Multidisciplinary Approach and Academic Performance of Grade 11 Students

[1]Isabelita P. Alibagon, [2]Cynthia D. Dilag

[2]EdD
[1,2]Iloilo City, Philippines

Abstract: **This research paper looked into the effects of multidisciplinary approach such as cooperative learning, inquiry-based and scaffolding on the academic performance of the forty (40) Grade 11 students taking Understanding Culture, Society, and Politics enrolled in the first semester of School Year 2016–2017 at Bancal National High School. It made use of both qualitative and quantitative data. On the qualitative side, it probed into the realizations and feelings of the students enrolled in the course. These revealed by the students through journal writing, focus group discussion and interview for triangulation and analysis. Moreover, the six phases of Braun and Clarke's thematic analysis were the bases for the analysis of the qualitative data. The results showed that the Grade 11 students had the following experiences using multidisciplinary approach: (1) lessons were easily understood, (2) developed critical thinking, (3) promoted positive behavior, social skills, and time management, (4) activities were challenging yet enjoyable, (5) stimulated learning through researches and investigations, (6) developed group dynamics. On the quantitative side, t-test was the statistical tool used in determining student's academic achievements through the Statistical Package for Social Sciences (SPSS) Software. The statistical data showed that the academic performance of Grade 11 students in the pre-test was "Poor" which signified the low performance in Understanding Culture, Society, and Politics. On the other hand, the Grade 11 students achieved "Very Good" after multidisciplinary approach was utilized which means that there was an improvement in the academic performance of students taking the course. Furthermore, no significant difference was noted in the level of performance of the students before and after the intervention.**

Keywords: **Multidisciplinary Approach, Academic Performance, Grade 11 Students, K to 12.**

1. INTRODUCTION

Background of the Study:

Students' performance is primarily dependent on the teaching strategies and methods devised by the teacher. The teacher is more and more accountable for students' academic achievement. Thus, the institution's success that is hinged on the Vision, Mission, and Core Values of the Department of Education, is actualized.

Understanding Culture, Society, and Politics is one of the Core Subjects in the Senior High School commencing in School Year 2016-2017 with the first batch of Grade 11 of the K to 12 Program implemented through Republic Act 10533 otherwise known as the Enhanced Basic Education Act of 2013. Students are smart in different ways and have different learning approaches; thus, the student-centered approach becomes a necessity to account for different learning styles in the classroom (Hudson 2009). Regarding learners' minds as complex systems with heterogeneous natures helps us better understand the constructivist perspectives of learning, implement a student-centered model of instruction and appreciate differentiated curriculum, instruction and assessment paradigms (Klein 2003).

Constructivism as a learning theory, simply speaking, is to make learning meaningful. The core constructivist perspectives are as follows: (a) learning is a self-directed process—knowledge is constructed rather than directly received; (b) instructor as facilitator; (c) learning as a socio-cultural process (Tobin and Tippins 1993). It has long been argued that a constructivist approach is essential for the development of skills and abilities.

Page | 183

In the Philippines, curriculum developers keep on brainstorming on pedagogical methodologies to make schooling interesting and productive. Nevertheless, researchers have observed that educational reforms have failed and students have habitually become lax in their studies (Virola, 2007). This is heightened by the teachers' comments that underscore how stressful it is to motivate students to perform better in school. On the other hand, amidst these efforts to improve academic competence in the field of education in our country, there has been no study yet conducted on Multidisciplinary approach presumably especially on its impact on the cognitive and behavioral aspects among Filipino learners.

This study is anchored on the concept of cooperative learning, inquiry-based learning, and scaffolding, the main features of the theory Zone of Proximal Development (ZPD) by Vygotsky. Multidisciplinary is a competent assistance or support in learning performance of the Grade 11 students in Understanding Culture, Society, and Politics, usually provided through mediation of the environment by a parent or teacher, by which cognitive, socio-emotional, and behavioral forms of development can occur. This approach is an excellent and key technique for stimulating cognitive development of the students in the subject. The main element in many programs designed to facilitate early cognitive development is teaching parents to respond to their infants and young children in ways that provide scaffolding for the children. Teachers using multidisciplinary approach can respond not only to the developed and developing cognitive abilities of students of Grade 11 students but also to their developed and developing socio-emotional needs and behavior repertoire such as social skills and learning. Multidisciplinary approach is a crucial part in planning intervention, action taken to improve a child's cognitive, socio-emotional, or behavioral development. It requires parents to provide carefully designed guidance. Applying this theory to the present study will enable the researcher to give a clear presentation of the conceptual framework.

Based on this theory, the best method or approach to offer students' needs are the strategies of cooperative learning, inquiry-based, and scaffolding. Through this approach, teachers will be able to internalize how students process their learning behavior to improve their performance. On the part of the teachers, their practices in motivating students and presenting the lessons are qualities that will help develop the interest of students in learning their lessons. Classroom management which includes routine and discipline can also be observed and internalized so that there will be less problems that will disrupt the smooth flowing of lessons especially if important concepts are explained and analytical thinking preoccupies the attention of students. From these strategies, teachers try to reach the optimum development of students. Scaffolding will enable the observers to ask for competent assistance or support of the outstanding teachers so that they will be able to get the best guidance on how to improve their teaching performance and how to develop the potentials of students.

On the other hand, this study is also supported by Constructivism that is basically a theory -- based on observation and scientific study -- about how people learn. It says that people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences (Tobin and Tippins, 1993). When we encounter something new, we have to reconcile it with our previous ideas and experience, maybe changing what we believe, or maybe discarding the new information as irrelevant. In any case, we are active creators of our own knowledge. To do this, we must ask questions, explore, and assess what we know.

In the classroom, the constructivist view of learning can point towards a number of different teaching strategies. In the most general sense, it usually means encouraging students to use active techniques (experiments, real-world problem solving) to create more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing. The teacher makes sure she understands the students' pre-existing conceptions, and guides the activity to address them and then build on them.

Constructivist teachers encourage students to constantly assess how the activity is helping them gain understanding. By questioning themselves and their strategies, students in the constructivist classroom ideally become "expert learners." This gives them ever-broadening tools to keep learning. With a well-planned classroom environment, the students learn "how to learn." One might look at it as a spiral. When they continuously reflect on their experiences, students find their ideas gaining in complexity and power, and they develop increasingly strong abilities to integrate new information. One of the teacher's main role is to encourage this learning and reflection process. For example, groups of students in Understanding Culture, Society, and Politics class are discussing a problem related to the subject. Though the teacher knows the "answer" to the problem, she focuses on helping students restate their questions in useful ways. She prompts each student to reflect on and examine his or her current knowledge. When one of the students comes up with the relevant concept, the

teacher seizes upon it, and indicates to the group that this might be a fruitful avenue for them to explore. They design and perform relevant experiments. Afterward, the students and teacher talk about what they have learned, and how their observations helped (or did not help) them to better understand the concept.

Contrary to criticisms by some (conservative or traditional) educators, constructivism does not dismiss the active role of the teacher or the value of expert knowledge. Constructivism modifies that role, so that teachers help students to construct knowledge rather than to reproduce a series of facts. The constructivist teacher provides tools such as problem-solving and inquiry-based learning activities with which students formulate and test their ideas, draw conclusions and inferences, and pool and convey their knowledge in a collaborative learning environment.

Constructivism transforms the student from a passive recipient of information to an active participant in the learning process. Always guided by the teacher, students construct their knowledge actively rather than just mechanically ingesting knowledge from the teacher or the textbook.Constructivism is also often misconstrued as a learning theory that compels students to "reinvent the wheel." In fact, constructivism taps into and triggers the student's innate curiosity about the world and how things work. Students do not reinvent the wheel but, rather, attempt to understand how it turns, how it functions.

This study conceptualizes the multidisciplinary approach utilized by the researcher to improve academic performance, and thus, it is the independent variable, the pre-test and post test are the intervening variables, the dependent variable has something to explain the level of academic performance of Grade 11 students in Understanding Culture, Society and Politics.
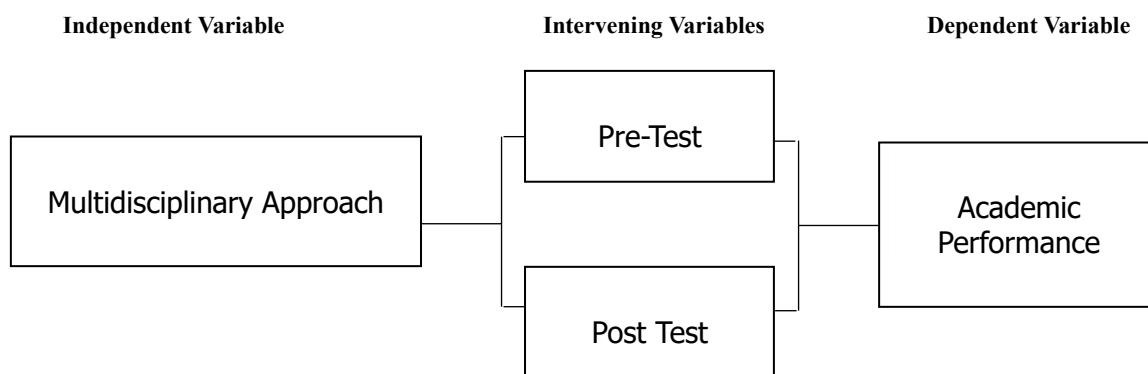
Figure 1: Schematic diagram of the Study.

Statement of the Problem:

The study aimed to determine the experiences and the level of academic performance of Grade 11 students in Understanding Culture, Society, and Politics utilizing multidisciplinary approach at Bancal National High School, during the First Semester, School Year 2016-2017.

Specifically, this study sought answers to the following questions:

1. What is the pre-test performance of the Grade 11 students in Understanding Culture, Society, and Politics before using the multidisciplinary approach?

2. What is the post test performance of the Grade 11 students in Understanding Culture, Society, and Politics using multidisciplinary approach?

3. Is there a significant difference in the pre-test performance and post test performance of Grade 11 students in Understanding Culture, Society, and Politics using multidisciplinary approach?

4. What are the experiences of the Grade 11 students in Understanding Culture, Society, and Politics in using multidisciplinary approach?

In view of the aforementioned problems, the study advanced the null hypothesis:

1. There is no significant difference in the Grade 11 students' pre-test performance and post test performance in Understanding Culture, Society, and Politics using multidisciplinary approach.

Significance of the Study:

The result of the study will be beneficial to the following: **Students**. As the beneficiaries of learning, they will benefit so much from the result of the study. They can be able to reach their highest potentials in terms of their academic performance, behavior and study habits once the study is proven to have favorable results. This could likewise encourage other students from other schools to observe good social and learning behavior so that they too, can improve their achievement in school.

School Administrators and Principals. They will benefit much from the result of the study, which will be an excellent guide to those who manage schools most especially that they have the command when it comes to innovations as well as programs and projects of the school. The school administrators or principals can give incentives to the facilitator if students attain high performance in academic endeavors.

Teachers. They will be helped to become more successful in the accomplishment of their duties as facilitators of learning. Through the positive effect of multidisciplinary approach on the cognitive and behavioral aspects of the students, it would be much easier for the teachers to facilitate learning among the students if the latter's potential to learn is maximized.

Curriculum Developers. They will encourage DepEd teachers to closely monitor the behavioral aspects of students, just like in any other schools in the countries abroad.

Parents. They may be freed from all academic concerns or problems of their children given the positive impact of multidisciplinary approach on the cognitive and behavioral aspects. They can instead focus on other aspects that will help their children achieve more.

