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RESEARCH ARTICLE

DIFFICULTIES ENCOUNTERED IN TEACHING AGRICULTURE AS A CORE PART OF T.L.E. IN THE PUBLIC SECONDARY SCHOOLSIN GUINOBATAN, ALBAY

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Abstract

This study was conducted to determine the difficulties encountered in teaching Agriculture as a core part of Technology and Livelihood Education (TLE) in the Public Secondary Schools in Guinobatan, Albay. It discussed the profiles of 10 Agriculture teachers, the activities being conducted, the difficulties encountered, the extent of difficulty, the solutions applied by the teachers to address the difficulties encountered in line with classroom instruction and practical agriculture, and the proposed solutions to address the difficulties encountered. The study made used of questionnaire - checklist and rating scale as the instrument in data gathering. The data gathered were subjected to statistical analysis using frequency count, percentage and weighted mean to analyze the data obtained. The activities conducted by the Agriculture teachers during classroom instruction include oral recitation, paper and pencil test, and group activity. During practical agriculture, Horticulture teachers let their students plant crops but it was found out that none of them ever conducted soil sampling activity. For Animal Production, it was revealed that the activities conducted by the teachers were mere familiarization rather than actual demonstration of the subject. Moreover, teachers encountered numerous difficulties that serve as hindrances in their teaching profession. The difficulties they encountered during classroom instruction were the unavailability of resources, short time allotment, financial constraints and inability of the students to understand the lesson. On the practical agriculture, teachers encountered difficulties because of short time allotment, financial constraints in providing the needed materials to be used for hands-on laboratory, and lack of land, farm tools, equipment and facilities to support the practical aspects of the subject. As teachers, they applied solutions to address the difficulties encountered by consulting the principal/department head with regards to the unavailability of learning resources and farm resources. Teachers also used different teaching strategies so that slow learners can cope up in the class discussion and they extend time for hands-on laboratory.

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Introduction:-

Teachers are expected to be effective and efficient in their teaching profession. However, they would not become effective and efficient if they encountered difficulties in teaching their field of specialization. Agriculture teachers are not exception to this for they also find difficulties in dealing with the subject matter itself and in dealing with their students.

Agriculture is the science, art (skills) and business of cultivating the soil, producing crops and raising farm animals. Agriculture as a subject can be learned through classroom instruction and practical agriculture. Therefore, it is necessary that Agriculture teachers have a sound background in theory and practical aspects of the subject to facilitate varied activities.

Agriculture as a practical subject requires facilities like land, equipment and a laboratory. However, these demand a lot of funds which may be difficult for many schools to secure in order to facilitate the practical teaching of the subject. According to Johnson (1968), having satisfactory facilities, equipment and materials should not be minimized in establishing a curriculum because it contributes to the effectiveness of the school. Their availability will enhance or exhibit the implementation of curriculum. It then follows that facilities, equipment and materials influence the implementation of curriculum. Vandesboch (2006) stated that the availability of teaching and learning support material is among the most important determinants of effectiveness in agricultural education and training. Even if teachers are competent and well-trained, they will often find it difficult to teach effectively because of lack of adequate teaching and learning resources that are relevant to the local agricultural situation.

Teaching strategies plays an important role in learning. According to Kisirikoi et.al., (2008), modern trends in teaching emphasize certain approaches which determine the strategy to be used. Vandesboch (2006) added that the most used strategies in teaching agriculture are lectures, demonstrations, discussions, educational visits, projects, question and answer, assignment and practical. These will provide opportunity to make the learning process interesting. Therefore, students' activities should infuse with experiences well within their interest and understanding to maximize their learning especially on the Agriculture subject.

