

**Ministry of Science and Higher Education**



**Higher Diploma Program in Teaching**

**Handbook of Pedagogical Training for Agricultural  
Academics**

**In Higher Education Institutions**

**Addis Ababa, Ethiopia**

**May 2021**

**Higher Diploma Program (HDP)**  
**Handbook of Pedagogical Training for Agricultural Academics**  
**In Higher Education Institutions**

**Authors**

<b>No.</b>	<b>Name of the Team member</b>	<b>University</b>
1.	Netsanet Bayleyegn	Gondar
2.	Kassaye Gurebiyaw	Gondar
3.	Anbes Tenaye	Hawassa
4.	Dr. Yosef Deneke	Jimma
5.	Mesganaw Addis	Debre Markos
6.	Dr. Solomon Abera	Mekele
7.	Dr. Ketema Geleta	Wollega
8.	Tizazu Yirga	Jimma
9.	Tadele Yeshiwas	Bahir Dar
10.	Alemu Bezie	Ambo
11.	Terefe Belay	MoSHE
12.	Endris Mekonnen	Jhpiego/GtN

**Reviewers of the final draft**

1.	Eshetie Aragie	Bahir Dar
2.	Fayisa Eticha	Wollega
3.	Eden Fasika	Hawassa
4.	Hirut Geremew	Bahir Dar
5.	Seyoum Shega	Haramaya

## **Acknowledgements**

The Ministry of Science and Higher Education would like to thank those higher education institutions management and staffs and specifically those academicians who directly contributed a lot in the review and revision of the module and for this document to become a reality. We are indebted to Jhpiego-Ethiopia and the USAID funded Growth through Nutrition Activity for its financial and technical support.

## **Foreword**

One of the measures that have been taken by the Ministry of Science and Higher Education (MoSHE) to enhance the quality of education in higher education institutions is the professional training of academic staff through the Higher Diploma Program (HDP). Successful completion of the HDP has also been instituted as a requirement for all university teachers in public universities. A series of HDP training has been given so far and the vast majority of academic staff in public universities has completed the program. The training was conducted using handbooks which have been revised from time to time with the view to make them increasingly more relevant and appropriate for academic staff at university level. The present version is a continuation and a product of the improvement in the Handbook.

The Handbook is intended to guide HDP leaders and tutors who facilitate the training in the universities where both experienced and less experienced staff work together. It is believed that the training will assist the more experienced staff to develop their own expertise even more. They will also be able to share their pedagogical skills to their less experienced peers. The Handbook also allows discreet flexibility in the sense that HDP leaders and tutors can make appropriate adjustments in terms of enrichment or emphasis of the content in order to attend to the professional needs of participants adequately and to achieve the purpose of the training at the highest level.

The reviewers of the four modules who were selected by the Ministry of Science and Higher Education were individuals from various universities. The Team undertook the task of copy editing by making the most use of the limited time allotted for the task. The adjustments included, but were not limited to, clarifying concepts, including more relevant activities, removing unnecessary repetitions and details, and improving the language.

The Handbook comprises modules and units. The modules include activities which partly involve field work. The field work provides the opportunity for participants to improve their teaching and research by testing the application of their knowledge and skills in organizations outside the university system. This module is more appropriate for academic staff working in agricultural college, school and faculty.

## TABLE OF CONTENTS

### Table of Contents

<b>Authors</b> .....	i
<b>Acknowledgements</b> .....	2
<b>Foreword</b> .....	3
<b>INTRODUCTION</b> .....	11
<b>1. Aim of the Program</b> .....	11
<b>2. Rationale for Customization</b> .....	11
<b>3. Core Competencies</b> .....	12
<b>4. Objectives and Principles</b> .....	12
<b>4.1 Objectives</b> .....	12
<b>4.2 Principles of the Program</b> .....	13
<b>5. Roles and Responsibilities of the HDP Implementers</b> .....	13
<b>5.1 The Higher Diploma leader is responsible for</b> .....	13
<b>5.2 The Higher Diploma Tutor</b> .....	13
<b>5.3 Higher Diploma candidates</b> .....	14
<b>6. Support for the HDP</b> .....	14
<b>7. Award of the Higher Diploma</b> .....	14
<b>MODULE ONE: UNDERSTANDING HIGHER EDUCATION</b> .....	16

<b>Unit One: Features of Higher Education .....</b>	<b>17</b>
<b>1.1.1 Higher Education in the Globalized World .....</b>	<b>17</b>
<b>1.1.2 Agricultural Education in Higher Institutions .....</b>	<b>18</b>
<b>1.1.3 Agricultural Education in Ethiopian Higher Institutions.....</b>	<b>18</b>
<b>1.1.2 Vision, Mission, Goals and Core Values of Higher Education.....</b>	<b>20</b>
<b>1.1.2.1 General View .....</b>	<b>20</b>
<b>1.1.2.2 Vision, Missions, Goals and Core Values of the Candidates’ HEIs .....</b>	<b>21</b>
<b>1.1.3 Higher Education Leadership .....</b>	<b>21</b>
<b>1.1.4 Responsiveness of Agricultural Higher Education Institutions to Needs and Expectations.....</b>	<b>22</b>
<b>1.1.4.1 Local, Regional and National Needs .....</b>	<b>23</b>
<b>1.1.4.2 International Standards .....</b>	<b>23</b>
<b>Unit Two: The Role of Reflection among Agricultural Higher Education Teachers.....</b>	<b>25</b>
<b>1.2.1 Introduction .....</b>	<b>25</b>
<b>1.2.2 Conceptualizing Reflection .....</b>	<b>25</b>
<b>1.2.2.1 Forms and Levels of Reflection .....</b>	<b>26</b>
<b>1.2.2.2 Reflection as Thinking Process.....</b>	<b>28</b>
<b>1.2.3 Techniques of Reflection .....</b>	<b>29</b>
<b>1.2.4 Cases in Reflective Thinking.....</b>	<b>30</b>
<b>Unit Three: Professionalism in Higher Education .....</b>	<b>33</b>