Researcher. She will be able to observe and satisfy her curiosity on the impact of multidisciplinary approach on the cognitive and behavioral aspects of the Senior High School - Grade 11 students. Furthermore, she can verify the results and venture into more researches related to the same field with improved methodologies.

Future Researchers. They will expand their horizon about the positive effects of multidisciplinary approach on the academic achievement of the students. Moreover, they can use the results of the study as a stepping stone or related literature for further studies which can effect change in social, learning behaviors and educational endeavors.

Definition of Terms:

For the purpose of clarity and better understanding, the following concepts are defined conceptually and operationally:

Understanding Culture, Society, and Politics is a core subject in the Senior High School which uses insights from Anthropology, Political Science, and Sociology to develop students' awareness of cultural, social and political dynamics, and sensitivity to cultural diversity; provide them with an understanding of how culture, human agency, society and politics work; and engage them in the examination of the country's current human development goals. At the end of the course, students should acquire ideas about human cultures, human agency, society and politics; recognize cultural relativism and social inclusiveness to overcome prejudices; and develop social and cultural competence to guide their interactions with groups, communities, networks, and institutions (Department of Education, 2015).

In this study, it refers to the course where multidisciplinary approach is applied with the students.

Multidisciplinary Approach involves drawing appropriately from multiple disciplines to redefine problems outside normal boundaries and reach solutions based on a new understanding of complex situations (Wikipedia, 2016).

In this study, it refers to the method employed by the researcher to observe the academic performance of the Grade 11 students namely Cooperative Learning, Inquiry-based learning, and Scaffolding.

Cognitive aspects feature relating to or involving conscious mental activities such as thinking, understanding, learning and remembering (Merriam-Webster Dictionary, 2015).

In this study, it refers to the same mental functions or brain-based skills of the participants in the study. Furthermore, it refers to the participants' scores in Understanding Culture, Society, and Politics performance test and abstract reasoning. It is also one of the tools being observed by the teacher as participant in the study.

Cooperative learning is a teaching strategy design for helping students attain high academic standards through group work (Kagan, S. 1992).

In this study, it refers to the structures and activities used in the classroom where students work together to earn and share information.

Inquiry-Based Learning is defined as a seeking for truth, information or knowledge seeking information by questioning.

In this study, inquiry-based learning refers to the involvement of students in learning, processing skills and attitudes that permit him/her to seek resolutions to questions while constructing new knowledge.

Scaffolding is the process of "ensuring that what a student learns, how he/ she learns it, and how the student demonstrates what he/ she has learned is a match for that student's readiness level, interests, and preferred mode of learning (Dilag, C., 2010).

In this study, it refers to the intent of assisting students in Grade 11 in Understanding Culture, Society, and Politics in the learning process.

Understanding Culture, Society, and Politics Performance is the student's Understanding Culture, Society, and Politics academic success or how well a student meets standards on the pre-test and post test.

In the study, Understanding Culture, Society, and Politics performance refers to the scores of the students in Understanding Culture, Society, and Politics pre-test and post test at the end of the two-month study. This is true to the students in participatory observation.

Senior High School Students (SHS) covers the last two years of the K to 12 program and includes Grades 11 and 12. In SHS, students will go through a core curriculum and subjects under a track of their choice (Department of Education, 2015).

In this study, it refers to the forty (40) participants from the Grade 11 – Athena of Bancal National High School, Alimodian, Iloilo, who are the respondents of the study.

Delimitation of the Study

The study focused on the experiences and the level of academic performance of Grade 11 Understanding Culture, Society, and Politics students utilizing multidisciplinary approach.

The participants of this study were forty (40) Grade 11 - Athena students in Understanding Culture, Society, and Politics of Bancal National High School during the First Semester of School Year 2016–2017.

The instruments used were researcher-made paper and pencil test based on the table of specifications and guide questions. A triangulation process was utilized in the generation of the qualitative aspect of the study to validate the quantitative aspect of the study. The process includes journal writing, focused group discussion and interview on the experiences of students using multidisciplinary approach in Understanding Culture, Society, and Politics.

The statistical tools used in determining the description, and differences and relationships of the academic performance of the Grade 11 students were the frequency, percentage, means, standard deviation, t-test and Pearson's r set at .05 alpha level. All statistical computations were processed through the Statistical Package for the Social Sciences (SPSS) software.

2. REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents the related literature and studies after the thorough and in-depth search done by the researcher. This will also present the synthesis of the art, theoretical and conceptual framework to fully understand the research done and lastly the definition of terms for better comprehension of the study.

Compared to earlier intelligence theories, contemporary theories of intelligence, such as Gardner's Multiple Intelligences (MI) theory (1983) and Sternberg's theory (1999), put more emphasis on delineating different intelligence components. Although different theories have different taxonomies, they usually describe human intelligence on cognitive, metacognitive, affective and sociocultural dimensions. Gardner's multiple intelligences theory (Gardner 1983) has had an impact on education around the world. The eight major intelligences (logical-mathematical, linguistic, visual-spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalist) have been shaping the curriculum, pedagogy and

assessment in many ways over the last two decades (Armstrong 2009). Students are smart in different ways and have different learning approaches; thus, the student-centered approach becomes a necessity to account for different learning styles in the classroom (Hudson 2009). Regarding learners' minds as complex systems with heterogeneous natures helps us better understand the constructivist perspectives of learning, implement a student-centered model of instruction and appreciate differentiated curriculum, instruction and assessment paradigms (Klein 2003). A review of the curriculum guidelines and objectives of a variety of education systems shows the increasing popularity of the multiple intelligences theory. Accounting for individual differences has been integrated into the curriculum, pedagogy and assessment principles of some educational systems (for example, British Columbia's Ministry of Education 2002; Curriculum Development Council 2002; Ministry of Education, Singapore). Compared to the past, abilities and skills aligned with those intelligences, including both traditionally important ones and emerging ones, have been more clearly delineated in the curriculum, pedagogy and assessment. For example, critical thinking skills, creative-thinking skills, communication skills and metacognitive ability have been emphasized in different content areas at different learning stages in both Western and Asian educational systems (for example, Li 2010).

Constructivism as a learning theory attributed to Jean Piaget, simply speaking, is to make learning meaningful. The core constructivist perspectives are as follows: (a) learning is a self-directed process—knowledge is constructed rather than directly received; (b) instructor as facilitator; (c) learning as a sociocultural process (Tobin and Tippins, 1993). It has long been argued that a constructivist approach is essential for the development of skills and abilities.

Tobin and Tippins (1993) consider constructivism as a set of beliefs about knowing and knowledge that can be used to analyze the learning potential of any situation. In this way, it becomes a tool for critical reflection, a referent for deciding whether teacher and learner roles are likely to be more productive in given situations. Constructivism provides a different way of thinking about education.

COOPERATIVE LEARNING:

Constantopoulos (1994:251) and Northern Province Department of Education (2001:18) define cooperative learning as a concept based on group work in which the learners are responsible for others' learning as well as their own learning. A major feature of cooperative learning is that it involves learner-to-learner interaction in the process of fostering successful learning. Cooperative learning methods since its inception, many cooperative methods have been developed. These methods have been implemented and researched within the science classroom. Many methods of cooperative learning have been developed, including the Jigsaw method founded by Aronson, Stephan, Sikes Blaney in 1978; Group Investigation method founded by Sharan and Hertz-Lazarowitz in 1980; Learning Together method founded by Johnson in 1975; Student Teams Achievement Division (STAD) method founded by De Vries and Slavin in 1978; and Teams Games Tournaments (TGT) method founded by Slavin and Lazarowitz. Initially the main goals of cooperative methods were to facilitate positive ethnic relation and increase academic achievement in heterogeneous classrooms. Current Status of use in South Africa There has been an increased reference to cooperative learning in both the literature and government documents since the implementation of Curriculum 2005 in South Africa. One of the major underlying philosophies of Curriculum 2005 is Outcomes-Based Education (OBE). Teaching in the new curriculum therefore places a great emphasis on the achievement of learning outcomes. Almost in all references to cooperative learning in official education documents, cooperative learning is believed to help in the acquisition of learning outcomes. Since the implementation of Curriculum 2005 in 1998 (Northern Province Department of Education 2001:5), several schools were selected by the department of education for intense support in the testing of the implementation of the curriculum. These schools are often referred to as "pilot schools". Teachers in pilot schools are given in-service training (INSET) which focus, among others, on the use of cooperative learning in the classroom. It is expected therefore that at a minimum, all pilot schools in South Africa should be capable of teaching using cooperative learning as one of the teaching strategies. Importance of Cooperative Learning. According to Roth and Roychoudhury (1993:143), cooperative learning is the convenient way to support the construction of individual knowledge of the members in a variety of ways. When learners are required to explain, elaborate, or defend their position, they construct a deep understanding because they have to evaluate, integrate, and elaborate upon their existing 10 knowledge. Learning through cooperative problem solving gives rise to insights and solutions that would not come about without them. This view is supported by Hertz-Lazarowitz, Baird and Lazarowitz (1994:70) and Wise (1996:338), when they indicate that cooperative learning creates a classroom learning environment which contributes to the positive perception pupils have towards social and cognitive aspects of the learning process, since learners are able to make more friends and practice more helping behavior. They hold that cooperative learning

creates a classroom environment in which learners listen to each other, develop love for peers, exchange ideas and be on task most of the time. Learners learn to cooperate and cooperate to learn. They also come to feel for their classmates. Communication abilities of listening and questioning as well as the learners' polite interaction are improved. Since cooperative learning requires learners to be both physically and mentally engaged, it makes them to construct knowledge. Principles of cooperative learning: Principles of cooperative learning as outlined by the Northern Province Department of Education (2001:20) includes the classroom organization and the learner skills. Classroom organization is the conditions that the educator must create like positive interdependence, face-to-face interactions, individual and group accountability. Learner skills refer to the participation skills for effective contribution to the cooperative learning environment. They include small group social interaction and group processing which involves careful listening, initiating, gatekeeping and evaluating. Since learning occurs in the social context, knowledge is co-constructed with others. The following condition, which should be considered during cooperative learning are, summarized by the Northern Province Department of Education (2001:18): No member should dominate by doing all or most of the talking and work; each member should contribute a fair share to the workload; the group should stick to the given task; the group should keep the task moving. According to Mashile (2002: 73), the diverse methods found in cooperative learning imply that each method will have characteristics peculiar to the method. However, the following elements are essential for the successful implementation of cooperative learning. 1. Teachers must have a clear set of specific learning outcome objectives. 2. Students must, in turn, accept such objectives as their own. 3. Positive interdependence: a feeling of "sink or swim together" must be created, so that each student learns the assigned content and abilities and makes sure that all of his or her group mates also master the same content and abilities. There are several ways of achieving positive interdependence. You can establish mutual goals for the group; a division of labor for a mutual task; dividing materials, resources, or information so group members will have to cooperate to achieve their task; assign students different roles such as recorder, researcher, organizer, et cetera; or joint rewards for the group can be given. 4. Face to face interaction is required so that students discuss what they are studying; clarify and explain the content and procedures they are to learn; critique one another's ideas and performances and provide appropriate feedback, support, assistance and encouragement. 5. Each student is held individually accountable for doing his or her own share of the work and for knowing what the outcome of the learning activity is. Cooperative learning is not having one person does a report for two or three people. The aim is for all students to learn the material. In order to accomplish this, it is necessary to determine the level of mastery of students and then assign groups to maximize achievement. 6. Public recognition and rewards for group academic success. If group effort is not rewarded, students will not collaborate in the group. They will continue to work independently, thus, lose the benefits of social learning. 7. Teachers should organize the three-, four-, or five-member small groups so that as much as possible students are grouped homogenously according to academic abilities, ethnic backgrounds, race, socioeconomic levels and gender. 8. In their groups, students need to engage in interaction abilities such as leadership, compromise, negotiation and clarifying to complete their tasks. To achieve this, they must use behavior and attitudes like leadership; trust building, communication, conflict management, constructive criticism and encouragement. Note that these activities are not innate within students and thus need to be taught. 9. Post group reflection (debriefing) about group processes. Students must spend time discussing group maintenance, social and group processing behavior and particular behavior and attitudes that promoted or prevented the group's and individual member's success. 10. Sufficient time for learning is required; otherwise the benefits of cooperative learning will be limited.

