 4.4 described as very adequate. This means that topics in the instructional material are aligned to agriculture. The consistency of objectives is described as very highly consistent with a mean of 5 while the appropriateness of distracters is very highly consistent with a mean of 4.6. The congruency of the content of instructional material to the competency of the Senior High School with a mean of 4.4 described as very congruent rated by the evaluators. This is expected because the instructional material is aligned with the learning competency of the SHS in their core subjects specifically in English subjects. Moreover, the gradation and organization of the instructional material has a mean of 4.4 described as well-organized. The content of the instructional material is relevant for the Senior High School taking TechVoc track in the Agri-fishery strand.

In addition, the readability of the instructional material was tested using the FRY readability index. Three sample passages were subjected to the readability test. Fry readability test revealed that the reading level of the

developed instructional material is grade 10 and grade 12. It can be noted that the reading grade level of the instructional material is also suitable for grade 11 Senior High School students. Also, it can be said that the instructional material is readable based on FRY readability index.

Table 5. Summary of Validity of the Instructional Material

Indicators of Face Validity and Content Validity of the Instructional Material	M	DR
General appearance	4.8	HP
Clarity of diction	4.6	TC
Adequacy of topic	4.4	VA
Adequacy of items to elicit the appropriate response	4.4	VA
Consistency of objectives	5	VHC
Appropriateness of distracters	4.6	VHA
Congruency of the content to the syllabus	4.4	VC
Gradation and organization	4.4	WO

Conclusion

The aim of this paper was to examine the needs of the Senior High School students' reading competencies, to develop instructional material intended for Senior High School students and to determine the reading skills developed by the content teachers in the Senior High School.

Based on the findings of the study, the following conclusions were drawn:

1. The Senior High School students of Pangasinan State University in the TVL track in Agri-fishery strand lack mastery of reading skills. They excel only in noting details and recognizing cause and effect as it was revealed in the result of their reading skill test. Not all teachers in Senior High School in the TVL track of the Pangasinan State University use the seven reading skills used by the researcher during the inventory of reading skills. Noting details and sequencing ideas or ordering events are the most frequently used reading skills in their classes.
2. Content-based and task-based instructional material with the concept of EAP can be produced to address the students' reading skills.
3. The instructional material is valid and appropriate as to its face, content, and readability to use for Senior High School students taking TechVoc track in the Agri-fishery strand to augment their reading skill.

Recommendation

Since the study found strong evidence on the needs of the Senior High School students' reading competencies, instructional material, and inventory of reading competencies developed by content teachers, the following are recommended:

1. Students in the Senior High School should be exposed to all reading skills in various reading materials to hone their reading skills. Teachers in the Senior High School should employ all the reading skills as springboard in their subject taught to help improve and to develop the students' reading skills.
2. In order to help students improve their reading skills, a content-based and task-based instructional material with the concept of EAP should be developed, produced and used by the faculty members in the TechVoc track.
3. The developed instructional material should be used by the Senior High School students as well as the content teachers specifically on the Technical-Vocational- Livelihood (TechVoc) track.***

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