Effectiveness in teaching involves persevering through problems and hardships which one encounters. Agriculture is one subject that presents challenges and problems in the part of the teachers. According to Harper (2004), it requires more teaching time, effort and travel beyond the normal school day. Acquisition of knowledge will not occur through simple lectures but it is more on its application because according to Awuku et.al., (1991) the best way to learn Agriculture is by doing. However, Thobega et.al., (2011) emphasized that this could not happen if the teacher himself does not have the competencies and skills that the students must acquire due to lack of in-service training programs. Furthermore, insufficient agricultural equipment and facilities as well as the low interests of the students in the subject are also problems encountered in the teaching-learning process.

This study was undertaken in order to determine the difficulties encountered by the teachers in teaching agriculture and to identify the proposed solutions to minimize them.

Methods and Materials:-

The study utilized the descriptive-survey method of research since it is concerned in the difficulties encountered by the agriculture teachers in teaching agriculture as a core part of T.L.E in the public secondary schools in Guinobatan, Albay.

The researcher used set of questionnaire - checklist and rating scale as the research instrument. A dry-run was conducted to the Agriculture teachers in Pariaan National High School which is not included in the actual study. Interview was done before and after the distribution of questionnaire to received comments and feedback on how to improve the items in the questionnaire.

After the dry run, the researcher secured permission to the Office of the Principal of the public secondary schools in Guinobatan, Albay to gather data on the difficulties encountered by the teacher. The respondents of this study were teachers who are teaching agriculture as a core part of T.L.E. and data gathered in this study were subjected to statistical analysis using frequency count, percentage and weighted mean.

Results and Discussion:-

Profile of the Agriculture Teachers

There were ten (10) teachers handling Agriculture as a core part of T.L.E. in the entire public secondary schools in Guinobatan, Albay. Agriculture teachers were requested to accomplish the data sheet provided to have background information on them. Their profiles are shown from table 1 to 7.

Age

Thirty percent (30%) of the teachers range their age from 31-40 and 51-64.

Table 1:- Age.

Age	Frequency N=10	Percentage (%)
24-30	2	20
31-40	3	30
41-50	2	20
51-64	3	30

Sex

Most of the Agriculture teachers are female and there are only 20% male teachers.

Table 2:- Sex.

Sex	Frequency N=10	Percentage (%)
Male	2	20
Female	8	80

No. of Years in Service

There is only one teacher with the longest teaching experience and there are 2 teachers who are new in the teaching profession which have teaching experience of less than a year.

Table 3:- No. of Years in Service.

No. of Years in Service	Frequency N=10	Percentage (%)
Less than a year	2	20
1-10	3	30
11-20	2	20
21-30	2	20
31 – above	1	10

Subject Taught

Sixty percent (60%) of the respondents are teaching Horticulture and only 20% are teaching Animal Production. On the other hand, 20% of the teachers are teaching both Horticulture and Animal Production.

Table 4:- Subject Taught.

Subject Taught	Frequency N=10	Percentage (%)
Horticulture	6	60
Animal Production	2	20
Horticulture and Animal Production	2	20

TESDA Competency

The study revealed that 50% of the Agriculture teachers are both NC II holder of Horticulture and Animal Production and 10% of them are NC II holder of Bread and Pastry while the rest are not NC holder. It is necessary for teachers that they undergo TESDA NC Assessment because it measures their competencies in teaching the subject most especially on the practical aspects and in order to significantly contribute to the development of the

lifelong learners. Most importantly, teachers should take TESDA NC Assessment which is aligned to their subject being taught.

Table 5:- TESDA Competency.

TESDA Competency	Frequency N=10	Percentage (%)
NCII Horticulture	5	50
NC II Animal Production	5	50
NC II Bread and Pastry	1	10
No NC II	4	40

Educational Attainment

Seventy percent (70%) of the teachers were graduates of BS Agricultural Education, 30% of them are master teachers, and there is only one agriculture teacher who was able to pursue a doctorate degree.

Table 6:- Educational Attainment.