Other studies have examined a variety of factors that might interact with achievement gain in cooperative learning. Okebukola (1986) and Wheeler & Ryan (1973) found that students who preferred cooperative learning learned more in cooperative methods than those who preferred competition. Chambers & Abrami (1991) found that students on successful teams learned more than those on less successful teams.

INQUIRY-BASED LEARNING:

A growing body of research suggests that models of education designed to meet the needs of the industrial past are inadequate for the myriad challenges and opportunities facing 21st century students (Alberta Education, 2010; Barron & Darling-Hammond, 2008; Friesen & Jardine, 2009; Perkins, 2009). New educational environments require different ways of designing learning experiences for students as well as new approaches to teaching and assessment. The call for educational reform away from passive transmission-based learning and the imparting of discrete skills and processes is not new. Institutions of education around the world are reconsidering some of their most deeply-held assumptions about how they conceptualize learning and to what end education should be directed.

A diverse and wide body of research suggests that inquiry-based approaches to learning positively impact students' ability to understand core concepts and procedures. Inquiry also creates a more engaging learning environment. As outlined by the Galileo Educational Network (2008) rubric to guide inquiry and supported by a large body of research, a constellation of processes need to be in place to maximize the impact of inquiry-based education. These elements include scaffolding activities, formative feedback loops, and the adoption of powerful questioning strategies to guide the learning process.

SCAFFOLDING:

The concept of scaffolding has received a great deal of attention in educational research over the past few decades. An abundance of research on scaffolding in different contexts is thus the result. Scaffolding highlights one of the key aspects of children's learning, namely that it is often "guided by others" (Stone, 1998). Scaffolding is typically associated with the socio-cultural theory of Vygotsky. Wood et al. (1976) adopted the scaffolding metaphor to explain the role that adults can play in joint problem-solving activities with children. Borrowed from the field of construction, where a scaffold is a temporary structure erected to help with the building or modification of another structure, the use of scaffolding as a metaphor within the domain of learning refers to the temporary support provided for the completion of a task that learners otherwise might not be able to complete. This support can be provided in a variety of manners that for example includes modeling and the posing of questions for different subjects (e.g., science, social studies) at different ages. Stone (1993) described a Vygotskian-inspired analysis of scaffolding. According to Vygotsky, learning first takes place on a social (intermental) level before it takes place on an individual (intramental) level. In Stone's view, the student is not a passive participant in teacher–student interaction but scaffolding is seen as a fluid, interpersonal process in which both participants are active participants. Both participants actively build common understanding or intersubjectivity through communicative exchanges in which the student learns from the perspective of the more knowledgeable other. Because scaffolding is such a dynamic intervention finely tuned to the learner's ongoing progress, the support given by the teacher during scaffolding strongly depends upon the characteristics of the situation like the type of task (e.g., well-structured versus ill-structured) and the responses of the student. Therefore, scaffolding does never look the same in different situations and it is not a technique that can be applied in every situation in the same way. Cazden (1979) related Vygotsky's Zone of Proximal Development (ZPD) early on to scaffolding and suggested that the metaphor be expanded from the domain of parent–child interactions to teacher–student interactions. The ZPD is characterized by Vygotsky (1978) as: "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers". More recently, some authors have argued that the concept of scaffolding has been applied too broadly in educational and psychological research. Pea (2004) even claimed that "the concept of scaffolding has become so broad in its meanings in the field of educational research and the learning sciences that it has become unclear in its significance." Puntambekar and Hübscher (2005) similarly contend that "the scaffolding construct is increasingly being used synonymously with support." In the frequently cited work of Stone (1998), the utility of the scaffolding metaphor is critically considered. Stone concludes that, in many studies, the metaphor has been removed from its original theoretical context and that this has led to the use of scaffolding as a teacher initiated, directive instructional strategy that is actually in conflict with the more responsive socio-historical background for the metaphor. Nevertheless, Stone argues in favor of salvaging the scaffolding metaphor without losing sight of its theoretical background in which the student is seen as an active participant. To stay close to this idea of scaffolding, the focus of this review lies on scaffolding in face-to-face interactions (and in particular teacher–student interactions). Stone (1998) discussed several studies on scaffolding on teacher–child interactions in which scaffolding was found to be effective. However, these studies were largely observational (e.g., Cazden 1979; Langer and Applebee 1986; Englert 1992; Fleer 1992). Virtually no (quasi-) experimental studies were found, and different definitions of scaffolding were used across the several studies. An exception is the work of Palincsar and Brown (1984) and Palincsar (1986, 1991) in which scaffolding is systematically examined via both single-subject and comparative group designs and found to be effective in the context of Reciprocal Teaching. Although scaffolding has continued to be a frequently studied concept since 1998, no systematic review of the literature on scaffolding in teacher–student interaction has been performed since then. The goal of this review is therefore to provide an overview of research on scaffolding in the classroom of the last decade, particularly with regard to its conceptualization, appearances, and effectiveness.

The majority of the theoretical studies focus on the conceptualization or the metaphor of scaffolding. Scaffolding appears to be most fully developed in the field of literacy (Clark and Graves 2005; Pardo 2004; Smith 2006). Clark and Graves

(2005) provide an overview of several instructional frameworks on literacy (text comprehension) that includes the idea of scaffolding such as Reciprocal Teaching, the Scaffolded Reading Experience, and Direct Explanation of Comprehension Strategies. Clark and Graves (2005) and Pardo (2004) also implemented the useful Gradual Release of Responsibility Model (Pearson and Gallagher, 1983) that involves three phases, namely: (1) teacher responsibility, (2) joint responsibility, and (3) student responsibility. Some authors describe the application of the concept of scaffolding to other areas such as moral development education (Turner and Berkowitz, 2005) and the value aspects of motivation in education (Brophy 1999). Most empirical studies are small-scaled, descriptive studies with or without an intervention. The majority of these studies focus again on literacy, followed by math and science. One-to-one interactions are studied the least, whole-class and small-group interactions to a greater but similar extent. A small amount of studies investigate the effectiveness of scaffolding.

Although there is widespread disagreement in the field as to what constitutes a scaffolding activity, in general it involves tools, strategies, and guides to support students in gaining levels of achievement that would not be otherwise possible. Simons and Klein (2006) argued that an effective scaffold involves bracketing out elements of a task initially beyond the learner's capability in a way that allows the learner to concentrate upon and complete only those elements that are within their range of competence. Similarly, Pea (2004) argued that scaffolds involve a range of instructional measures including "constraining efforts, focusing attention on relevant features to increase the likelihood of the learner's effective action, and modeling advanced solutions or approaches" (p. 446). Research suggests that scaffolding activities positively impact problem solving (Cho & Jonassen, 2002), reflection (Davis & Linn, 2000), research assistance (Brinkerhoff & Glazewski, 2004), concept integration (Davis & Linn, 2000), and knowledge acquisition (Roehler & Cantlon, 1997).

Summary:

The related studies included in this review aimed at finding support for the present investigation on the use of multidisciplinary approach (cooperative learning, inquiry-based learning, and scaffolding). Some theories were included, like Gardner's Multiple Intelligences theory (Gardner, 1983), which has had an impact on education around the world, and contructivist perspectives (Tobin and Tippins, 1993) in which constructivism provides a different way of thinking about education.

The literature reviewed revealed various concepts and principles on cooperative learning, inquiry-based learning, and scaffolding. Constantopoulos (1994:251) and Northern Province Department of Education (2001:18) define cooperative learning as a concept based on group work in which the learners are responsible for others' learning as well as their own learning.

Roth and Roychoudhury (1993:143), cooperative learning is the convenient way to support the construction of individual knowledge of the members in a variety of ways. This view is supported by Hertz-Lazarowitz, Baird and Lazarowitz (1994:70) and Wise (1996:338), when they indicate that cooperative learning creates a classroom learning environment which contributes to the positive perception pupils have towards social and cognitive aspects of the learning process. According to Mashile (2002: 73), the diverse methods found in cooperative learning imply that each method will have characteristics peculiar to the method. Other studies have examined a variety of factors that might interact with achievement gain in cooperative learning. Okebukola (1986) and Wheeler & Ryan (1973) found that students who preferred cooperative learning learned more in cooperative methods than those who preferred competition. Chambers & Abrami (1991) found that students on successful teams learned more than those on less successful teams.

The Galileo Educational Network (2008) rubric to guide inquiry and supported by a large body of research, a constellation of processes need to be in place to maximize the impact of inquiry-based education.

Scaffolding is another strategy included in the multidisciplinary approach that affects learning (Stone, 1998; Wood et al., 1976; Cazden, 1979; Puntambekar and Hübscher, 2005). However, these studies were largely observational (Cazden, 1979; Langer and Applebee, 1986; Englert, 1992; Fleer, 1992). Virtually no quasi- experimental studies were found, and different definitions of scaffolding were used across the several studies; Palincsar and Brown, 1984; and Palincsar, 1986, 1991. Scaffolding appears to be most fully developed in the field of literacy (Clark and Graves, 2005; Pardo, 2004; Smith, 2006).

Scaffolding is effective using various activities (Simons and Klein, 2006; Pea, 2004; Cho & Jonassen, 2002; Davis & Linn, 2000; Brinkerhoff & Glazewski, 2004; Davis & Linn, 2000; Roehler & Cantlon, 1997).

3.   RESEARCH METHODOLOGY

This chapter consists of six parts: (1) The Research Design and the Hypothesis, (2) Locale of the Study, (3) The Participants, (4) Research Instrument, (5) Data Gathering Procedure, and (6) Data Analysis.

Part One, The Research Design and the Hypothesis, describes the kind of research employed in the conduct of the study and restates the hypothesis.

Part Two, Locale of the Study describes the place where the investigation was conducted.

Part Three, Participants, tells about the subjects involved in the study.

Part Four, Research Instrument, describes the materials and instruments used to gather the data.

Part Five, Data Gathering Procedure, specifies the steps observed in the conduct of the study.

Part Six, Data Analysis, delineates the statistical treatment used in the analysis of the data gathered for the investigation.

The Research Design:

This research employed both quantitative and qualitative research designs. In this study, a pre-test – post test were utilized to determine if multidisciplinary approach will create a significant difference on the students' academic performance in Understanding Culture, Society, and Politics subject.

The researcher believes that the quantitative research design is the best approach in evaluating the benefits and impact of multidisciplinary approach on the students' academic performance.

The other research method used was the qualitative method. Triangulation was done to ensure the veracity of the data. This research method provides additional data which quantitative research cannot supply, like journal writing, appreciation of the methods used by the teacher, their feelings and attitude while attending the subject, focused group discussions, and interview.