1.3.1 Professional Ethics and Values.....	33
1.3.2 Peculiar Professional Ethics in AHEIs.....	34
1.3.3 Continuous Professional Development (CPD) .....	35
1.3.3.1 The Concept of Continuous Professional Development (CPD) .....	35
1.3.3.2 Rationale of Continuous Professional Development (CPD) .....	36
1.3.3.3 Continuous Professional Development (CPD) for instructors in AHEIs .....	36
1.3.4 Higher Education Teachers as Role Models.....	43
<b>Unit Four: Diversity Management</b> .....	47
1.4.1 A Description of Diversity .....	47
1.4.2 Inclusive education as a means of accommodating diversity .....	48
1.4.3 Gender Perspectives in Higher Education .....	50
MODULE TWO: MANAGING TEACHING, LEARNING, AND ASSESSMENT IN AGRICULTURAL EDUCATION.....	56
Unit one: Understanding Learning .....	57
2.1.1 Conceptualizing Learning.....	57
2.1.2 Learning Styles .....	59
2.1.3 Setting Learning Outcomes .....	63
2.1.4 Time Management .....	67
<b>a) Time Management Matrix</b> .....	67

<b>b) How to Apply the Time Management Matrix .....</b>	<b>72</b>
<b>c) Tips for Effective Time Management .....</b>	<b>74</b>
Unit two: Active Learning Methods .....	76
2.2.1 Essence of Active Learning.....	76
Improved student perceptions and attitudes towards information literacy (Deltor et al., 2012) .....	77
2.2.2 Challenges of implementing active learning methods in Ethiopian HEIs.....	77
2.2.3 Active learning methods.....	81
<b>Activity 2.10.....</b>	<b>83</b>
2.    Read the following descriptions carefully and match with the appropriate methods.	83
2.2.4 Collaborative and Cooperative Learning.....	85
2.2.5 Varieties of Behaviors in Group Situation .....	86
<b>Managing Group Work.....</b>	<b>89</b>
2.2.6 Encouraging Independent Learning/Learner Autonomy .....	92
<b>a) Teaching, Coaching and Mentoring to Promote Independent Learning .....</b>	<b>94</b>
<b>b) Promoting Critical Thinking Skills: Teaching for Thinking.....</b>	<b>97</b>
Unit Three: Instructional Planning .....	99
2.3.1 Course Planning.....	100
1.    Based on your own experience what does the following statement mean to you? If you fail to plan, you plan to fail.....	<b>100</b>

<b>Components of a Course Plan</b> .....	<b>101</b>
2.3.2. Session Planning.....	104
<b>Components of a Session Plan</b> .....	<b>104</b>
<b>Guidelines for session planning</b> .....	<b>105</b>
2.3.3. Self-Session Evaluation.....	106
2.3.4. Action Planning .....	108
2.3.5. Use of Instructional Media .....	109
<b>Unit Four: Assessment</b> .....	<b>111</b>
2.4.1 Concept of Assessment.....	111
2.4.2 Types of Assessment .....	113
2.4.3 Principles of Assessment .....	114
2.4.4 Key Characteristics of Assessment for Learning .....	115
2.4.5 Peer Assessment and Self-assessment .....	118
2.4.6 Continuous Assessment.....	122
2.4.7 Assessment Methods .....	125
2.4.8 Planning a Test .....	134
2.4.10. Monitoring and Evaluations .....	11
<b>Unit Five: Managing Teaching Sessions (Teaching project)</b> .....	<b>13</b>
2.5.1. Steps to be followed while conducting Teaching Session Project .....	13

2.5.2. Session evaluation by peer/HDL observation .....	14
<b>MODULE THREE: ACTION RESEARCH .....</b>	<b>18</b>
Unit One: The Concept and Characteristics of Action Research .....	19
3.1.1 Conception of Action Research .....	19
3.1.2 Why action research is preferred for HDP?.....	20
3.1.3 Procedures and Ethics in Conducting Action Research .....	20
Unit Two: Action Research Project.....	22
3.2.1 Components of Action Research Report .....	22
<b>MODULE FOUR: PLACEMENT IN ORGANIZATION OR EDUCATIONAL INSTITUTION</b> .....	<b>27</b>
Unit One: Organizational placement-guidelines and report .....	27
4.1.1 Personal priorities for organizational placement .....	28
4.1.2 Report Format.....	30
4.1.3 Final Reflection on the Organization Placement.....	31
Unit two: Placement to Agricultural Educational Institution .....	32
4.2.1 Collaboration with Educational Institutions .....	32
Unit Three: Agricultural Educational Institution Placement Guidelines and Report .....	34
4.3.1 Personal Priorities for your Agricultural Educational Institution.....	34
4.3.2 Teaching Practice in the Agricultural Educational Institution (Project) .....	37

4.3.3 Final Reflection on School Placement..... 38

## **INTRODUCTION**

### **1. Aim of the Program**

This Higher Diploma Program (HDP) for agricultural academic staff is based on the 2018 Higher Diploma Program for Teacher Educators developed by MoSHE. It contains the major elements of the 2018 Program with an emphasis on the improvement of the quality of teaching and learning and the development of reflective practitioner. The Program gives room for discussing and reflecting on recent significant changes in the teaching-learning processes of higher education to meet the highest quality standards. A few of these changes are the increased appreciation of field-based and problem-solving learning in educational and other types of institutions.

### **2. Rationale for Customization**

The consultative workshop that was held in Debre Markos University in collaboration with MoSHE and Jhpiego discussed the HDP content, context, delivery methods, challenges and the way forward on the 2018 HDP document. One of the recommendations given was to customize the HDP handbook to specific agricultural context. Hence, MoSHE and Jhpiego organized a five-day review workshop on the above-mentioned concerns related to Agriculture and Health colleges.