A. Bachelor's Degree	Frequency N=10	Percentage %
BSEd	1	10
BSAgEd	7	70
BSA – AH	1	10
BS – Food Tech	1	10
B. Master's Degree		
MAIEd	1	10
MAAS	1	10
MAEd	1	10
C. Doctorate		
PHDEF	1	10

Training and Seminars Attended

The study revealed that one of the teachers do not have trainings and seminars attended since that teacher is newly hired. However, ninety percent (90%) of the respondents have trainings and seminars attended where most of them were participants, but there are some who were given the chance to facilitate the said trainings and seminars.

Table 7:- Trainings and Seminars Attended.

Agri-Teachers	Trainings/Seminars Attended	No. of Hours	Nature of Participation	Sponsoring Agency
1	3	72	Facilitator, Participant	CPAE
2	4	130	Participant, Facilitator	DEPEd
3	none	None	none	None
4	1	24	Participant	DEPEd
5	1	36	Participant	DEPEd
6	1	24	Participant	DEPEd
7	2	72	Participant	BU
8	1	240	Participant	TESDA
9	1	24	Participant	DEPEd
10	3	81	Participant	DEPEd, TESDA

Activities Being Conducted by the Teachers during Classroom Instruction

Table 8 presents the activities being conducted by the teachers during classroom instruction. In this study, it was found out that 90% of the respondents agreed that oral recitation, paper and pencil test, and group activity are the most common activities being conducted inside the classroom. Some of the respondents claimed that they are also conducting research work, brainstorming, debate and panel discussion. This implies that teachers are using varied activities as their teaching strategies in facilitating the teaching-learning process

Table 8:- Activities Being Conducted by the Teachers during Classroom Instruction.

Activities	Frequency N=10	Percentage (%)
● Oral Recitation	9	90
● Think-Pair-Share	6	60
● Paper and Pencil Test	9	90
● Problem Solving	8	80
● Group Activity	9	90
● Reporting	6	60
● Board work	7	70
● Others specify:		
-Research work	1	10
-Brainstorming	1	10
-Debate	1	10
-Panel Discussion	1	10

Activities Being Conducted by the Teachers during Practical Agriculture in Horticulture

In the activities being conducted by the Horticulture teachers during practical agriculture, table 9 revealed that 70% of the respondents let their students plant crops. And the least activity that they performed is the pest and diseases management which comprises 10% of the total respondents. Ten percent (10%) of them also added that the activities they do involved mixing soil medium, potting, and gardening. However, none of them ever conducted soil sampling activity because according to the respondent, they do not have materials/equipment to facilitate such activity**.**

Table 9:- Activities Being Conducted by the Teacher during Practical Agriculture for Horticulture.

Activities	Frequency N=10	Percentage (%)
● Teaching the students on the proper use and maintenance of farm tools	6	60
● Pruning of plants and fruit-bearing trees	3	30
● Identifying the maturity indices of crops and fruits	3	30
● Perform asexual propagation	5	50
● Making organic fertilizers	4	40
● Perform land preparation	6	60
● Making sedbeed	6	60
● Planting crops	7	70
● Weeding	6	60
● Water management	2	20
● Soil sampling	0	0
● Fertilizer application	4	40
● Pests and diseases management	1	10
● Harvesting	3	30
● Others specify		
-Mixing soil medium	1	10
-Potting	1	10
-Gardening	1	10

Activities Being Conducted by the Teachers during Practical Agriculture in Animal Production

As to the activities being conducted by the teachers during practical agriculture in Animal Production revealed that there were only few activities that most teachers were conducting during their hands-on laboratory and most of the activity were just a mere familiarization rather than an actual demonstration due to lack of learning facilities for Animal Production.

Table 10:- Activities Being Conducted by the Teachers during Practical Agriculture for Horticulture.