After the data were collected and transcribed, the transcripts were coded. Thematic analysis was used to analyze the data collected. Braun and Clarke (2006) define thematic analysis as a method for identifying, analyzing, and reporting patterns (themes) within data. The texts from the coded transcription were grouped, coded and formulated into small set of non-overlapping themes until the main concept or idea of coded transcription is determined.

Locale of the Study:

This investigation was conducted at Bancal National High School, Bancal, Alimodian, in the Province of Iloilo, which belongs to the Visayas group of Islands. It is geographically located on the south west portion of Iloilo Province. It is bounded by Antique province in the north, the municipalities of Maasin and Cabatuan in the east, the municipality of Leon in the west.

Alimodian is a third class municipality. In terms of urbanization, Alimodian is classified as partly urban since it still has rural communities. It occupies an area of 144.82 km. Majority of the total land area is devoted to agricultural while a high percentage consists of the forest lands. The remaining land area is classified as built-up areas. Bases on the dominant land use, Alimodian is considered as an agricultural municipality. Administratively, it is subdivided into 51 barangays grouped into nine administrative districts, with a total population of 37, 484 people.

The school is located in a rural community in District Two of the municipality. In 2005, there were only two secondary schools in the municipality which are located in the Poblacion and Barangay Gines. In 2008, Bancal National High School opened School Year 2008–2009 with first and second years respectively. The following School Year (2010–2011), all four (4) year levels were complete. Presently, Bancal National High School is established with twenty one (21) faculty and one (1) staff. There are four hundred ten (410) enrolled students with 11 sections. The study was conducted to Understanding Culture, Society, and Politics students during the first semester of School Year 2016–2017.

The Participants of the Study:

The participants in this study are the Grade 11 - Athena students in Understanding Culture, Society, and Politics enrolled in Senior High for the First Semester of School Year 2016-2017. These students were chosen as participants because they are taking the aforementioned subject at Bancal National High School.

Research Instrument:

The data gathering instrument will be the researcher-made, paper and pencil test administered before and after the Final examination. The instrument was constructed based on the researcher identified approaches/strategies appropriate to the content being studied.

The fifty-item multiple-choice teacher made test covers topics to include the Final part of the Understanding Culture, Society, and Politics subject. Table of specifications will be constructed based on the questionnaire reference and information from the literature reviewed. The questionnaire is composed of two parts: **Part I,** Academic Performance of the senior high school students in Understanding Culture, Society, and Politics, **Part II,** Experience of the Grade 11 students in Understanding Culture, Society, and Politics using multidisciplinary approach.

The researcher-made paper and pencil test was based on the table of specifications made by the researcher. The corrections and recommendations of the validators were considered before the final drafting of the instrument. The procedure taken to establish validity of the research-made paper and pencil test was adopted from the modified version of the instrument development scheme designed by Tibajares (2001). The instrument development scheme has the three stages.

Stage I, Initial Formulation of the Instrument. This phase includes the initial drafting of the fifty items test that determined the level of students' academic achievements in Understanding Culture, Society, and Politics utilizing multidisciplinary approach as provided by the review of related literatures and studies. A draft of the fifty-item test was constructed based on the course outline and table of specifications in Understanding Culture, Society and Politics of Grade 11 students in Bancal, National High School. This instrument is subject for review and recommendations during the defense to establish its content validity. Revisions was made on the panel's recommendation.

Stage II, Trying out. In this phase, the revised teacher- made paper and pencil test was based on the table of specifications distributed to the different chapters. To ascertain the validity of the teacher-made paper and pencil test the students were asked whether they understand the instructions or not, or whether the test items are comprehensible or not.

Stage III, Completing the Instruments. The final version of researcher- made paper and pencil test accomplished based on the result of the try-out and the suggestion given by the panel of experts.

A triangulation process was utilized in the generation of the data. The process includes journal writing on the experiences in Understanding Culture, Society, and Politics, focused group discussion and interview. The instrument used was the guide questions on the interview schedule. Open ended question was prepared to generate in-depth information on experiences if multidisciplinary approach is implemented. Focused group discussions using interview schedule were conducted to gather collective ideas and response on the research with regards to multidisciplinary approach in Understanding Culture, Society, and Politics. The interview schedule for focused group discussions was validated by a panel of jurors composed of 3 validators to ensure the validity and reliability of the questions. The interview and the focused group discussion were tape recorded and transcribed. The instruments for interview were submitted to the members of the panel for content validation.

Revision and improvement of the instrument was based on the results of the validation.

For the purpose of interpretation of the pre-test and post test scores, numerical weights with corresponding descriptions were assigned.

Scale	Description
40.00 – 50.00	Excellent
30.00 – 39.99	Very Good
20.00 – 29.99	Good
10.00 – 19.99	Fair
0.00 – 9.99	Poor

To gather necessary data on the level of academic performance in Understanding Culture, Society and Politics, the post test in the subject was the basis. This research study aimed to determine the level of academic performance in Understanding Culture, Society, and Politics of Grade 11 students of Bancal National High School for the First Semester of School Year 2016-2017.

Moreover, it also aimed to find out if there is a significance that exists between variables.

Finally, it aimed to determine the experiences of the Grade 11 students using multidisciplinary approach.

Data Gathering Procedure:

The data gathering were taken from three measures: the pre-test and post test, triangulation - journal writing, focus group discussion and interview. First, individual pre-test results of the participants were listed down. Second, accomplishment of journal writing will check to find out their experiences on the different activities in every session during the intervention period. Moreover, focused group discussions and interview with guide questions was used in order to determine students' academic performance and experiences on multidisciplinary approach in Understanding Culture, Society, and Politics.

Finally, a pre-test was given to students to determine and assess their performance prior to the exposure of multidisciplinary approach. After the administration of the pre-test the students were given an orientation on what they were supposed to do during the activity. The study was lasted for 2 months starting on August 15, 2016 and ended on October 14, 2016, for a total of thirty two (32) hours of direct exposure. Post test was administered after the intervention in order to determine the increase in mean scores of students, if any. The researcher made sure that all items were answered in the pre- and post tests.

Data Analysis Procedure:

Frequency counts, percentage, means, and standard deviation were used as descriptive data analysis tools. The t-test is the inferential statistical tool used to determine if there is a significant difference in the students' performance before and after the teacher used various types of multidisciplinary approach. The statistical Package for Social Sciences (SPSS) software will be used to process the quantitative data and the degree of significance is set at 0.05 alpha.

4.   PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

Chapter 4 presents the findings of the research. It presents the quantitative and qualitative data gathered during the course of the study. The investigation focused on the academic performance of Grade 11 students, and their experiences in using multidisciplinary approach.

This chapter is composed of six parts: (1) The Intervention, (2) Descriptive Data Analyses, (3) Attitudes of the Grade 11 when they attend "Understanding Society, Culture and Politics," (4) Experiences of Grade 11 Students Using Multidisciplinary Approach (Journal Writing), (5) Experiences of Grade 11 Students Using Multidisciplinary Approach (Interview and Focused Group Discussion), and (6) Reflection.

Part One, The Intervention, presents the summary of the multidisciplinary approach used to improve academic performance of Grade 11 students.

Part Two, Descriptive Data Analyses, describes academic performance of Grade 11 students before and after using multidisciplinary approach.

Part Three, Attitudes of the Grade 11 when they attend "Understanding Society, Culture and Politics," summarizes the findings of the gathered data and observations

Part Four, Experiences of Grade 11 Students Using Multidisciplinary Approach (Journal Writing), presents the transcriptions of the journal of the participants on their experiences using multidisciplinary approach.

Part Five, Experiences of Grade 11 Students Using Multidisciplinary Approach (Interview and Focused Group Discussion), exhibits the transcriptions of the interview conducted and focused group discussions using an interview questionnaire.

Part Six, Reflection, indicates the thoughts and learnings of the teacher-researcher in using multidisciplinary approach.

The Intervention:

The researcher in this study employed multidisciplinary approach as intervention to improve the academic performance of the students in Understanding Culture Society and Politics, from a pre-test administered prior to the conduct of the intervention in the following instruction:

Multidisciplinary Approach:

In this approach, the teacher/researcher, designed lessons with multidisciplinary approach as strategy. The teacher led various activities including a study skills component, which included preparing for lectures, taking notes, critical thinking, test-taking strategies, and researching. Also addressed were written and oral communication skills, critical thinking, individual reporting, and socialization activities. The teacher maintained the locus of control over the instructional process and monitors students learning throughout the process. The teacher-researcher then delivered large amount of information in a timely manners and made instruction that is developmentally appropriate to students' ages and stages. Multidisciplinary approaches have different instruction strategies, scaffolding, inquiry-based learning, and cooperative learning.

A.) Scaffolding:

Scaffolding is a learning process designed to promote a deeper level of learning. Scaffolding is the support given during the learning process which is tailored to the needs of the student with the intention of helping the student achieve his/her learning goals (Sawyer, 2006).

In this method, there are three essential features of scaffolding that facilitate learning. First feature has to do with the interaction between the learner and the expert. This interaction should be collaborative for it to be effective. The second, learning should take place in the learner's zone of proximal development (Vygotsky, 1978). To do that the expert needs to be aware of the learner's current level of knowledge and then work to a certain extent beyond that level. The third feature of scaffolding is that the scaffold, the support and guidance provided by the expert, is gradually removed as the learner becomes more proficient. The support and guidance provided to the learner is compared to the scaffolds in building construction where the scaffolds provide both "adjustable and temporal" support to the building under construction. The support and guidance provided to learners facilitate internalization of the knowledge needed to complete the task. This support is weaned gradually until the learner is independent.

B.) Inquiry-Based Learning:

In this technique, the teacher involved students in the learning process through focusing questions and the use of critical thinking. The first step the teacher did was the formulation of a question or set of questions related to the topic in Understanding Culture, Society, and Politics. Second, the teacher encouraged the students to investigate the topic by gathering information from sources that either the teacher provides or within learning resources or tools that are readily available to the students, including interviews with people in the community. Third, the student organized in categories or outlined the important information relative to the topic on the subject Understanding Culture, Society, and Politics. Fourth, the teacher discussed and highlighted the implications that arise from the investigation. Finally, student reflections were encouraged and served as a way to relate back to inquiry.

C. Cooperative Learning:

This is a method where the teacher placed students in small teams with the students of different learning levels. First, the teacher divided the students into even groups of five or less. She gave each student in a group a unique concept to learn. Then she brought the group back together and let the students teach each other what they have learned. Second, is the "think-pair-share" where the teacher divided the students in groups. Each member of the group chooses a partner. The individuals interviewed their partner by asking them clarifying questions after which the partners switched roles. The member of the entire group shared their responses as a team. Third, in the "catch a brainstorm" the teacher divided the students into teams of 4 to 6 and appointed one student on each team to be the secretary, each team was given a different question with the secretary writing down the team's responses. The students worked in a circle, each taking turns to give a response. Fifth, is the modified Student Team Achievement Division (STAD) (Slavin, 1994), wherein students were

assigned to five groups that are mixed in performance level and gender. The teacher presents a lesson, and then students work within their teams to make sure that all team members have mastered the lesson. Finally, all students take individual quizzes on the material, at which time they may not help one another or will answer the quiz as a group. In a related method called Teams-Games-Tournaments (TGT), students play games with members of other teams to add points to their team scores.

In essence, every member was responsible for learning, as well as helping team-mates learns, too. The teacher let the students keep practicing concepts until the entire team understood and completed the assignments given.

