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Through Stem Activities in Community
Language Learning Method (CII)

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INVIGORATING SPEAKING CLASS ATMOSPHERE THROUGH STEM ACTIVITIES IN COMMUNITY LANGUAGE LEARNING (CLL) METHOD

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It is widely sounded that a speaking classroom is one of that creates a sense of fear, stress, nervousness in higher students. Lecturers are well aware that they can boost their students' foreign language learning by providing joyful, meaningful, real-world opportunities to practice their communication skills that lessens their fear and anxiety in speaking classroom. This qualitative study describes STEM activities in making the speaking learning environment that reduce the fear students experience in speaking classroom. For the lecturers who wish to create a more meaningful speaking environment to lessen the students anxiety and fear in speaking, the writer suggests providing some meaningful activities to encourage classroom atmosphere.

Key words: speaking class atmosphere, STEM activities, CLL

I. INTRODUCTION

Teachers today are being asked to think “outside of the box” in order to prepare their students for a career and a life that is largely unknown due to the warp speed changing needs and desires of society today and STEM Education focus on college and career readiness by mixing literacy across discipline, STEM literacy and 21st century skill [1].

Now we are living in the 21st century era and facing unprecedented challenges [2]. One of skill should be mastered by in 21st century is communication skill. The ability to present an idea clearly, lucidly and confidently is enormously valuable at every stage of students' lives, whatever the subjects they study; it will bring them success in academic work, job interviews and their future working life – it's the most transferable of all their skills, and a critical part of their professional development [3].

Speaking as one of communication skills is extremely needed in this era in order to be able to build a good relationship with other to survive in this volatile world. In many countries it is learned formally in the classroom. Yet, it is widely sounded that a speaking classroom is one of that creates a sense of fear, stress, nervousness in higher students. Most of students approach the course with fear and anxiety [4]. Additionally, the students tend to do the negative attitude during the class, such as falling asleep, fighting boredom, letting mind drift to other topics during class, paying attention to the phone during class, and getting caught up in an off-topic conversation with classmates [5]. As the result, such the situation will affect the classroom atmosphere.

Many factors such as motivation level, methods and materials used in the classroom, atmosphere of the setting where learners are taught, the amount of chances for practicing target language can be mentioned among the broad range of factors exerting influence on speaking skill [6]

Classroom atmosphere is closely associated with learning environment and it is seen as a major factor of classroom behavior and learning [7]. It has a great influence on learning and achievement [8]. Lecturers are well aware that they can boost their students' foreign language learning by providing joyful, meaningful, real-world opportunities to practice their communication skills that lessen students' fear and anxiety in speaking classroom. The joyful learning occurs when students put into practice “in the real world” what they have theorized about from behind a desk [9]. It is in line with [10] that there are some consideration in STEM education; project-based instruction and real-world setting within the project-based instruction environment.

The first challenge for teacher is to engage learners in the subject matter and content. Applying STEM activity can booster students creativity and create positive classroom atmosphere [11].

Thus, this paper sought to report some simple STEM activities found in *Community Language Learning* (CLL) Method in speaking class that lessen the students' boredom during learning in the classroom.

As it has been stated in the introductory part, that speaking skill in other language is strongly needed for connecting with other world nowadays. Nevertheless, foreign language speaking anxiety experienced by foreign language learners may contribute to their failure to learn the target language. Anxious foreign language learners are likely to think about evaluations from others and this condition may be worse when they are not able to control their behavior [12]. Anxious students are often concerned about the impressions that others form of them [13]. When such students are confronted in a classroom with a learning situation that makes them uncomfortable, they may choose to withdraw from the activity. Some learners believe they cannot perform in English and consequently form negative expectations, which

in turn lead to decreased effort and the avoidance of opportunities to enhance their communication skills.

The problem is the students' anxiety in showing up their English skill. Shy, worrying of mistakes and avoiding friends laugh become the biggest problem in teaching English. Sometimes we found students who just keep silent and do not want to showing up. There are also the students who can speak fluently alone but when speaking in front they got problem to focus. The problem of anxiety related to the psychological aspect [14].