Activities	Frequency N=10	Percentage (%)

● Identifying breeds of swine	2	20
● Identifying breeds of goats and ruminants	3	30
● Determining good quality chicks	1	10
● Maintaining housing, farm implements and surrounding area	1	10
● Brooding and growing chicks	1	10
● Trimming of beak	0	0
● Performing artificial insemination on sow/gilt	0	0
● Perform castration for young male piglet.	0	0
● Others please specify: -Familiarization of different farm housing structures -Familiarization of different stages of growth of animals and feeding system	1 1	 10 10

Difficulties Encountered by the Teachers in Teaching Agriculture during Classroom Instruction

Teachers need materials that will help them facilitate the teaching-learning process. However, the encountered numerous difficulties in their teaching profession. Table 11 presents the difficulties encountered by the ten (10) Agriculture teachers during classroom instruction.

The difficulty that most teachers encountered under planning and designing the learning event is the unavailability of resources which received the interpretation of Difficult with a weighted mean of 3.7. The least difficulty that the respondents encountered is the difficulty in lesson planning, and inadequate knowledge and skills in preparing and utilizing instructional material, which received the interpretation of Slightly Difficult having both a weighted mean of 1.9. One teacher added that lack of learning modules and other references is also one of the difficulties encountered in the planning and designing the learning event.

On the knowledge and mastery of the subject matter, having short time allotment was the most difficult agreed by the respondents with a weighted mean of 3.3 and an interpretation of Moderately Difficult while fluency in delivering the topic was the least agreed by the respondents with a weighted mean of 1.9 and an interpretation of Slightly Difficult.

Teachers experience Moderately Difficult in the use of appropriate teaching strategies and techniques because of the inability of the students to understand the lesson which received a weighted mean of 2.9. On the contrary, teachers have Slightly Difficult in teaching the subject that gained a weighted mean of 1.4.

The difficulty that they are facing in the selection, preparation and utilization of instructional materials is that they are having financial constraints that achieved a weighted mean of 3.3 and an interpretation of Moderately Difficult. In addition, teachers have Moderately Difficult because some of them lack knowledge in using modern instructional materials that earned a weighted mean of 2.3.

Under classroom management, teachers have Slightly Difficult in managing students' behavior wherein it earned a weighted mean of 2.4. Similarly, they also have Slightly Difficult in maintaining good relationship with their students, and encouraging them to participate in a class discussion which earned a weighted mean of 1.8. As classroom managers, teachers make sure to maintain the orderliness of the class, good behavior and the conduciveness of the classroom in order to build a harmonious and good teaching-learning outcome among the learners. As stated by Bean (2008), classroom management is a set of actions taken to create and maintain a learning environment conducive to successful instruction by arranging the physical environment of the classroom, establishing rules and procedures, maintaining attention to lessons and engagement in academic activities.

DepEd Order No. 41 s. 2012 on the revised guidelines on the opening of classes stated that the class size shall range from a minimum of 15 pupil/students per class to a maximum of 60 pupils/students per class for grade 5 to high school. And whenever possible, classes for Grade 1 to 4 shall not exceed40 pupils per class in order to keep the teaching-learning process more manageable during the foundation years of schooling. However, one of the respondents added that large number of students is one of the difficulties encountered under classroom management for having a number of 60 students in a class. The teacher also said that having large number of students makes it more difficult in facilitating the teaching-learning process. Similarly, the study of Alegre and Atienza (2002) on the

difficulties encountered in teaching Mathematics revealed the same findings that bigger numbers of students are also one factor that affect teachers in teaching the subject.

Furthermore, teachers have least difficulty in the assessment of student's learning during classroom instruction. In the table below, it shows that the highest weighted mean is 2.0, which is the difficulty in making rubrics for classroom activities and the lowest is 1.7 which is the difficulty in assessing the students with both interpretation of Slightly Difficult.

Table 11:- Difficulties Encountered by the Teachers in Teaching Agriculture during Classroom Instruction.