Descriptive Data Analyses:

Table 1 shows the pre-test performance of the Grade 11 students in Understanding Culture, Society, and Politics.

The results show that there were 29 or 72.5% respondents had "Poor", 9 or 22.5 % had "Good", 2 or 5.0% had "Fair" in Understanding Culture, Society, and Politics before the intervention. None of the respondents obtained an "Excellent" and "Very Good" performance in the subject. As a whole, the respondents had "Poor" (M = 16.65, SD = 4.76) performance in Understanding Culture, Society, and Politics before the intervention.

Table 1: Level of Performance of the Respondents in Understanding Culture and Politics before the Intervention

Level of Performance		f	%
Excellent	(40.00 – 50.00)	0	0
Very Good	(30.00 – 39.99)	0	0
Good	(20.00 – 29.99)	9	22.5
Poor	(10.00 – 19.99)	29	72.5
Fair	(0.00 – 9.99)	2	5.0
		M = 16.65	SD = 4.76

There were 35 or 72.5 % had "Very Good", 5 or 12.5% had "Excellent" performance in Understanding Culture, Society, and Politics after the intervention. Further, none were "Poor" and "Fair" performance in the subject. As a whole, the respondents had "Very Good" (M = 36.38, SD = 3.83) performance in Understanding Culture, Society, and Politics after the intervention.

Table 2 presents the data.

Table 2: Level of Performance of the Respondents in Understanding Culture and Politics after the Intervention

Level of Performance		f	%
Excellent	(40.00 – 50.00)	5	12.5
Very Good	(30.00 – 39.99)	35	72.5
Good	(20.00 – 29.99)	0	0
Poor	(10.00 – 19.99)	0	0
Fair	(0.00 – 9.99)	0	0
		M = 36.38	SD = 3.83

Employing the machine-processed paired t-test, no significant difference was noted in the level of performance in Understanding Culture, Society, and Politics of the respondents before and after the intervention (t = 22.738, p > .05) hence, the null hypothesis was accepted.

Page | 196

Table 3 indicates the data.

Table 3: t-test Computations of the Difference in the Level of Performance in Understanding Culture, Society, and Politics before and after the Intervention

Category	Mean	t-value	df	Two-Tail Prob
Pre-Test	16.65	22.738	39	0.000
Post-Test	36.3			

Summary:

Summing up, the results of the study revealed that the pre-test performance of the Grade 11 students was "Poor" before multidisciplinary approach was used.

Whereas, when multidisciplinary approach was utilized, the Grade 11 students achieved "Very Good," which indicates increase in their academic performance. On the other hand, no significant difference was noted in the level of performance in Understanding Culture, Society, and Politics of the respondents before and after the intervention.

Attitudes of the Grade 11 When They Attend "Understanding

Culture, Society, and Politics"

The following were the summary of the findings out of the gathered data and observations:

The attitudes of the Grade 11 when they attended Understanding Society, Culture, and Politics were all positive. Students later became active and participative in the class discussions. They became more self-motivated and they find the activities meaningful and employable as shown by their cooperation in class activities. This was expressed in the reflection of the students in their written journal, interview and focused group discussion. The journal showed that cooperative learning, inquiry-based, and scaffolding have helped improved their academic performance.

The observations of the teacher on the attitudes after the intervention was conducted indicating that students manifested positive attitudes as shown in the students' active participation in the classroom, improved scores in the achievement test, and enhanced study habits.

With the use of multidisciplinary approach and motivation of the teacher, students realized that learning indeed is fun and interesting.

Experiences of Grade 11 Students Using Multidisciplinary Approach

(Journal Writing)

This part presents the summary of the experiences of the Grade 11 students of Bancal National High School through journal writing. There were eight (8) weeks of intervention using multidisciplinary approach employing scaffolding, inquiry-based, and cooperative learning. Each week, the students were asked to write their experiences in using multidisciplinary approach.

The following are the journal entries of the Grade 11 students on their experiences using multidisciplinary approach.

WEEKS 1 – 8

We understand the lesson more and explore further. The approach aided my understanding better the lessons/discussions because I was allowed to explore and discover the details of the lesson, especially on confusing topics and unfamiliar words/terms. Because of this, I was able trace my family lineage. The teacher cited examples, used compare and contrast scheme and the posed questions guided my learning process. Because of this, I learned how political institutions evolved.

Page | 197

S1, 2, 3, 6, 7, 9, 15, 20, 22, 24, 26, 28, 29, 31, 32, 33, 34, 36, 37

I was able to relate past lessons to present especially on kinship, political dynasty and political system. *Dasig lang mag*-identify *ka mga* political dynasties *kag kilala nga mga apelyido.* [It was easier to identify the] political dynasties and prominent family names.]The teacher related lessons in Economics to the present economy and non-state institutions. Moreover, the activities such as interview with the common people taught us to build pillars for our acquisition of knowledge. The strategy made the lesson interesting and exciting and I was very eager to learn.

S1, 2, 5, 6, 7, 9, 10, 14, 21, 30, 35, 39, 40

Ginsigurado gid ni ma'am *may na*-learn *kami kag naka*-reflect *man ko parti sa akon* family *amo ra nga nalipay man ako sa akon pamilya kay maswerte gid ako bisan pigado lang kami.* [Our teacher made sure that we learn and I was able to reflect about my own family because I am lucky even though we are poor.]There are also families who are problematic and are broken. I learned what is the purpose of marriage and family as well as to what type of family I belong and how culture affect us in general.

S2, 3, 6, 7, 9, 10, 16, 17, 20, 22, 24, 25, 32, 38

The approach made lessons more enjoyable, interesting, and challenging, especially the group activities that made the lesson more appealing. In small groups, I can freely share my views and opinions. I listened to my classmates and compared my opinion with that of my classmates. *Nami-an ako kay* [I like it because] we were free to express our opinions. Likewise, the activities such as interview with the sufferers of the culture specific syndromes and the traditional healers; group activities, such as STAD and TGT, "study buddy," and research activities composed these.

S1, 2, 6, 8, 9, 12, 15, 17, 21, 22, 23, 26, 30, 37

The learning took place easily because I was paired with my classmate so that we can help each other in achieving the objectives of the lesson. The think-pair-share activities made me learn better because aside from my learnings, a classmate's ideas add up my understanding to achieve better learning outcomes.

S2, 3, 6, 11, 13, 16, 18, 19, 22, 24, 28, 35, 36, 38

The provision of reading materials and visual aids made me learn better. The teacher provide advices and provided coaching, especially to the succeeding facilitators of the class. *Ginatodlo-an kami ni* ma'am [The teacher taught us] to take down notes because it was very helpful.

S14, 16, 17, 18, 20

The tasks given, like facilitating the class discussion and lecture led me to higher learning and teaches me to manage time efficiently because I was the one who researched about the topic. At the same time, the multidisciplinary approach made the topics interesting because the teacher coached us to better comprehend the lesson and we were able to practice our social skills.

S8, 13, 14, 16, 17, 18, 20,24, 29, 34, 35, 39

Ma'am gave us topic *tapos kami ang mag*-explain *at gumagawa ng mga gawain hangga't kaya namin at kung hindi namin alam binibigyan niya kami ng* guide questions *para marami pa kaming matutunan tungkol sa*[then we explained and do the activities as long as we can and if we do not know, the teacher gave us guide questions so that we can learn better about the lesson] on kinship, marriage, and the households.

S2, 4, 12, 20, 27, 32, 34

I made my own researches to better understand the topic and eventually led me to other discoveries. I enjoyed because ma'am gave us a topic *tapos kami ang mag*-explain *at gumawa hangga't kaya naming gawin. Nandiyan si* ma'am *upang mag*-guide *sa amin* [we were the ones to explain and do as long as we can.] We learned through experiences and explore to more knowledge because we look into the evidences to support our claims.

S1, 8, 15, 23, 24, 31, 32, 36, 39

My classmates serve as facilitators and I am glad that they are willing to answer our questions. *Antes kami nag*-present, *gin*-coach *kami anay ni ma'am kon paano obrahon* [Before we present, our teacher coached us how to do it].I was able to

relate previous knowledge and basic understanding of the world that ultimately concerns human existence. *Kay may mga* outline *ka* topics and resources *nga ginatao ni* ma'am *kag may mga* handouts *nga gintao mga* classmates *namon.* [Because there were outline of topics provided by the teacher and handouts and resources given by our classmates]. Because of these, I was able to learn better.

S1, 4, 9, 20, 21 24, 27, 28, 34, 37, 40

The interview with the sufferer of culture specific syndromes and illnesses such as *"nabughat," "ginbuyagan,"*and *"nausog"* made me more interested with the lesson. We conducted investigations and develop questions, and so these made me learn further and explain some mystery in our culture. The interview with the traditional healer such as *"babaylan," "merko," and sirohano"* made the learning process thrilling and it broadened my knowledge. I find the lesson easier to understand because I examined an article about education and made a reaction about it. The task given made me more interested in the topic.

S1, 3, 5, 10, 15, 16, 19, 20, 21, 26, 27, 28, 36

I have arrived to higher thinking skills because I was able to quantify the responses made by the interviewee. I learned I need to be responsible for learning to take place *kay naganuto kami base sa amon nga* investigation [because we learn based on our investigations.] The internet, if used properly can provide access to further knowledge and learnings.

S1, 10, 16, 21, 23, 28, 31, 40

I have learned that culture specific syndromes like *"bughat"* is hard because of the distress experienced by the sufferer.

S1, 4, 10, 11, 39

The knowledge is not stagnant because we were able to relate previous knowledge with the lesson. This encouraged me to learn more. *Dugangan pa kay ang* interactions *nangin mabiningahon kag kang pag*-interview *namon naman-an namon nga budlay gali ang mga* [Additionally, the interactions became fruitful and during the interview we learned that] culture specific syndromes and illnesses *parehas abi ka bughat kay kabudlay ka ginaagyan ka naga*-suffer [like

 'bughat' because of the distress of the sufferer].

S2, 4, 5, 13, 16, 18, 21, 24, 26, 30, 33

The assignments and tasks that were assigned to us made me more curious about the subject. The lesson prompted me to use the internet to investigate and the library to read more about the matter. I derive meanings and answers of my own questions.

S9, 16, 25, 31, 36, 36

I slowly derived conclusions because of the framework the teacher offered. Coping with the pace of the lesson is much easier. *Ang name sa* multidisciplinary approach is *ginapabay-an kami mag-obra ka mga pamangkot kag kami man nagpangita ka sabat sa amon mga pamangkot. Ang mga budlay nga* topics *nagapadugang pa gid* eagerness *ko mangita sabat* [One thing nice about multidisciplinary approach is that we were allowed to create our own questions and we were the ones to look for answers to these questions. The hard topics add up my eagerness to look for answers].

S4, 9, 14, 25, 30, 31, 33, 38

Reflection

The students wrote various experiences in using multidisciplinary approach and were also allowed to express during interview and focused group discussion. At first, it was hard to group the responses of the students. But after a thorough process, I was able to come up with the themes that were essential to categorize all their responses.

The study yielded many realizations on my part. The strategies used in multidisciplinary approach were not new to me. However, it is my first time to combine all three strategies in a class, having a shorter time frame, and having to document the process and the responses of the students.

I have noted that students responded positively. Students were able to derive meanings not only from the lessons but from the experiences of going through the multidisciplinary approach. One thing more remarkable to me was the students' realizations on various aspects of the lesson and the entire involvement in the teaching-learning process.