Customization of the HDP handbook to Agricultural Higher Educational Institutions (AHEIs) is crucial in revitalizing the sectorial demand of the HDP handbook to agricultural instructors. Effective teaching skills and tools in agriculture demand laboratories, demonstrations, observations, use of real objects, discussions, and supervisions. Hence, a tailored and appropriate active teaching methods and tools in agricultural education programs are required. There were several important components identified in the handbook to be customized. These components included the type of subject matter, cases, activities, reflective activities, instructional units, skills, facts, concepts, processes and principles, analysis of the student-teacher activities for the sessions and use of selected teaching-learning approaches.

Besides, HDP contributes to improve quality of education, transforming agriculture concerning current issues in the area of technological advancement and practical skills towards increasing

agriculture production, productivity, and efficiency of the agriculture sector towards sustainable development.

The Handbook consists of four modules. These modules could be enriched and further aligned with the needs and interests of individual departments/academic units in Agricultural Higher Education Institutions based on the discussion and contributions of HDP leaders, candidates and all stakeholders.

### **3. Core Competencies**

- ✚ use different reflective forms to demonstrate professionalism via managing diversity to transform agriculture through applying acquired knowledge, practical skills, and attitude based on evidence-based analysis in agricultural education

### **4. Objectives and Principles**

#### **4.1 Objectives**

The program will enable HDP candidates to:

- ✚ identify their needs and become ethical professional
- ✚ be reflective teachers
- ✚ develop teaching skills based on sound theoretical knowledge and experience
- ✚ serve as a role model for effective teaching
- ✚ contribute to institutional and community development
- ✚ provide high quality learning experience for students
- ✚ engage in action research, collaborative learning and team work
- ✚ adopt inclusive approach in teaching-learning process
- ✚ develop knowledge and appropriate attitudes concerning relevant public service programs and strategies
- ✚ analyze educational policies and strategies at a regional, national and international level
- ✚ evaluate agricultural policies and strategies at a regional, national and international level
- ✚ encourage critical thinking on agricultural issues

## 4.2 Principles of the Program

The principles underlying the HDP relate to the enhancement of:

- ✚ teaching and assessment
- ✚ professional ethics
- ✚ self-assessment and continuous improvement
- ✚ open-mindedness and accountability
- ✚ collaboration and dialogue
- ✚ engagement and commitment
- ✚ inclusiveness
- ✚ knowledge and skill based
- ✚ community service

## 5. Roles and Responsibilities of the HDP Implementers

### 5.1 The Higher Diploma leader is responsible for

- ✚ managing the program
- ✚ running two 2-hours sessions each week
- ✚ organizing meetings with HDTs to plan and share work
- ✚ conducting professional discussion with candidates
- ✚ carrying out continuous assessment
- ✚ assessment of candidates through constructive written feedback
- ✚ observing a class session conducted by individual HDP candidates and providing feedback
- ✚ distinguishing agricultural related problems and issues, and
- ✚ authorizing candidates to proceed with the next module in the Handbook after making sure that they have completed the preceding module successfully.

### 5.2 The Higher Diploma Tutor

The HDP tutor is responsible for:

- ✚ assisting the HDL plan weekly sessions

- # supporting delivery of the class sessions
- # facilitating group discussions and providing feedback
- # observing candidates' lessons and giving comments
- # assisting the HDL in assessing candidates' work
- # helping the HDL in conducting professional discussions with candidates
- # encouraging the candidate to demonstrate and discuss agricultural related problems and issues

### **5.3 Higher Diploma candidates**

Higher Diploma candidates are responsible for

- # attending all sessions
- # participating actively in HDP sessions and related activities
- # completing and submitting all required activities as scheduled
- # making sure that you have completed all the requirements in a module before start taking on the next module.

### **6. Support for the HDP**

There should be a central body, which supports, coordinates, oversees and evaluates the HDP in each AHEI.

### **7. Award of the Higher Diploma**

Successful completion of the HDP will be based on evidence provided in the portfolio. The candidates will develop the portfolio during the program with the guidance of the HDL and HDTs. The final Portfolio of Evidence for moderation should include:

- # Reflective activities showing development of reflective thinking and its effect on practice
- # Lesson plans showing development of active learning and assessment techniques
- # Records of formal observations of the candidate by the HDL or HDT
- # Report on field based learning
- # Report on Action Research Project

- ✚ Continuing Professional Development Plans
- ✚ Any activities that may be suggested by HDL or HDT
- ✚ All End-of-Module Self Assessments and the Final Self-Assessment

HDP candidates' evaluation will be as follows:

- ✚ Pass (if a candidate has fulfilled all requirements)
- ✚ Incomplete (if a candidate has failed to complete any one of the requirements)
- ✚ Fail (if a candidate fails to meet all the requirements of Module One)

After successful completion of the program, the candidate will be awarded a certificate in “Higher Diploma in Teaching”

Note: before starting the program, candidates should complete the ‘Before HDP’ part of the Appendix.

## **MODULE ONE: UNDERSTANDING HIGHER EDUCATION**

This module emphasizes the understanding of the environments of higher education institutions. It is believed that higher education teachers become effective when they understand more fully their respective institutions' mandates, roles, responsibilities and expectations. Four major units are included in the module. The first unit deals with higher education institutions' missions, visions, and core values. It also discusses leadership contexts, mandates and functions. The second unit addresses the nature and importance of reflection in teaching and learning. The third unit deals with the role of professionalism and professional development in advancing the mission of institutions of higher learning. The fourth unit addresses inclusive higher education with respect to some principles of diversity, inclusion and equity. Opportunities and challenges in teaching diverse populations are also treated.