Indicators	Weighted Mean	Interpretation
1.1 Planning and Designing the Learning Event		
● Difficulty in lesson planning	1.9	Slightly Difficult
● Difficulty in formulating lesson objectives consisting of 3 domains	2.4	Slightly Difficult
● Inadequate knowledge and skills in preparing and utilizing instructional materials	1.9	Slightly Difficult
● Unavailability of resources	3.7	Difficult
● Others specify: Lack of learning modules and other references	0.5	Not Difficult
1.2 Knowledge and Mastery of Subject Matter		
● Fluency in delivering the topic	1.9	Slightly Difficult
● Coverage of Course Content is broad	2.1	Slightly Difficult
● Time allotment is too short	3.3	Moderately Difficult
1.3 Use of Appropriate Teaching Strategies and Techniques		
● Difficulty in the use of medium of instruction	1.5	Slightly Difficult
● Inadequate relevant instructional aids to help make the teaching-learning effective	2.5	Slightly Difficult
● Difficulty in teaching the subject	1.4	Slightly Difficult
● Inability of the students to understand the lesson	2.9	Moderately Difficult
● Art of questioning	1.8	Slightly Difficult
1.4 Selection, Preparation and Utilization of Instructional Materials		
● Lack of knowledge in using modern instructional materials in teaching	2.3	Slightly Difficult
● Lack of modern instructional materials	2.8	Moderately Difficult
● Financial constraints	3.3	Moderately Difficult
● Inappropriate used of instructional materials in teaching	2.4	Slightly Difficult
1.5 Classroom Management		
● Managing students' behavior	2.4	Slightly Difficult
● Maintaining good relationship with the students	1.8	Slightly Difficult
● Encouraging student's participation	1.8	Slightly Difficult
● Maintaining the classroom for conducive learning	2.2	Slightly Difficult
● Others specify: - Large number of students	0.5	Not Difficult
1.6 Assessment of Student's Learning		
● Difficulty in assessing the students	1.8	Slightly Difficult
● Difficulty in providing formative assessment	1.7	Slightly Difficult
● Difficulty in constructing summative assessment that develop HOTS of the students	1.9	Slightly Difficult
● Difficulty in making rubrics for classroom activities	2.0	Slightly Difficult

Rating	Descriptive Characteristics
4.2 – 5.0	Highly Difficult

3.4 – 4.1	Difficult
2.6 – 3.3	Moderately Difficult
1.8 – 2.5	Slightly Difficult
1.0 –1.7	Not Difficult

Solutions Applied by the Teachers to Addressed the Difficulties Encountered in Teaching Agriculture during Classroom Instruction

Lewin's field theory states that an individual is embedded a field called his life space, when present barriers and the alternatives to resolve the conflict. What one does, depends upon the way he interprets his present situation, his goal and the barriers in his field. This theory explains that agriculture teachers may encounter difficulties in the teaching process. But as a teacher and an individual, she has the capability to solve or find alternatives in order to address the faced difficulties.

In the planning and designing the learning event, the difficulty they encountered is unavailability of the resources that is why 70% of the respondents agreed that they must consult the principal or the department head in order to address this difficulty. And the least difficulty that some of them met are the difficulty in lesson planning and inadequate knowledge and skills in preparing and utilizing instructional materials, that were the reason why 30% of them admitted that they must attend in-service training for lesson planning. It implies that some teachers have needs to master lesson planning because it serves as a guide for the teacher in the learning process. As stated by Vicencio (1990), a teacher who takes the trouble in writing a plan takes consideration of the needs of children and plans the lesson around these needs. Therefore, a teacher must be armed with a lesson plan to get optimum results in teaching.

The difficulty that Agriculture teachers most encountered in the knowledge and mastery of the subject matter is that their time allotment is too short in teaching the subject and the least is the fluency in delivering the topic. To address the said difficulties encountered on the fluency in delivering the topic, 70% of the respondents agreed that they must master the subject matter itself before entering the classroom. On the other hand, the solution that teachers applied to address the short time allotment is that 60% of them agreed that they should only pick the easy and important subject to be discussed and unfinished subject matter will be discussed on the next meeting due to time allotment of one hour per day in teaching the subject. Because, as stated in the Resource Guide for Teacher Educators, School Administrators and Teachers (2012), the different learning areas of T.L.E. can onlybe taught 4 hours per week.