Most people are in the dark and moreover, most educators and students are as well. When one hears the acronym "STEM" within an educational setting, they may think along the lines of stem cell research or something dealing with flowers [15]. The term STEM was first coined in 2001 by Judith Ramaley, the Assistant Director of the Education and Human Resources Directorate at the National Science Foundation, it referred to science, technology, engineering, and mathematics. STEM now has a broader meaning, including agriculture, environment, economics, education, computer science, and medicine [16]. However, STEM stands for Science, Technology, Engineering and Mathematics [17].

In language educational setting, an educator as well as students can take some profit from the technology. Integrating technology in teaching and learning practice is one ways STEM activities that trigger students to be active learners who learn important concepts through creative and innovative ways [18]. Through the integration of technology, a STEM learning activities creates the learning activities more fun and enjoyable for the students. It is in line with this statement that by including modern technology in the classroom support teachers to creates joyful learning [19]. Additionally, through technology, English Language Learning (ELL) students can become engaged, constructivist learners, and this type of learning lends itself especially well to STEM content [20].

A key benefit is that technology allows us to customize learning to fit each student's individual level and pace, and provide immediate feedback and assessment. Self-paced, online lessons allow ELLs—or any student—to repeat an activity as many times as needed to ensure understanding, or to accelerate learning if they master concepts more quickly than their peers [21].

Teacher should be able to find a better solution that can eliminate the students' obstacles dealing with their speaking problems. English teachers play important role in success of teaching and learning activity. They have to be able to trigger their students to speak up often during the class. Applying an appropriate teaching method in their teaching practices is extremely needed in order to make teaching and learning process in learning language so that the speaking activities would more enjoyable and meaningful. One of the innovative teaching methods that is able to reduce the students' anxiety during the teaching and learning process is Community Language Learning [22]. CLL is an effective learning method applied to language learning at the university

level especially for speaking class [23]. CLL can be used by lecturers to explain foreign or grammar terms in the class [24]. Meanwhile, Anderson & Chung [25], Abdullah [26], Damaik [27], Kongi [28] found that CLL increased interest, creativity, and student participation in the English speaking learning process.

Practically, the application of CLL method in speaking classroom follows stages that adapted from Curran's idea, there are three phases of activities done in this method as it is seen the following table.

TABLE I
CLL INSTRUCTION

Phase	Activities
Prepare	<ul style="list-style-type: none"> - Warming up - Engage to the material - Setting the class - Constructing some utterances related with the material - Teacher assist the students
Practice	<ul style="list-style-type: none"> - Record - Listen - Correct - Repeat
Product	<ul style="list-style-type: none"> - Note from the discussed material - Transcript of the recording

In planning the teaching sessions, there are some activities that is done by the teacher in the introducing phase. 1) Introducing the material to the student. 2) Activating the students' background knowledge. 3) Giving assistant to the students.

In practice stage, the students' activity was record. In this state the students were recording their utterances or speaking. Hence, before they record their voice, the students were allowed to ask the teacher about what they were going to utter in L1, then the teacher translated the utterances in the target language. The students uttered the utterance modeled by the teacher. The students then practiced in uttering the utterance many times. The purpose of this activity is to get the students fluency. It was supported by [29] said that repetition activity can help students' fluency. After they were sure about their pronunciation, their intonation, and they were confident enough to record their utterances, then they did recording. Only the target language was recorded using *Orai application*.

The second stage was listening. After the students recorded their speeches the device would take a few second to analyze students' speech. The device then would show the result and gave direct feedback to the students. The feedback covered pronunciation, tone, energy, filler as well as the clarity of the students' speech as well as the score of the speech. The result of the analysis of pronunciation can be seen in the transcribe sheet. When there was a blank sheet meant that the students produced incorrect pronunciation. The students' result of speaking energy was indicated by the graphic of energy. There were two colors in it; yellow color indicated that students' speaking was monotonous and purple color that was indicated the students' speck energy. The students' unuseful filler was also analyzed. At the end, students were able to get their scores of clarity. The students also got suggestion from the device. Due to the suggestions, the students then listened to their recording speech. In this stage the students would highlight their mistakes occurred.