### **Module Learning Outcomes**

Upon completion of the module, a candidate will be able to:

- ✚ realize the contexts of higher education institutions
- ✚ characterize the contexts of higher education institutions
- ✚ realize the context of agricultural higher education institutions
- ✚ explain the mission, vision and core values of higher education institutions
- ✚ explain professionalism in the context of higher education institution milieu
- ✚ state the opportunities and constraints pertaining to the responsibilities of higher education teachers
- ✚ describe ways of handling diversity
- ✚ use the skills and knowledge of reflection to enable students become reflective learners
- ✚ document their continuous professional development (CPD) track records and identify their future CPD needs
- ✚ demonstrate awareness on inclusive pedagogy and use it

# Unit One: Features of Higher Education

## Unit learning Outcomes

After the completion of this unit, a candidate will be able to:

- ✚ explain the characteristic features of higher education institutions
- ✚ explain the characteristic features of agricultural higher education institutions
- ✚ discuss the mission, vision and core values of higher education institutions in general and home university in particular
- ✚ describe the higher education leadership situation in higher education institutions
- ✚ elaborate on the roles and responsibilities of higher education teachers

The Unit deals with higher education institutions ‘characteristics, missions, vision, goals and core values as well as the leadership situation. To this end, brainstorming and pertinent learning and reflective activities are incorporated.

### Activity 1.1

1. Outline the characteristic features of higher education.
2. Outline the characteristic features of agricultural higher education.
3. How does the academic profession differ from other professions?
4. What are the current challenges of Ethiopian agricultural higher education?
5. Higher education institutions across the globe are increasingly pressed to find ways of proving their worth not only in the academic preparation of students, but also in how their preparations are linked to business and industry. Discuss the actions that need to be taken by your university in addressing this issue.

#### 1.1.1 Higher Education in the Globalized World

For over half a century, Ethiopia and the rest of Sub-Saharan Africa have been engaged in an effort to develop higher education. Their efforts have been influenced by globalization emanating mainly from the models of the western world. This is the case, for example, with massification and the growth of the private sector.

In recent years, AEHIs have been under increasing governmental pressure to make direct, visible and relevant contribution to national research and development. More precisely, teaching, research and outreach programs of AHEIs are expected to be in line with national strategies for meeting the challenges of food security, economic growth and sustainable environmental management.

### **1.1.2 Agricultural Education in Higher Institutions**

Agricultural education is defined as the teaching of knowledge, skills, values, and practices of crop and animal farming using natural resources sustainably, for the purpose of producing food, feed and raw-materials for industries to sustain the needs of a society.

The system of higher education in agriculture evolved over a period of 150 years. Agricultural colleges and universities have played a significant role in serving the community. They have been contributed in advancing knowledge and educating students in science and technology.

### **1.1.3 Agricultural Education in Ethiopian Higher Institutions**

As agricultural higher education is critical to a country's development, Ethiopia needs to have a farsighted approach to streamline education in order to generate innovative ideas to facilitate the much needed reform.

The importance of agricultural education and research and its impact on development in Ethiopia was overlooked. Agricultural education and research started with the establishment of the Ambo and Jimma Colleges of Agriculture in 1947 and the Imperial College of Agriculture and Mechanical arts (in today's Haramaya University) in 1953.

The mission of agricultural education program began its operation in Jimma as Agricultural Technical School by enrolling best qualified elementary level graduates from all over the nation by providing a unique and comprehensive training program designed to encompass both theoretical and practical agricultural education.

Additionally, agricultural higher education institutions historically involved in agricultural education and research include Awassa College of Agriculture (1977); Wondo Guenet College

of Forestry (1978); Faculty of Veterinary Medicine at Debre Zeit (1979); Mekelle University College (1994). Currently, agriculture and agriculture-related education is offered in almost all universities found in the country. These include forestry, veterinary medicine, food and nutrition, agricultural production economics, and agribusiness and value chain management have been remarkable. However, the quality of the agricultural education process is quite unsatisfactory and is not in a position to meet the need of the country. Moreover, globalization calls for the integration of the world economies by allowing free movement of trade, technology, and people. The universities are the appropriate place to house expertise on this topic, to provide education for undergraduate and post-graduate students, and to inform the impact of globalization to societies at large.

**Activity 1.2**

1. List the advantages and disadvantages of the process of globalization in the development of agricultural higher education in Ethiopia.

Advantages of Globalization	Disadvantages of Globalization

**Activity 1.3**

1. What do you think are the advancements and challenges of agricultural higher education institutions in Sub-Saharan Africa in general and in Ethiopia in particular?

Advancements	Challenges

2. State how globalization [in higher agricultural education] has affected the development of Ethiopian higher agricultural education with regard to organization (structure), curriculum development, and system of evaluation, certification and other similar aspects.
3. How should Ethiopian higher agricultural education institutions be steered to best accomplish their missions in the context of globalization?
4. Mention the importance of AHEIs in the development of the agricultural sector in Ethiopia.
5. Discuss the features of student-teacher relations in Ethiopia and other countries.

## **1.1.2 Vision, Mission, Goals and Core Values of Higher Education**

### **1.1.2.1 General View**

In the Ethiopian contexts, agricultural higher education institutions (AHEIs) have the mission of teaching, research and community service. These institutions have shown progress which includes:

- ✚ favorable national and international policies
- ✚ increasing support from bilateral and multi-lateral donors and funding institutions
- ✚ rising number of private higher education providers
- ✚ expanding technologies in information and communication, and
- ✚ a growing trend in strategic planning and other reform initiatives

However, in discharging their missions effectively, higher education institutions in Sub-Saharan Africa have faced a number of challenges. These include:

- ✚ limited autonomy and academic freedom
- ✚ escalating enrolments
- ✚ declining resources
- ✚ high outflow of higher education teachers, and
- ✚ problems of equity and quality

### Activity 1.4

1. Identify internal and external factors that influence the quality of agricultural higher education in Ethiopia.

Internal factors	External factors

#### 1.1.2.2 Vision, Missions, Goals and Core Values of the Candidates' HEIs

*At this point, references to be consulted prior to the discussion session: The Senate Legislation of the relevant/respective university, especially those sections dealing with Vision, Mission, Values and Goals.*

#### Reflective Activity 1.1

Discuss the mission of your university from the point of view of content, relevance, clarity, precision, etc.