Teachers have difficulties in the use of appropriate teaching strategies because they encountered students with inability to understand the lesson. To answer the faced difficulties, 80% of the Agriculture teachers agreed that it is necessary to use different teaching strategies and they should exert more effort to enhance language fluency. While 50% of them agreed that they also need to attend in-service training for motivational strategies and art of questioning that will be helpful in facilitating the teaching-learning process. Turtoga (2005) stated that one's teaching effectiveness may greatly increase depending on his ability to make the most out of the different teaching methods. As a teacher, one must bear in mind the fact that method forms the bridge between the child and the subject matter that makes learning easier as well. This follows that a teacher must know the most appropriate methods/techniques to be employed in the teaching process. On the other hand, Bruner's constructivist theory stated that a theory of instruction should address the ways in which the body of knowledge can be structured so that it can be most readily grasped by the learner. This implies that the task of the teacher is to transform knowledge in a form that it can easily grasped by the students.

The solution applied by the teachers in the difficulties encountered in the selection, preparation and utilization of instructional materials revealed that 90% of the entire respondents agreed to show an eagerness to learn on how to manipulate modern instructional materials because some of them do not know how to use it. In addition, 50% of them want to consult the principal for additional modern instructional materials. Using modern instructional materials can make the teaching process both convenient to the teachers and students. Inadequacy of these may be an obstacle in their teaching. However, Lardizabal (1990) stated that some of the modern instructional materials are expensive but teachers can avail themselves of numbers of materials with just a little ingenuity and initiative.

Under classroom management, teachers have least difficulty in managing students' behavior. However, 100% of them still agreed to provide rules and regulations inside the classroom because according to Junio (2004), teachers should emphasize discipline among students in order to have a smooth, orderly and organized classroom. Seventy

percent (70%) of the teachers also agreed that they should keep the classroom well-lighted, properly ventilated and provide a friendly-classroom atmosphere to make the environment conducive for learning.

On the other hand, Agriculture teachers have the least difficulty in the assessment of students' learning during classroom instruction because 90% of them used different assessment strategies in assessing their students. However, there are few who have difficulties in constructing rubrics. Therefore, 40% of the respondents have needs to attend in-service trainings for rubrics development.

Table 12:- Solutions Applied by the Teachers to Addressed the Difficulties Encountered in Teaching Agriculture during Classroom Instruction.

Indicators	Frequency N=10	Percentage (%)
1.1 Planning and Designing the Learning Event		
● Attend in-service training for lesson planning.	3	30
● Be guided of the Bloom's taxonomy of educational objectives.	6	60
● Attend in-service training for preparation and utilization of instructional material.	5	50
● Consult to the principal/department head in regards with the unavailable resources	7	70
● Provide the unavailable resources.	6	60
1.2 Knowledge and Mastery of Subject Matter		
● Memorizing/mastering the subject matter before entering the classroom.	7	70
● Picking only the easy and important topic to be discussed.	6	60
● Unfinished subject matter will be discussed on the next meeting.	6	60
1.3 Use of Appropriate Teaching Strategies and Techniques		
● Attend in-service training for motivational strategies.	5	50
● Self-practice to enhance language fluency.	8	80
● Go for further studies to master the subject being taught.	7	70
● Uses of different teaching strategies and techniques that will make students' learn.	8	80
● Attend in-service training on the art of questioning.	5	50
1.4 Selection, Preparation and Utilization of Instructional Materials		
● Eagerness to learn on how to manipulate modern instructional materials.	9	90
● Buy personal modern instructional materials to facilitate the teaching process.	6	60
● Consult the principal for the additional modern instructional materials.	5	50
● Before teaching, decide what instructional materials to be used that is appropriate to the subject matter.	8	80
1.5 Classroom Management		
● Provide rules and regulations inside the classroom.	10	100
● Be approachable to your students but not too much.	8	80
● Provide positive reinforcement.	9	90
● Keeping the classroom well-lighted, properly ventilated and provide friendly-classroom atmosphere.	7	70
1.6 Assessment of Student's Learning		
● Use of the different assessment strategies to assess student's learning.	9	90
● Use of the art of questioning to facilitate formative assessment.	8	80
● Be guided of Bloom's taxonomy of educational objectives in constructing summative test.	9	90
● Attend in-service training on the rubrics development.	4	40