With the data at hand, the last stage of the Braun and Clarke's thematic analysis is producing the report, which constituted the final analysis of selected extracts to produce a report of the journal written by the Grade 11 students on their experiences using multidisciplinary approach, as well as the results derived from the interview and focused group discussions.

The Grade 11 students' experiences on multidisciplinary approach were grouped into six (6) themes, namely: 1) lessons were easily understood, 2) developed critical thinking, 3) promoted positive behavior, social skills, and time management, 4) activities were challenging yet enjoyable, 5) stimulated learning through researches and investigations, 6)developed group dynamics.
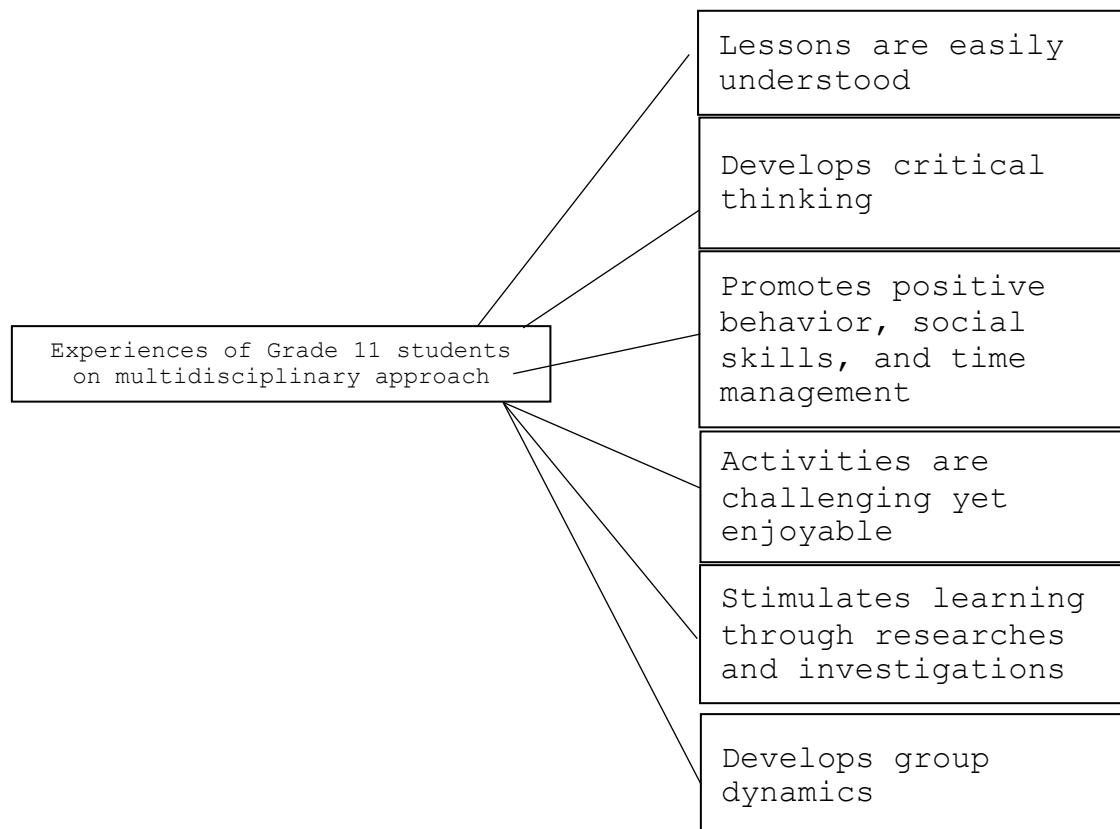
Experiences of Grade 11 Students Using Multidisciplinary Approach

(Interview and Focused Group Discussion)

This part presents the results of interview and focused group discussion of the Grade 11 in Understanding Culture, Society, and Politics using the semi-structured interview guide.

Students' reported experiences are influenced by the multidisciplinary approach utilized by the teacher to make the students learn further.

In this study, the student-participants have different experiences in multidisciplinary approach. In the interviews, I asked the students regarding their experiences in the multidisciplinary approach. Figure 2 shows the different experiences of the participants in using multidisciplinary approach.

Figure 2: The Grade 11 students' experiences using multidisciplinary approach.

The participants in this study have large family structure, usually an extended family having an average of eight (8) members.

In terms of the educational support of parents or family members, it was found out that most students obtain less intervention and support by the family members. Majority of the students responded that they got help from other family members only if they ask questions about their assignments; half of the members of the class do not receive at all any help

from their family members; and only few students responded that they regularly receive assistance from their family members on their assignments.

I have also discovered that some of the Grade 11 students are not living with their family. Instead, they live with their distant relatives or somebody else who support their studies. This way, they receive less support in terms of doing their assignments and other school-related works.

Few number of students have parents or guardians that visit school for follow-ups. Parents come to school only to attend regular meetings but do not come to school for regular conference with teachers.

Experiences Using Multidisciplinary Approach:

Constructivist learning theory is multifaceted, but all of the interpretations have the element that the student is an active participant in their learning (Elkind, 2004). Constructivism is derived from the work of Jean Piaget (1967), Lev Vygotsky (1978), John Dewey (1944), and many others who studied how learners acquire knowledge. The basic elements of constructivism incorporate the ideas that learners "construct" their own learning; it is an individual process based on prior knowledge and the process is affected by outside influences. The learning process is also social in that we gain understanding to further interact with others. Vygotsky (1978) argued that individuals learn in their own zone of proximal development and students can master new skills and become increasingly independent thinkers and problem solvers if supported and challenged by teachers who move them slightly outside of their comfort zone. This means that students can learn more if suitable teaching methods are employed. The use of multidisciplinary approach affects students' learning. The Grade 11 students have various experiences in using multidisciplinary approach. For them, multidisciplinary approach (1) helps make lessons easily understood, (2) develops critical thinking, (3) promotes positive behavior, social skills, and time management, (4) make activities challenging yet enjoyable, (5) stimulates learning through researches and investigations, and (6) develops group dynamics.

Lessons are easily understood. Majority of the students responded that multidisciplinary approach aided them to easily understand the lessons.

The students noted that it is important that they are properly guided in order for them to fully understand the lessons. According to Student 31, *"lain gid tana ang* approach *nga dya kay hapos lang mag-*cope *sa mga lessons."* [This approach is unique that we can easily cope with our lessons]. Moreover, they added that because of the learning they were able to connect the lesson with the previous ones, as added by Student 3,

"Gahapos gid ang mga lesson *kay may* materials *kami nga pwede balikan* in case *malipat kami."* [The lesson becomes easier because there are materials that we can browse again in case there are things we forget.]

The common views of the students about their experiences in using multidisciplinary approach was extracted on their journal, but was expounded during the interview and focused group discussion.

Develops critical thinking. Educators have long been aware of the importance of critical thinking skills as an outcome of student learning. More recently, the Partnership for 21st Century Skills has identified critical thinking as one of several learning and innovation skills necessary to prepare students for post-secondary education and the workforce (Lai, 2011). Those working in the field of education have also participated in discussions about critical thinking. Benjamin Bloom and his associates are included in this category. Their taxonomy for information processing skills (1956) is one of the most widely cited sources for educational practitioners when it comes to teaching and assessing higher-order thinking skills. Bloom's taxonomy is hierarchical, with "comprehension" at the bottom and "evaluation" at the top. The three highest levels (analysis, synthesis, and evaluation) are frequently said to represent critical thinking (Kennedy et al., 1991). One of the themes Grade 11 students expressed on their experience in using multidisciplinary approach is that it developed their critical thinking as mentioned by Students 1, 10, 31 and 40: "I have arrived to higher thinking skills because I was able to quantify the responses made by the interviewees."

On the other hand, group 3 discussed their experience in multidisciplinary approach. They said,

*"Na-*process *namon amon* knowledge *kag nakahimo kami* decisions based on the learnings we have, especially *kang nag-*conduct *kami* interview *sa mga nakaagi usog, bughat, kag iban pa nga mga* culture-specific syndromes *nga lesson ta kag sa mga manugbulong* like *babaylan, manugluy-a kag siruhano. Mas nakahimo kami* synthesis *ka amon naman-an sa mga* discussions *ta sa classroom kag na-*evaluate *man namon kon bala may basehan ang mga sakit nga dya nga gina-*practice

ta sa culture *ta.*[We were able to process our knowledge and came up with decisions based on the learning we have, especially when we conducted an interview with those who suffered culture-specific syndromes, which was our lesson, such as *usog, bughat*, and others and also with the traditional healers like *babaylan, manugluy-a, and siruhano.* We were able to synthesize our learning out of the discussions inside the classroom and we were able to evaluate if these practices really have basis.]

The critical thinking skills of students were developed because prior to the intervention, students tend to be passive. After the intervention and the exposure of the students to multidisciplinary approach, it was evident that they were able to express opinions based on their evaluation. Moreover, most number of students can make a reaction out of a situation that requires analytical outcomes.

This was also evident when I asked the students to look for an article about education, especially a success story of a person on how his/her life improved because of education. I requested them to photocopy or cut the article if possible and make a reaction out of it. The reactions manifested what I have in mind at first, that is, for them to probe the article and evaluate it according to the instruction given.

Therefore, in order for the students to think critically, they must be exposed to situations that require higher order thinking skills like analyzing, synthesizing, and evaluating. They should be given tasks that calls thought-provoking situations which would entail analytical proficiency.

Promotes positive behavior, social skills, and time management. Teachers oftentimes are faced with difficult situations in school when it seems all the efforts exerted are in vain based on the assessments conducted. Likewise, students are exposed to different forms of distractors in their studies such as the multi-media, cellphones, and gadgets. With this, it is hard to fortify students' positive behavior. This leads to the inert attitude of student towards group activities, work on requirements and would end up to negligence of time.

As educational systems enter the twenty-first century, they are faced with many of the same problems that have haunted educators throughout history. With these traditional challenges in conjunction with the modern deterioration of the traditional family, as well as a departure from traditional values and ethics, school systems are not only responsible for educating children, but also the unenviable task of raising them as well (Knowles, 2014). As Hoyle, Marshall, and Yell (2011) state, "concerns about discipline problems and violence in public schools have resulted in efforts to find effective methods to maintain safe school environments." School systems have always influenced children educationally and socially. This means that students' vitality should be diverted to activities that would generate positive responses. Group 1 of the focused group discussion readily agreed on the idea of Student 6 when she said,

*"Kis-a nga daan ma'am kon may mga gina-*assign *kanamon nga mga* tasks *nga orobrahon ang* teachers, *gamay lang kami ga-*comply *kay kalabanan ka mga* classmate *namon tamad mag-obra ka mga* output or requirements *nga ginatao kanamon. Kon indi ma-*maximize *ang* time *sa eskwelahan, may* tendency *gid nga labay-labay obra ka iban. Pay* because *ka lain-lain nga* activities *kag raku gin-assign kanamon nga obrahon nga* guided *man kami, naganuto man* classmates *namon mag-obra ka mga tasks nanda."* [Sometimes when our teachers assigned tasks to be accomplished, only few of us comply because majority of our classmates are lazy to do the output or requirements that are assigned to us. If time is not maximized, there is a tendency for other students to do nonsense activities. But because even if there were plenty tasks assigned to us, our other classmates also learn to do the assigned tasks.]