1. Reflection on the Mission
2. Reflection on Vision
3. How effectively are the teachers in your AHEI working towards realizing the mission and vision of the institution?
4. What are the core values of your institution?
5. To what extent are the above core values practiced?

#### 1.1.3 Higher Education Leadership

Higher Education Institution leadership involves a number of hierarchies – President, Vice Presidents, Deans/Directors, etc., and the number and the designations of the different positions

can vary from university to university. In addition, there are various administrative units (e.g. finance office) in HEIs.

### **Reflective Activity 1.2**

1. How relevant and important are the various leadership positions for the effective functioning of AHEIs?
2. To what extent does the top leadership understand and support the efforts of lower academic units to achieve the ultimate goals of the institution?
3. From the point of view of need and efficiency, how satisfactory is the organization of HEIs?
4. Explain the effectiveness of your college offices in supporting the activities in the organization.
5. Academic Rules and Regulations

### **Reflective Activity 1.3**

1. How reasonable are the rights and duties of the academic staff as indicated in the Senate Legislation of your University?
2. To what extent are higher education teachers in your university performing according to their duties and responsibilities as indicated in the Senate Legislation?

#### **1.1.4 Responsiveness of Agricultural Higher Education Institutions to Needs and Expectations**

*At this point, reference to be consulted prior to the discussion session: The 2019 Higher Education Proclamation.*

Agricultural higher institutions should be responsive to local, national and international requirements, which include relevance, quality, center of excellence in their field of specialization and internationalization. In the context of these new orientations, higher education policy should fit into the complex dynamics of the AHEIs that have interfaces with secondary or "pre-university" education.

#### 1.1.4.1 Local, Regional and National Needs

Higher agricultural education institutions (AHEIs) should align their plan and implementation strategies to local, regional and national needs and expectations. In this regard, AHEIs are expected to play a leading role in training skilled labor that can serve as a catalyst in identifying root causes for low agricultural productivity, devising appropriate remedial measures to surmount problems of food self-sufficiency and improving the traditional farming practices.

#### 1.1.4.2 International Standards

AHEIs should strive to internationalize some of their programs in line with the demands of the world of work. This has two purposes: to achieve the global quality standard, and to attract foreign higher education teachers and students. These two purposes should be achieved with the minimum cost.

#### Activity 1.5

1. In your opinion what are the strengths, gaps or limitations of the 2009 Higher Education Proclamation?

Strengths	Limitations / gaps

2. Do you think that the current academic and administrative bodies of higher education institutions in Ethiopia are competent enough to meet the expectations of the society?
3. Based on your experience as a higher education teacher, discuss the theoretical, structural and practical options for the success of AHEIs in Ethiopia.
4. Rate the level of responsiveness of Ethiopian AHEIs to the issues indicated in the following table.

S/N	AHEIs responsiveness	High	Medium	Low	Justification for rating
1	Local needs and expectations				
2	Regional needs and expectations				
3	National needs and expectations				
4	International standards				

**Activity 1.6**

1. In your opinion what are the strengths, gaps or limitations of the Agricultural policy of Ethiopia in achieving the sustainable development goal of the country?

Strengths	Limitations / gaps

## **Unit Two: The Role of Reflection among Agricultural Higher Education Teachers**

### **1.2.1 Introduction**

This unit focuses on improving the competencies of Agricultural teachers in HEIs for delivering quality education. In order to develop this kind of competency they have to be reflective practitioners in their day to day activities. In other words, they should have the habit of looking back on experiences so as to learn from them. This is a central point in reflection. Reflection may also be considered as a means of constructing knowledge about oneself and about the world. In this direction, this unit deals with higher education teachers as reflective practitioners who learn through reflection, as well as with the forms, types and ways of using reflection.

### **Learning outcomes**

After the successful completion of this unit, a candidate will be able to:

- ✚ describe concepts related to reflection and reflective practices
- ✚ identify the types and levels of reflection
- ✚ state the rationale for being reflective in higher education teachers
- ✚ apply reflective learning in their day to day practices
- ✚ use different techniques of reflection to develop their skills of reflection and reflective teaching
- ✚ use his/her skills and knowledge of reflection to enable students become reflective learners

### **1.2.2 Conceptualizing Reflection**

Part of the process of reflection involves looking backwards to determine what we have succeeded in achieving already (or failed at doing), to get a sense of where we have come from and what our ‘things to do’ list looks like. Another part of the process, which is often given less attention, is looking forward and therefore towards achieving our future goals. So, taken together, reflection can be said to involve both *projection* and *review*.

Scholars define reflection in teaching and learning as

- reviewing one's practice, identifying lessons from it and determining how the lessons influence future action, or
- engaging in a deliberate, purposeful, structured activity to link theory and practice.
- In short, reflection has to do with learning, change and development.

#### **Reflective Activity 1.4**

1. What do reflection, reflective practice and reflective teaching mean to you?
2. How well do you practice reflective thinking to deepen your own understanding and to improve your teaching competence?
3. Based on your teaching experiences give examples of reflection on, in and for action.
4. How well have you handled the technical, practical and critical levels of reflection?  
Elaborate.

#### **1.2.2.1 Forms and Levels of Reflection**

Four common forms of reflection can be identified as shown below in Table 2.1. Each kind of reflection does a different job. In learning, more about yourself, your work or workplace, and when trying to do something differently or better, you often have to be able to use more than one kind of reflection.

The details of each of the reflective practices explained below.