Difficulties Encountered by the Agriculture Teachers during Practical Agriculture

According to Okorie (2001), practical agriculture involves actual involvement in farming activities. As a subject, it requires more teaching time, effort and travel beyond the normal school day, according to Harper (2004).

Agriculture subject as a core part of T.L.E. cannot be simply learned through classroom instruction. Because according to Awuku et.al., (1991), the best way to learn Agriculture is by doing.

Agriculture as a practical subject requires a sound background in theory and practical aspects of the teachers. It also requires facilities like land, equipment and laboratory because according to Vandesboch (2006), these are the most important determinants of the effectiveness of agricultural education. In relation to this, teaching Agriculture as a core part of T.L.E. in the public secondary schools in Guinobatan, Albay will not be effective if the said determinants were the teachers' faced difficulties.

This study revealed that most teachers have Moderately Difficult in the application of skills on hands-on laboratory because of having short time allotment of the subject that earned a weighted mean of 2.9. Teachers have also least difficulty in facilitating the students during their hands-on laboratory which received a weighted mean of 1.9 and an interpretation of Slightly Difficult.

On the other hand, the most difficult factor encountered by the teachers during practical agriculture is the availability of farm resources because most teachers are having financial constraints in providing the needed materials to be used for hands-on laboratory that earned a weighted mean of 4.1 and an interpretation of Difficult. This study also found out that agriculture teachers have difficulties in teaching the practical aspects of the subject because of lack of land, farm tools, equipment and facilities that received a weighted mean of 3.8 and an interpretation of Difficult.

Furthermore, teachers find assessing student's performance as a Slightly Difficult having a weighted mean of 2.1. Some of them find it also Slightly Difficult in developing rubrics and scoring sheet having weighted mean 2.3

Table 13:- Difficulties Encountered by the Agriculture Teachers during Practical Agriculture.

Indicators	Weighted Mean	Interpretation
1.1 Application of skills on hands-on laboratory		
● Difficulty to convert knowledge into skills	2.1	Moderately Difficult
● Difficulty to demonstrate agricultural skills	2.2	Moderately Difficult
● Difficulty in facilitating students	1.9	Slightly Difficult
● Short time allotment	2.9	Moderately Difficult
1.2 Availability of Farm Resources		
● Financial constraints	4.1	Difficult
● Lack of land, farm tools, equipment and facilities	3.8	Difficult
1.3 Assessment of Student's Performance		
● Difficulty in assessing the student's performance	2.1	Slightly Difficult
● Difficulty in developing rubrics/scoring sheets	2.3	Slightly Difficult

Rating	Descriptive Characteristics
4.2 – 5.0	Highly Difficult
3.4 – 4.1	Difficult
2.6 – 3.3	Moderately Difficult
1.8 – 2.5	Slightly Difficult
1.0 –1.7	Not Difficult

Solutions Applied by the Teachers to Addressed the Difficulties Encountered during Practical Agriculture