Having reading the result or the analysis, the students might make some corrections dealing with the mispronunciation, the tone, the filler, or the energy suggested by the device. In this stage they discussed with their fellow or consulted to the teacher dealing with the error. By having discussion mean they were chanced to make communication within friend and the teacher to build a relationship between students-students and student-teacher. In stage the students practiced reading the correct speech.

The final stage was repeating. Once the students corrected their speech, they might do some repetitions in practicing the speech through the recording. As the score increased and they felt comfort with the score they might submit the score to the teacher together with the transcription of the text.

II. RESEARCH METHODOLOGY

A. Purpose of the study

The purpose of this study is to report a simple STEM activity found in *Community Language Learning (CLL)* Method in speaking class that lessen the students' boredom during learning in the classroom. So, the findings could offer guidelines for teachers to create joyful and stimulating learning environment especially in speaking class.

B. Research Design

This research applied qualitative research design through content analysis. The participant of this study was the second semester students of English Education Study Program in the Academic Year 2016/2017. The instrument used [30] strategy in applying STEM activity in the speaking class; project-based instruction and real-world setting within the project-based instruction environment. The data were gathered from lesson plan and students' project result.

III. RESULT AND DISCUSSION

There is so much to share about STEM activities in teaching and learning that words would fall short of. However the main inferences from the observations have been placed under the evaluation of Project-Based Learning.

Aim

PBL is a method in which the students are learning through a project that is decided by themselves with the help from teachers so that they can be actively engaged in the learning process [31]. The purpose of PBL is to foster students' abilities for life-long learning through contextualizing learning by presenting them with problems to solve and/or artifacts to create; in doing so, students' motivation and enthusiasm, their problem-solving abilities, research skills, sense of collaborations, resource management skills, longing for communication and information sharing, and language use awareness are progressively evident, and more important, such a process of engaging in various levels of projects may

turn their life experiences to advantage [32]. Through PBL, students will experience much more meaningful and interesting learning where they should accomplish the assigned project [33].

Procedures

The procedures in conducting the project was adopting ten steps proposed by [34] as follows:

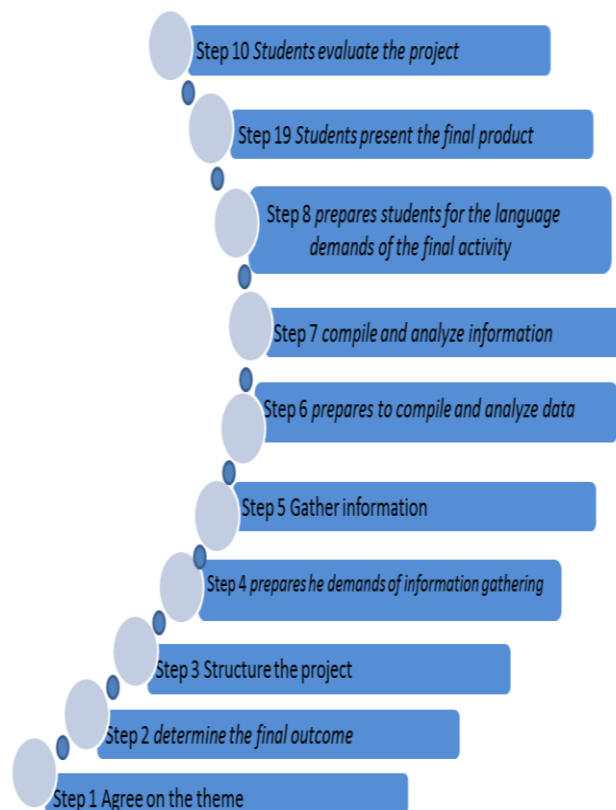


Figure 1. Steps in Conducting PBL

The brief description is as follows:

Step 1: Students and teacher agree on a theme for the project

At this step, the students and teacher reach a consensus on a project theme. The projects range from structured, semi-structured, to unstructured in terms of the degree to which the teacher defines the project; the teacher therefore should work out the ways in which students can develop some sense of ownership toward the project.

Step 2: Students and teacher determine the final outcome of the project

The students and teacher come to a decision about the final outcome of the project, e.g., bulletin board display, written report, debate, brochure, letter, handbook, oral presentation, video, multimedia presentation, and theatrical performance. They also negotiate the most appropriate

audience for their projects, e.g., classmates, other students, parents, program director, a local business.