**Reflection in action;** It means reflection in a particular context or workplace – for example, reflecting on what we are doing in a classroom, an office, chairing in a meeting, an agricultural field, a factory and so on. Additionally, it means thinking about what you are doing, while you are actually doing it. Some call this ‘thinking on your feet’. Much of this can be unconscious; you may be unaware that you are doing it. For example, you ask your student a question, then read the expression on her/his face. You quickly see that s/he doesn't understand what you have said, so you rephrase the question in your mind and ask it again. This happens quickly, in the heat of the moment. So reflection-in-action is about making on-the-spot adjustments to what you are doing, but in the midst of the action – not two or three days later. It is about improvisation.

**Reflection on action;** It can mean reflecting after the event – say, a day or two days later. It is like thinking about one’s teaching after the class. This essentially involves looking back and going over things again. So this kind of reflection is linked with the notion of time. It is retrospective thinking or thinking after the event. It can also mean focusing on something significant. For example, what would you regard as a ‘significant’ encounter or incident? This implies that you have to be selective. The key thing is to ask yourself, ‘What’s significant in what I am experiencing and doing?’ You might ask yourself, ‘What’s caught my eye and stayed in my memory?’ You cannot reflect on everything! This is unwise, and not healthy or necessary.

**Reflection for action;** It is reflecting for our future action. It is thinking about the future event. It is proactive thinking to guide future action. If you reflect on something you’ve done, been involved in or observed, presumably you are doing it for a particular reason. For example, you may want to understand it better, know more about it, change or improve it. These are all good reasons why you might reflect on your work or that of others. This kind of reflection is also about planning to take some (positive) steps to do something with what you’ve learned. This planning aspect is important, because there is a difference between planning for action and action itself. For example, you might see and imagine something being different or better, but actually putting these thoughts into practice, in a particular workplace, is quite different. Additionally, you might think of alternative ways of reducing the time herds of cow queue for milking, examination, and cleaning. This is quite different from actually doing (or being able to do) something about reducing the queue. Planning-for-action is sometimes called ‘anticipatory reflection’

**Reflection with action;** It is actually about doing something. It is conscious action to develop your understanding or your skills. It is about weighing up what options you have, making a decision to act in a particular way and then doing it. The ‘with’ part also means acting alone or with others. There are limits to learning and acting alone. Often the power to change and improve something is better achieved by a group or team.

Scholars define reflection in teaching and learning as reviewing one’s practice, identifying lessons from it and determining how the lessons influence future action, or engaging in a deliberate, purposeful, structured activity to link theory and practice. In short, reflection has to do with learning, change and development.

Table 1.1 : Four of the common forms of reflection

<b>Kinds of reflection</b>	<b>Meanings</b>
Reflection-IN-action	1. In a particular workplace 2. ‘Thinking on your feet’, improvisation
Reflection-ON-practice	1. After the event 2. On something significant
Reflection-for-action	1. For a reason or particular purpose 2. Planning what you are going to do
Reflection-with-action	1. Conscious future action 2. Action alone or with others

Reflection may assume three levels, namely:

1. **Technical:** A level of reflection in which teachers of higher education deal with technical issues in their classrooms and the learning environment in their universities.
2. **Practical:** A reflection in which higher education teachers examine the relevance of their students’ learning for their life and work.
3. **Critical:** A level in which higher education teachers evaluate their teaching in relation to student characteristics - gender, social class, etc.

### **1.2.2.2 Reflection as Thinking Process**

Reflection will keep us moving along the continuum towards agility in our classrooms, and this will resonate further afield as our students move on and reflect their capacity to learn in future environments. As educators, we need to satisfy recruiters, students and the general public as to the standards we inculcate in our students while we work together toward building the potential for a more harmonious world.

In the process of reflection, we learn to pause in order to identify constructs, reactions, responses and to name and describe them to ourselves. This is to self-evaluate and clarify what is constraining and what is positively enhancing. We are involved in making choices to develop, alter, and bring to life greater awareness and clarity from within our inner being.

## Activity 2.2

1. How applicable are the different forms of reflective thinking to teaching and research? Cite examples.

### 1.2.3 Techniques of Reflection

Higher education teachers can use different techniques of reflection to develop their reflection skills. Commonly used reflection techniques are described briefly as follow.

- + **Diaries** may be used to record experiences, examine past practices, and develop better means of teaching-learning. In other words, going through an experience by itself does not result in better practice. Some reflection should be done on the experience.
- + **Critical incident** may be described as a particularly significant and unpredicted event which requires close examination in order to determine its implication for the improvement of future activities. Critical incident reflection can be used in different ways to produce narratives (individual and/or group) based on the recall of an experience.
- + **Portfolio** is evidence of learning and deep thinking. In the present case it refers to learning by a higher education teacher. Portfolio consists of two main components: evidence of learning and reflections.
- + **Action research** is a systematic way of reflecting on a particular problem in teaching-learning, devising an appropriate solution to the problem and testing the solution. (Action research will be addressed in some detail in Module Three.)
- + **Checklist** is helpful in evaluating one's learning or teaching performance. It shows clearly where the gap exists in the events of teaching and learning process. It is a valuable evaluation device when carefully developed, validated, and applied. A sound evaluation checklist clarifies the criteria that should be considered when evaluating something in a particular area; aids the evaluator not to forget important criteria; and enhances the assessment's objectivity, credibility, and reproducibility. In the classroom evaluation and practical teaching, checklists are useful for both formative and summative evaluations.

### **Reflective Activity 2.3**

1. What are the different techniques of reflection that you have been using in your reflective learning endeavors? Why did you use them and how?
2. Which reflective technique is more preferable and appropriate for teaching/learning and for lifelong learning? How?
3. If you didn't use reflective techniques ever before in your learning and teaching process, please apply all the above reflective techniques in one of your class and discuss the approach you have followed?