On the other hand, students 16 and 17 specified on their journal "The teacher goes out of her way and guide us to better comprehend the lesson and practice the social skills." This means that the students appreciate group activities because they were able to relate with one another. As Student 25 pointed out during the interview,

"Isa sa manami nga feature *ka* multidisciplinary approach *kay naga-*group sharing *kami para ma-*achieve *ang* objectives *ka group. Ang isa pa nga nami sa* group activities *kay ga-*share *kami* ideas *sa isa kag isa nga makabulig man kanamon makapaminsar luwas pa ka amon nga* ideas*. Makita man anda* study habits *kag may mga sitwasyon pa gani nga nagalatnanay ka* enthusiasm sa pagtuon." [One of the most striking features of the multidisciplinary approach is the group sharing wherein we achieve the objectives of the group. One more thing is were able to share ideas that aid us to think more aside from our own ideas. We can also observe others' study habits and there are even situations that we acquire each other's enthusiasm towards studies.]

Student 3 also added that "social skills are acquired because of the activities." Walker (1983) defines social skills as "a set of competencies that a) allow an individual to initiate and maintain positive social relationships, b) contribute to peer acceptance and to a satisfactory school adjustment, and c) allow an individual to cope effectively with the larger social environment. "Social skills can also be defined within the context of social and emotional learning — recognizing and managing our emotions, developing caring and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations constructively and ethically (Zins, Weissbert, Wang, & Walberg, 2004). With this understanding, researchers and educators seek to evaluate and build students' social skills within a variety of social contexts.

Students 16 and 18 commented,

"The groupings made us work together and it developed our social skills."

In the cooperative learning activities, I incorporated Student Team Achievement Division (STAD)(Slavin, 1994) and Team Games Tournament (TGT). Each team member collaborates with one another and serve as discussion group in preparation for the scheduled tournament. Rules were laid down and the tournament progressed. I observed group interdependence took place that all members of each group contributed for the success of the team.

Before the intervention, I observed that average students in the class do not usually relate with the performing students. What I did was, after the mid-term grades were handed to me, I computed the class rank list. Without showing them the rank list, I paired the upper half or the performing half of the class with those whose performance were quite unsatisfactory. I instructed the performing group and motivated them to help their "partner" not only on my class but also on the other subjects. As Student 8 remarked on his journal, "I learned more because I have a partner or "study buddy." The strategy was effective because they were able to make assignments together.

Time management plays a vital role in improving student's academic performance and achievements. Each and every student should have time management ability which includes setting goals & priorities, using time management mechanism and being organized in using time. Time management is only possible through self-motivation; performance, ability and motivation (Brigitte, Claessens, Eerde, & Rutte, 2005).

As Senior High School students, time management is essentially a part of the Grade 11's day to day existence. They are treated more differently than their Junior High School counterparts because on their age, it is expected that they develop a certain level of maturity and consciousness. The tasks assigned to them are more complex, varied, and requires diligence. With this, they sometimes find the tasks harder and harder. Another factor is the introduction of higher education subjects on their curriculum which challenge their dedication on their studies.

For teachers, the time invested for students to understand and arrive to higher order thinking skills, it takes time to coach and guide them. Students 8, 13, 14, 18, 20, 24, 29, 34, 35 and 39 wrote on their journal,

"The tasks given, like facilitating the class discussion and lecture led me to higher learning and teaches me to manage time efficiently because I was the one who researched about the topic.

Activities are challenging yet enjoyable. The idea of using activities, such as games to engage students in the process of learning is not new. Educators have been increasingly incorporating various strategies into their teaching curriculum in an effort to create a fun and engaging learning environment for students (Milczynski, 2013). Although this can be very challenging and time consuming, interactive, collaborative and competitive games tend to motivate and encourage student participation in the learning process. Over the years, the format for classroom games has changed drastically. There are many more options that incorporate the use of technology and interactivity. Quinn and Iverson argued that students "need to be engaged more and to be put at the center of the learning experience to change from 'passive vessel' to 'active participant'" (Pannesse & Carlesi, 2007). In my class, I have conducted several activities like games especially to review the previous lesson. I noticed that students become more excited if exposed to strategies such as this. As group 1 pointed out during the interview,

"*Na*-challenge *kami sa mga* actitivities *kay may mga* something new *kami nga na-experience. Pirme gid namon gina*-look forward *kon maano duman kami sa sunod. Bisan pa budlay ang mga* lessons *kay bag-o gid para kanamon, pay nanami-an kami kay kasadya ka klase. Kon indi kami magdaog sa hampang, sige lang ah* next time *duman.*" [We were challenged by the activities because we experienced something new. We always look forward to the next activities. Even the lessons are hard because they are new to us but we find them enjoyable in class. If our group can't win on a game, there is always a chance next time.]

Innovation on the part of the teacher sets the direction of the class. I discovered that if I am going to use traditional method of teaching like lecture, the students get bored and do not engage in the lessons. To hook them to the learning process, it is important to allow the students to be involved in planning and designing the process of the activity. Schaller (2006) states that iteration, or repetition of the process, is critical to "support the learning process by encouraging experimentation, hypothesis testing and synthesis" which are all higher level thinking skills. Sometimes the activity cannot be done because it is time consuming. The teacher needs to speed up the discussions or the process because of time element. The most important thing on the other hand is that students are exposed to these type of strategies as Student 29 emphasized,

"nami kon maka-obra kami together *kay ga*-develop *man kami ka* friendship *kag* understanding *sa isa kag isa*." [It's good that we can work together because we develop friendship and understanding among ourselves.]

According to Franklin, Peat & Lewis (2003), when students work cooperatively on a gaming activity, "games foster group cooperation and typically create a high level of student involvement that makes them useful tools for effective teaching."

Stimulates learning through researches and investigations. In the early 1900's John Dewey argued that "education must be experience-based, centering on ideals such as open-mindedness and discipline in aim-based activity" (Glassman & Whaley, 2000). He believed these aim-based activities could be done using long-term projects, or project-based learning that grew out of a child's interest. He also saw learning as a continuous fluid process so as one aim was achieved it sets the groundwork for the next aim. Dewey, a constructivist, contended "that we must teach children how to engage with the world on a practical level and trust them to construct their own knowledge through (successful) engagement in activities of a lifetime" (Glassman et al, 2000).

As shown by the extracts from the interview transcripts, Dewey's contention on education as experience-based reached to a significant number. As group 5 of the focused group discussion said,

"Para kanamon mayad gid nga experience *naagyan namon sa* multidisciplinary approach *kay na*-expose *kami sa lain-lain nga* learning environment, *indi lang sa* classroom.*"* [For us, using multidisciplinary approach was a nice experience because we were exposed to different learning environment not just confined inside the classroom.]

When students are guided on inquiry-based learning the teacher acts as: 1) the guide (Chu, Tang, Chow, and Tse, 2007), 2) the one who sets a "rich environment in which students take on more responsibility in organizing and managing material for their own learning, and to develop a supportive social environment in which students can work collaboratively in small and large groups and learn to respect each other's ideas" (Turkmen, 2009), and 3) a facilitator of projects (Guven and Duman, 2007), 4) including "students in educational decision making and as partners in the teaching and learning process (McCombs, Daniels, & Perry, 2008), and 5) "working together to develop substantive aims in the educative process… as both mentor and cooperative partner" and "guide" (Glassman & Whaley, 2000). As Students 1, 3, 5, 10, 16, 19, 20, 26 and 27 emphasized,

"The interview with the sufferer of culture specific syndromes and illnesses such as '*nabughat,*' '*ginbuyagan,*' and '*nausog'* made me more interested with the lesson. We conducted investigations and develop questions, and so these made me learn further and explain some mystery in our culture."

Multidisciplinary approach can lead students to scrutinize existing phenomena, as well as creating new concepts and theories significant to the learning process. The existing knowledge serves as an anchor to predict future occurrences yet students are prodded to dig out more on the "cradle" or "repository" of learning which is their own community and if given the chance to be exposed as well to other communities. As group 2 put it this way,

"Nataw-an sabat ang curiosity *namon sa* lesson *kay nataw-an sabat ang mga pamangkot namon. Kanami ka* feeling *nga kami mismo naka*-discover *ka sabat kag mas na*-appreciate *pa gid namon ang* lesson.*"*[We were able to satisfy our curiosity about the lesson because we were the ones who discovered the answers to our own questions. It's so nice to feel that we were the ones who discover the answers and we appreciate it very much.]

Moreover, Students 15, 23, 24, 31, 32, 36 wrote on their journal,

"I made my own researches to better understand the topic and eventually led me to other discoveries."

Develops group dynamics. Students work together as groups is one of the most practiced method by teachers. This way, students can support each other's learning. Group work is an essential part of the Grade 11's Understanding Culture, Society, and Politics class.

I encouraged students to work as "study buddies" and other group activities. I usually do it to introduce a new lesson, and to assess their learnings at the end of the lesson. As group 4 articulated,

"Ang cooperation ma'am *kinahanglan gid ra tana para ma-*achieve *ang* goal *ka grupo. Kis-a garing nagakatabu man nga ang iban nagasaig lang sa mga imaw da sa grupo. Ti ang* challenge *duman* is *kon paano namon sanda mabuligan nga indi magtinamad."* [Cooperation is needed to achieve the goal of the group. There are times though that there are members of the group who depend on other members. But the challenge for us is how to help them not to be lazy.]

On my part, I see to it that group activities will become fruitful by roaming around the classroom and checking on the groups. There are instances when students cannot derive the expected output of the group activity. On the other hand, when we processed and evaluate the activity, they shared many insights about the activity. I discovered that even though they were not able to come up with the correct answer, still they learned a lot in the process. The students can easily formulate concepts or answers because they are stimulated to compete with other groups. This way, they were able to think aggressively. As Students 10, 11 and 12 said,

"Group activities made me more challenged to learn more because of my interaction with my groupmates."

Group activities develop students' interdependence. Students are more exposed to different stimuli when having group activities. On this note, they are challenged to react to these stimuli and produce productive outcomes. Students move in relative ease to from one step to another until the goal is achieved.

Group dynamics are the influential actions, processes, and changes that take place within and between groups. Groups come in all shapes and sizes, their functions are many and varied, and their influence universal. The tendency to join with others in groups is perhaps the single most important characteristic of humans, and the processes that unfold within these groups leave an indelible imprint on their members and on society. To understand people, one must understand groups and their dynamics (Forsyth, 2012).

One of the advantages of group work is that it takes away pressure from students (Anzures, 2016). It eases their stress. According to group 5,

"Kon mag-obra kami as a group*, naga-*strengthen *pa gid amon* bond *kag* camaraderie. *Indi tana dayon* stressful *kay kon indi gid man kami kasabat,* at least *irimaw man kami ka grupo ko. Waay ka man bala nahadlok nga indi timo kasabat kay raku man kamo."* [When we work as a group, our bond and camaraderie are strengthened. The activity becomes stress-free because if ever we can't answer, at least we are together as a group. We were not afraid if we can't answer.]

The things students wrote on their journal were also evident during the interview and focused group discussion.

5. SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Chapter 5 contains four parts: (1) Summary of the Problems, Method and Findings, (2) Conclusions, (3) Implications, and (4) Recommendations.

Summary:

The study employed both quantitative and qualitative methods of research to determine the effect of multidisciplinary approach strategies on the academic performance of Grade 11 students in Understanding Culture, Society, and Politics enrolled in the First Semester of School Year 2016-2017, at Bancal National High School. Specifically, this study wanted to know the level of academic performance through pre-test, post test and the experiences of students through journal writing, interview, and focused group discussion in Understanding Culture, Society, and Politics using multidisciplinary approach. The fifty-item pre-test, post test was used to get the level of academic performance of the respondents. The mean, percentage, standard deviation, and t-test were the statistical tools that were used in this study utilizing the Statistical Package for Social Science (SPSS).