As stated in the Lewin's field theory, it explains that the agriculture teachers have the capability to solve or find varied alternatives in order to address the faced difficulties.Teachers are having difficulties in the application of skills on hands-on laboratory because of having short time allotment of the subject. As stated in the Resource Guide for Teacher Educators, School Administrators and Teachers (2012), the time allotted for the different learning areas of T.L.E. is four (4) hours per week which requires teachers to maximize their time in order to carry out the subject being taught. However, Harper (2004) said that Agriculture as a practical subject requires more teaching time, effort and travel beyond the normal school day. That is the reason why 70% of them agreed to extend time for hands-on laboratory that is both convenient to the teacher and students. In addition, 70% of them also want to go further

studies in Agriculture in order master the subject being taught. Some teachers have also difficulty in facilitating the students during their hands-on laboratory that is why 30% of the respondents agreed to be strict especially on the first meeting.

Most teachers have difficulties on the availability of farm resources because of financial constraints and lack of land, farm tools, equipment and facilities for practical agriculture. To address these faced difficulties, 80% of the respondents usually consult the principals/department head with regards to their difficulties. Ten percent (10%) of them also let their students with failing grades to buy farm tools in order to pass the subject and address the unavailability of farm resources.

In the assessment of student's performance, there are teachers who have difficulties in assessing the students' performance and developing rubrics and scoring sheet. In order to address the faced difficulties, 80% of the respondents agreed that they should provide rubrics to assess students' performance easily. However, some of them have difficulty in developing scoring rubrics. That is why 50% of the respondents made an affirmation that they should attend seminars on how to develop rubrics.

Table 14:- Solutions Applied by the Teachers to Addressed the Difficulties.

Indicators	Frequency N=10	Percentage (%)
1.1 Application of skills on hands-on laboratory		
● Attend in-service training program for Agriculture.	5	50
● Go further studies in Agriculture.	7	70
● Be strict especially on the first meeting.	3	30
● Extend time for hands-on laboratory that is both convenient to you and to your students.	7	70
1.2 Availability of Farm Resources		
● Consult the principal/department head with regards to lack of land, farm tools, equipment and facilities for hands-on laboratory.	8	80
● Suggests to the parents that the farm tools will be their project in the Homeroom	5	50
● Conduct solicitation from philanthropists.	4	40
● Let the students buy farm tools as their project for a grading period.	3	30
● Let the students with failing grade to buy farm tools to pass the subject.	1	10
1.3 Assessment of Student's		
● Provide rubrics.	8	80
● Attend seminar on how to develop rubrics.	5	50

Conclusions:-

The Agriculture teachers are dominantly female, ages from 31-40 and 51-64, with teaching experiences of 1-10 years, were assigned to teach Horticulture, and NC II holders of both Horticulture and Animal Production, were graduates of BS Agricultural Education but only few were able to pursue master's degree and doctorate degree, and have trainings and seminars attended.

There are various activities being conducted by the Agriculture teachers during classroom instruction and practical agriculture for both Horticulture and Animal Production. However, teachers encountered numerous difficulties in teaching the subject that serves as their hindrances in facilitating it effectively and efficiently. The difficulties that teachers encountered during classroom instruction are the unavailability of resources, having short time allotment, the inability of the students to understand the lesson, and having financial constraints. On the contrary, the difficulties that most teachers encountered during practical agriculture include short time allotment for hands-on laboratory activities, financial constraints in providing the needed materials to be used for hands-on laboratory, and lack of land, farm tools, equipment and facilities to support the practical aspects of the subject.

As teachers, they applied multiple solutions to address the difficulties encountered in teaching Agriculture such as consulting the principal or the department head with regards to the unavailability of learning and farm resources. Teachers also used different teaching strategies so that slow learners can cope up in the class discussion and they are extending time for hands-on laboratory in order for the students learn the practical aspects of the subject. However, Agriculture teachers expressed that they still need support in dealing with their difficulties in lesson planning, motivational strategies, art of questioning and rubrics development by means of allowing them to attend trainings and seminars.

The school, community and the Department of Education must work hand in hand in helping the Agriculture teachers with regards to the difficulties they encountered in the teaching-learning process.

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