#### **1.2.4 Cases in Reflective Thinking**

Read the following cases and compare them with your actual practice. Then reflect on the strengths, weaknesses of the cases and on the lessons you can draw from each case first individually and then in pairs. Finally present the outcome to the whole class.

##### **Case 1**

Balcha is one of the junior teachers in one of the higher agricultural education institutions in Ethiopia. He always plans his lessons which involve different active learning methods and assessment techniques. He tries his best to facilitate his students' learning by managing his classroom effectively. When something goes wrong in his classroom, he takes it seriously, looks for a solution and takes immediate action to address it. After conducting his classes, he looks back and examines his experiences regarding his planning, the active teaching methods he used, and the assessment, classroom management and the communication methods he employed. Finally, he identifies his own strengths and weaknesses as well as those of his students. He then plans to improve on his weaknesses in his subsequent classes. Balcha has the habit of questioning his practices and improving his teaching to facilitate quality learning by his students.

##### **Case 2**

Endelibu is an academic staff in one of the oldest agricultural higher education colleges in Ethiopia. He teaches his lessons with no planning. He enters class and presents what he has prepared as notes. When a lesson is over he will teach the next in the same manner. Sometimes

he misses his classes but regards himself as the only source of knowledge for his students. He is proud of being an academic at the higher education institution but does not have the intention to identify his own teaching weaknesses and gaps and take steps to improve his practice; rather he enjoys taking part in activities that are not related to his profession. In short, even though he has been teaching for more than twenty years, he has always taught in the same way during all those years with no professional development.

### **Case 3**

Tsion is a fresh academic who is teaching in one of the newly established universities. She tries to prepare herself for her classes but she does not have the knowledge and skill of teaching the subject matter with respect to preparing a lesson plan, using active learning methods, managing classrooms and communicating effectively in English. She is usually afraid of asking senior teachers how she could address or manage the problems she faces. Rather, she prefers to read books, journals and other materials. However, she fails to put into practices what she gathers from her theoretical readings. As a result, she feels that she is not doing her job properly and she is tired of managing the problems she has faced inside and outside the classroom at the beginning of her professional journey.

### **Case 4**

Robel is a junior instructor in one of agricultural education institutions. He visited horticultural field to bring new experience to use it for class room teaching. Robel didn't take any notes on brief explanation given to him by horticulture expert during his entire visit. However, Robel used to think and relate the information he has been provided by the expert with the topic and the practical aspects of the course he has been taught. In addition, at the end of his visit, he memorizes what he has been informed and contextualized it and recorded it for future references. Finally, he developed an action plan based on the experience he has gained to incorporate in his future class room and practical teaching.

### **Reflective Activity 2.4**

1. What have you understood about reflective higher education teachers from the above cases?

2. How effective are the above cases in changing your attitude towards applying reflective thinking in your study and in your teaching? Explain.
3. After going through the cases, do you feel you should change your attitude towards the application of reflection in your practice? Explain.
4. Which case stood up for you and why? Can you prepare similar cases incorporating all forms of reflective thinking?

## Unit Three: Professionalism in Higher Education

### Unit Learning Outcomes

Upon the completion of this unit, a candidate will be able to:

- ✚ explain characteristic features of a profession
- ✚ discuss the importance of professional ethics
- ✚ explain the importance of agricultural professional ethics
- ✚ discuss values that need to be apparent among higher education teachers
- ✚ describe continuous professional development (CPD)
- ✚ document their CPD track records and identify their future CPD needs
- ✚ explain the importance of CPD.

#### 1.3.1 Professional Ethics and Values

Professionalism defines as “the conduct, aims, or qualities that characterize or mark a profession or a professional person”; and it defines a profession as "a calling requiring specialized knowledge and often long and intensive academic preparation.” The Merriam-Webster dictionary. Teaching is a profession. Hence, higher education teachers are expected to behave according to the professional code of conduct set by their higher education institutions. This unit describes ‘profession’ and raises issues related to breach of professional code of conduct by academic staff as well as the unethical behaviors observed among higher education learners.

A profession is characterized by a sufficiently long period of academic training of an organized body of knowledge. The undertaking is based on an appropriate duration of formal and rigorous professional training with practical experience. A professional man or woman possesses distinct qualifications which make him/her unique in a society in the field. A professional also subscribes to a code of ethics which binds him/her with other members of the professional community.

Ethics is defined as the philosophical study of moral values and rules. Ethics simply refers to the rightness or wrongness of actions. Often the term “profession” is associated with a fairly high status as in the medical profession. It also implies moral responsibilities.

Professional ethics are the rules governing the conduct, transactions and relationships within a profession and in the community. The quality of action of professionals will necessarily be judged from the point of view of their individual perceptions and that of the general community. Professional ethics requires conformity to professional standards and conduct.

Turning to the duties and responsibilities of higher education teachers, they include the following.

1. Teaching and research
2. Student consultations and team work
3. Service delivery to internal and external communities
4. Learning from experience

### **1.3.2 Peculiar Professional Ethics in AHEIs**

Agriculture has a long history. The domestication of plants and animals began independently in different places. In the domestication process, humans manipulated animals, plants, and their environment in different ways to increase the availability of the desirable species and desirable traits of these species. In the late twentieth century, systematic thinking about the values and norms associated with the food system like farming, resources management, food and feed production, food and feed processing, distribution, trade and consumption can be considered as agricultural ethics.

Agricultural ethics incorporates elements of philosophical ethical analysis with concerns about particular issues that arise in connection with the food systems. Agricultural professionals act ethically when they do right things and act wrongly when they do wrong things. For example, the farmers' use animals in agriculture raises many ethical issues like:

- ✚ they do not pay attention for environmental externalities such as soil erosion and loss of biodiversity in grazing areas.

Even though, ethical concerns have always been important in agriculture, these have not always been given an explicit place in the structure of higher institutions dedicated to agricultural education and research. Therefore, emphasis should be given to agricultural ethical considerations

when plants, animals, soil, water and agricultural equipment etc. are used in the teaching-learning, action research and practical teaching processes.