Step 3: Students and teacher structure the project

After the theme and final outcome of the project are defined, the students and teacher figure out project details that guide students from the opening activity to the completion of the project. At this step, students consider their roles, responsibilities, and collaborative work groups. After negotiating a deadline for project completion, students arrange the timing for gathering, sharing, and compiling information, and then presenting their final project.

Step 4: Teacher prepares students for the demands of information gathering

The language, skill, and strategy demands associated with information gathering should be provided. As the teacher is aware of student ability levels, (s) he prepares instructional activities for each of the information-gathering tasks. Take English students for example, if they will be conducting interviews to gather information, the teacher may plan activities in which students have to form questions, ask follow-up questions, request clarification, and take notes. If they are expected to write business letters in English, the teacher might review the format and language of formal letters. If they intend to conduct an Internet search, the teacher may review search procedures, how to evaluate an official website, and introduce useful note-taking strategies.

Step 5: Students gather information

After practicing the skills, strategies, and language needed for gathering information, the students can readily collect information using methods such as interviewing, questionnaire, letter writing, and library searches. Whenever possible, the teacher provides relevant content resources to get students started on their information search.

Step 6: Teacher prepares students to compile and analyze data

At this step, the teacher should help the students master the language, skills, and strategies needed to compile, analyze, and synthesize the information that they have collected from different sources. The instruction for the teacher depends on the types of information collected and the ways in which it was collected, e.g., taped interviews, brochures received in response to solicitation letters, library research, and note-taking).

Step 7: Students compile and analyze information

The students compile and analyze the gathered information. They work in groups, organize information and then discuss the value of the data that they have collected, keeping some and discarding others. They have to identify information that is critical for the completion of their projects.

Step 8: Teacher prepares students for the language demands of the final activity

The teacher designs language-improvement activities to help students successfully present the final outcome of the project. The activities may focus on skills for successful oral presentations, effective written revisions and editing, persuasive debates, and others. The students should focus on form at this point.

Step 9: Students present the final product

The students present the final outcome of their projects, as planned in Step 2.

Step 10: Students evaluate the project

The students reflect on the language mastered and the subject matter acquired during the project. They are also asked to make recommendations that can be used to enhance similar projects in the future. The teachers provide students with feedback on their language and content learning.

IV. CONCLUSION

The aim of this paper is to report a simple STEM activities applied in classroom speaking by using CLL method. The term STEM was first coined in 2001 by Judith Ramaley, the Assistant Director of the Education and Human Resources Directorate at the National Science Foundation, it referred to science, technology, engineering, and mathematics. STEM now has a broader meaning, including agriculture, environment, economics, education, computer science, and medicine. STEM stands for Science, Technology, Engineering and Mathematics.

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Classroom atmosphere is closely associated with learning environment and it is seen as a major factor of classroom behavior and learning. It has a great influence on learning and achievement. Lecturers are well aware that they can boost their students' foreign language learning by providing joyful, meaningful, real-world opportunities to practice their communication skills that lessen students' fear and anxiety in speaking classroom. The joyful learning occurs when students put into practice "in the real world" what they have theorized about from behind a desk. It is in line with that there are some consideration in STEM education; project-based instruction and real-world setting within the project-based instruction environment.

Regarding to STEM activity, during the observation that I have done in teaching and learning speaking I noticed that the activities that I gave to students during the implementation of CLL method were represented the STEM activity. One of them that I applied was Project Based Learning (PBL).

A teacher has challenges; activate the students since there are always students who are not at all motivated. The teacher's role as a facilitator and councilors includes planning such task and exercises, which take into consideration the aims of teaching, the structure of the group and the communicative atmosphere. Creating a positive learning environment enhance learning and the sessions should include exercise which give the students enough responsibility and freedom. The method used include per assisted learning, client-counselor based seen effective in speaking class.

By creating a joyful learning atmosphere, teacher can motivate the students to be active participate in the teaching process. Based on the observation on the implementation of PBL the speaking class atmosphere changed. The students more active and more creative in doing the task. PBL really help the students to overcome the boredom of teaching and learning conducted in the classroom.

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