Findings:

In relation to this, the findings of the study were:

1. The Grade 11 students have "Poor" level of performance. Before intervention the Grade 11 students were not listening attentively to the class discussion. Many learners find it hard to absorb and retain the concepts being discussed, they were not interested to learn and read because the teacher failed to motivate them, they get bored with the usual lecture method and have less interaction with her/his classmates, memorizing as the only way to learn things and learners are passive receiver of knowledge.

2. The Grade 11 students have "Very Good" level of performance after the teacher utilized multidisciplinary approach strategies. Most of the students are participating actively in the recitations. It was easier for them to understand and recall the ideas after the intervention. They were eager to learn more by exposing them to technology, library, and other venues outside the four walls of the classroom. They find the learning process more personalized and meaningful, one example is writing journals, they try to value more the higher order thinking skills and most students are active and inquisitive in searching and processing information, with the multidisciplinary approach and motivation of the teacher, they realize that learning indeed could be fun and interesting.

1. After the intervention, the level of academic performance in Understanding Culture, Society, and Politics subject of Grade 11 students had improved in terms of achievement test.

2. Improvements in the academic performance and achievement of students in Understanding Culture, Society, and Politics subject was significantly higher after using multidisciplinary approach as compared to utilizing traditional methods of teaching.

Conclusions:

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

The level of academic performance in Understanding Culture, Society, and Politics subject of Grade 11 students had improved in terms of achievement test, and classroom participation after the researcher utilized multidisciplinary approach.

As observed, the multidisciplinary approach such as cooperative learning, inquiry-based learning, and scaffolding if utilized by the teacher could improve students' performance in Understanding Society, Culture and Politics.

The attitudes of students toward the Understanding Culture, Society, and Politics were positive as manifested by their improved study habits resulting to improved grades.

Implications:

The result of the study indicated that multidisciplinary approach was very useful in teaching and in improving students' performance in Understanding Culture, Society, and Politics. These strategies are student-centered which provide them the tools for lifelong learning. The challenge is to find creative ways to design meaningful learning environment for the students who are the center of the educative process.

Recommendations:

Based on the findings and the conclusions of the study, the following recommendations are advanced:

1. Multidisciplinary approach such as cooperative learning, inquiry-based learning, and scaffolding should be used to improve the academic performance of students.

2. Teachers should be oriented on the proper use of multidisciplinary approach in Understanding Culture, Society, and Politics and other Social Sciences subjects.

3. To determine the effectiveness of the use of multidisciplinary approach, this research study should be tried in other sections/grade level for a longer period of time.

4. Researches and studies on multidisciplinary approaches should be constructed in other social sciences subjects/grade level, or other subjects for that matter to ascertain its effectiveness.

<div align="center">REFERENCES</div>

Book:

[1] Alberta Education. (2010). Inspiring education: A dialogue with Albertans. Edmonton, AB: Alberta Education.

[2] Brigitte, J. C., Claessens, Eerde, W. V., Rutte, C. G, Roe, R. A. (2005). A review of the time management literature. *Emerald Group Publishing Limited,* 36 (2), 2007.

[3] Hoyle, C. G., Marshall, K. J., & Yell, M. L. (2011). Positive behavior supports: Tier 2 interventions in middle schools. *Preventing school failure, 55*(3), 164-170.

[4] Kagan, S. (1992). Cooperative Learning (8th Ed.). San Juan Capistrano, CA: Kagan Cooperative Learning.

[5]   Kennedy, M., Fisher, M. B., & Ennis, R. H. (1991). Critical thinking: Literature review and needed research. In L. Idol & B.F. Jones (Eds.), *Educational values and cognitive instruction: Implications for reform (pp. 11-40)*. Hillsdale, New Jersey: Lawrence Erlbaum & Associates.

[6]   Peterson, J.M., & Hittie, M.M. (2003) *Inclusive teaching creating effective schools for all learners.* Boston, MA: A & B.

[7]   Perkins, D. (2009). Making learning whole: How seven principles of teaching can transform education. San Francisco, CA: Jossey-Bass.

[8]   Roehler, L. & Cantlon, D. (1997). Scaffolding: A powerful tool in social constructivist classrooms. In K. Hogan and M. Pressley, (eds), Scaffolding Student Learning: Instructional Approaches and Issues, Brookline: Cambridge, MA

[9]   Slavin, R.E. (1992). When and why does cooperative learning increase achievement? Theoretical and empirical perspectives. In R. Hertz-Lazarowitz & N. Miller (Eds.), Interaction in cooperative groups: The theoretical anatomy of group learning (pp. 145-173). New York: Cambridge University Press.

[10] Tobin, K., & Tippins, D. (1993). Constructivism as a referent for teaching and learning. In K. Tobin (Ed.), *The practice of constructivism in science education* (pp. 3-21). Washington: AAAS Press.

[11] Walker, H.M. (1983). *The ACCESS program: Adolescent curriculum for communication and effective social skills: Student study guide*. Austin, TX: Pro-Ed.

[12] Zins, J., Weissbert, R., Wang, M., & Walberg, H. (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.

Journal Article:

[13] Barron, B., Schwartz, D., Vye, N., Moore, A., Petrosino, A., Zech, L., Bransford, J., & The Cognition and Technology Group at Vanderbilt. (1998). Doing with understanding: Lessons from research on problem- and project-based learning. The Journal of the Learning Sciences, 7, 271-311.

[14] Brinkerhoff, J. & Glazewski, K. (2004). Support of expert and novice teachers within a technology enhanced problem-based learning unit: A case study. International Journal of Learning Technology 1: 219–230.

[15] Chambers, B., & Abrami, P.C. (1991). The relationship between Student Team Learning outcomes and achievement, causal attributions, and affect. Journal of Educational Psychology, 83, 140-146.

[16] Cho, K. & Jonassen, D. (2002). The effects of argumentation scaffolds on argumentation and problem solving. Educational Technology Research and Development 50(3): 5–22.

[17] Davis, E. & Linn, M. (2000). Scaffolding students' knowledge integration: Prompts for reflection in KIE. International Journal of Science Education 22: 819–837.

[18] Elkind, D. 2004. The problem with constructivism. The Educational Forum 68(4): 306–12.

[19] Franklin, S., Peat, M., & Lewis, A. (2003). Nontraditional interventions to stimulate discussion: the use of games and puzzles. *Journal of Biological Education, 37*, 79-84.

[20] Guven, Y., & Duman H.G. (2007). Project based learning for children with mild mental disabilities. [Electronic Version] *International Journal of Special Education. (22)*1, 77-82.

[21] Klein, P. (2003). Rethinking the multiplicity of cognitive resources and curricular representations: alternatives to 'learning styles' and 'multiple intelligences'. Journal of Curriculum Studies, 35 (1) 45-81.

[22] McCombs B.L., Daniels D.H., & Perry K.E. (2008). Children's and teacher's perceptions of learner-centered practices, and student motivation: implications for early schooling. *The Elementary School Journal (109)*1, 16 – 35.

[23] Okebulola, P.A. (1986). The influence of preferred learning styles on cooperative learning in science. Science Education, 70, 509-517.

[24] Pannese, L. & Carlesi, M. (2007). Games and learning come together to maximize effectiveness: The challenge of bridging the gap. *British Journal of Educational Technology, 38*(3), 438-454.

[25] Pea, R. (2004). The social and technological dimensions of scaffolding and related theoretical concepts for learning, education, and human activity. The Journal of the Learning Sciences, 13(3), 423-451.

[26] Simons, K. & Klein, J. (2007). The impact of scaffolding and student achievement levels in a problem-based learning environment. Instructional Science, 35, 41- 72.

[27] Slavin, R. E., & Tanner, A. M. (1979). Effects of cooperative reward structures and individual accountability in productivity and learning. *Journal of Educational Research*, *72*(5), 294-298.

[28] Turkmen, H. (2009). An effect of technology based inquiry approach on the learning of "Earth, Sun & Moon" subject. *HKIEd APFLST. 10*(1).

Thesis (Unpublished):

[29] Anzures, Vanessa A. (2016). *Secondary mathematics teachers' views and practices in problem solving: Implications for the K to 12 curriculum implementation.* (Unpublished Master's Thesis), West Visayas State University, Iloilo City, Philippines.

[30] Dilag, Cynthia D. (2010). *Involving Student Performance Utilizing Differentiated Instruction in Society and Culture: An Action Research.*

Electronic:

[31] Braun, V. & Clarke, V. (2006). *Using thematic analysis in psychology. Qualitative Research in psychology, 3* (2). Pp. 77-101. Retrieved August 13, 2016 from http://eprints.uwe.ac.uk/11735/2/thematic_analysis_revised_-_final.pdf

[32] Chu, K. W. S., Tse, S. K., Loh, E. K. Y., Chow, K., Fung, H. F., & Rex, H. W. (2008). *Primary four students' development of reading ability through inquiry-based learning projects.* Retrieved July 17, 2016 from http://www.edu.hku.hk/samchu/docs/2008_dev_read.pdf

[33] Department of Education, (2015). *K 12 curriculum guide: Understanding Culture, Society, and Politics.* Pasig City: Author. Retrieved June 1, 2016 from http://www.deped.gov.ph/

[34] Department of Education, (2015). *DepED Order No. 8, s. 2015.* Pasig City: Author. Retrieved June 1, 2016 from http://www.deped.gov.ph/

[35] Forsyth, Donelson R. (2012). *Studies in Group Dynamics.* Retrieved October 2, 2016, from https://donforsyth. wordpress.com/2012/02/14/studies-in-group-dynamics/

[36] Friesen, S. & Jardine, D. (2009). 21st century learning and learners. Calgary, AB: Galileo Educational Network. Retrieved from http://education.alberta.ca/media/1087278/wncp%2021st%20cent%20learning %20(2).pdf

[37] Galileo Educational Network Association (2008). Retrieved October 2, 2016, from http://www.galileo.org/ research/publications/rubric.pdf

[38] Glassman M., & Whaley K. (2000). Dynamic aims: The use of long-term projects in early childhood classrooms in light of Dewey's educational philosophy. RetrievedOctober 12, 2016, from http://files.eric.ed.gov/fulltext/ ED439853.pdf.

[39] Hertz-Lazarowitz, R. Ivory, G., & Calderσn, M. (1993). The Bilingual Cooperative Integrated Reading and Composition (BCIRC) project in the Ysleta Independent School District: Standardized test outcomes. Baltimore, MD: Johns Hopkins University, Center for Research on Effective Schooling for Disadvantaged Students. Retrieved October 1, 2016, from http://www1.amalnet.k12.il/ldta/mekuvenet/Documents/slavin1996_Research%20on%20 Cooperative%20Learning%20and%20Achievement.pdfhttp://uir.unisa.ac.za/bitstream/handle/10500/1394/03chapter 2.pdf

[40] Lai, Emily R. (2011). *Critical Thinking: A Literature Review*. Retrieved October 5, 2016 from http://www. pearsonassessments.com/research.

[41] Merriam-Webster Dictionary (2015)Milczynski, Karen A. Michigan State University https://msu.edu/~milczyn1/ artifacts/LITERATUREREVIEW_KAREN_MILCZYNSKI.pdf

[42] Virola, Romulo A. (2007). *How Rich is Rich?* Retrieved October 5, 2016 from http://nap.psa.gov.ph/ headlines/StatsSpeak/2010/061510_rav_joe.as