**Activity 3.1**

List unethical behaviors of higher education teachers and students in agricultural institutions, indicate the reasons for the observed unethical conducts and suggest solutions.

Table 3.1 Unethical behavior of Agriculture teachers in HEIs

No	Unethical behaviors	Instigating factors	Suggestions for tackling the problems

Table 3.2 Unethical behaviors of students in Agricultural HEIs

No	Unethical behaviors	Instigating factors	Suggestions for tackling the problems

**1.3.3 Continuous Professional Development (CPD)**

**1.3.3.1 The Concept of Continuous Professional Development (CPD)**

Continuous Professional Development (CPD) is timely professional updating. It is the process of learning for professionals. Continuous Professional Development can be defined as:

*“The systematic maintenance, enhancement and development of knowledge and skill, and the development of personal qualities necessary for the execution of professional and technical duties throughout the practicing engineering professional’s career.”*

Continuous Professional Development (CPD) is especially concerned with development of real value to the professional. Due to global competition, the number of professionals is increasing day by day. Clients are ever more aware of their rights and the levels of quality that they demand are continuously rising. The latest technology offers many advanced and new methods of working. This latest technology encourages the use of a variety of teaching/learning methods and commitment to continuous professional/personal development.

Professionals are increasingly recognizing the benefits of adopting a planned approach to the maintenance and upgrading of their skills. They require keeping themselves up-to-date and need the ability to acquire new knowledge in response to the challenges of new professional requirements. It is the ability to gain new knowledge that is considered by professionals as the best possible means of gaining a competitive advantage over others.

### **1.3.3.2 Rationale of Continuous Professional Development (CPD)**

Continuous Professional Development is not a new idea; it is merely the encapsulation of what has always been considered to be good professional development. The change is in its apparent importance in the current academic environment.

Continuous professional development has become an important aspect of maintaining quality standards. This is due to, among others, the changing market demands, mobility of communities, and booming science and technology, internationalization, and increasing emphasis on academic freedom and accountability.

### **1.3.3.3 Continuous Professional Development (CPD) for instructors in AHEIs**

Continuous Professional Development (CPD) is a common feature of many professionals operating within a range of different structures and frameworks. Continuous Professional Development (CPD) in agriculture is defined as "the learning activities professionals engaged into developing and enhancing their ability (CPDCS, 2018). Continuous Professional Development (CPD) to agricultural professionals refers to the process of tracking and documenting the skill, knowledge, attitude and experience that an individual gain through his (her) working career (both formally and informally) as he/she works beyond any subsequent initial training and education. It focuses on the acquisition and application of training.

Further CPD needs to be:

- + a documented process,
- + self-directed by the individual,
- + focused on learning from experience, reflective learning and review,
- + set development goals and objectives
- + included both formal and informal learning (Job.Ac. UK, 2019).

Why is CPD important for instructors in AHEIs? There are five main factors that contribute to professional obsolescence for instructors in AHEIs at present:

- + rapid expansion of technology
- + rapid turnover of technology
- + globalization and cost competitiveness
- + increasing interdisciplinary/transdisciplinary approach
- + emergence of new technology/market trends/legislation

The best way for the agricultural professional to overcome these factors and ensure a sustainable life long career is to ensure that candidates are:

- + equipped with up-to-date skills
- + able to adeptly search for new knowledge
- + capable of adopting creative and novel approaches

Systematic CPD is one of the ways in which agricultural professionals keep with the pace of both incremental and major step-changes in a knowledge-based society and to avoid professional obsolescence. The CPD for agricultural professionals can involve: training courses related to emerging laboratory instrumentations and their applications; emerging software and their utilizations; participating agriculture related workshops; conference; seminars, online programs; networking with professionals; dialogue and idea sharing.

### **Activity 3.2**

1. Read the following important areas of individual teachers for significant professional development.

Type of CPD activity	CPD duration
• Classroom training	
• Lecture series	
• Computer-based course / e-learning	
• Induction training	
• Teaching classes	
• Knowledge sharing activities	
• Mentoring either as Mentee/Mentor	
• Publishing article in journal /book review	
• Critical Reading	
• Benchmarking or Site Visit (e.g. to site/conference)	
• HDP	

### Reflective activity ----

Plan CPD of your own in terms of knowledge, skill, and attitude related to agricultural fields. You may consider any one of the following.

- ✚ Classroom presentations
- ✚ Effective use of the medium of instruction in your teaching
- ✚ Technology utilization in teaching
- ✚ Student assessment
- ✚ Classroom management
- ✚ Self-management
- ✚ Diversity management
- ✚ Research

Cases in CPD and college of agriculture classes

### Case 1

Lesson Observation: Agricultural Economics

The class: 45 second year students; 30 males and 15 females

Dr. Ayana is an assistant professor of agricultural economics. He has a heavy workload and spends much of his time in planning. When you go into his class to observe a session, he welcomes you and directs you to a seat at the back of the class. He continues to talk to the students about the task he wants them to do. He reminds them of a previous lesson about Bloom's taxonomy and asks them to write learning objectives for "knowledge and understanding in the cognitive domain"

He tells the students to form groups. The students manage to arrange themselves into groups of about six by alternate rows turning round to work with people behind. This happens with a minimum of noise and the students begin discussion. There is an animated buzz in the room which subsides after about five minutes and then gradually rises.

The students in all the groups are able to take turns in speaking and they seldom interrupt each other. Females take an equal and active part in the groups' discussions. The discussions are animated, thoughtful and students seem well motivated. While the students are engaged in discussions, the teacher moves around the room. He listens to what the groups are saying, encourages, answers questions, clarifies points, and joins in the discussions. There was a good working atmosphere in the room, the teacher and students had a relaxed and friendly relationship. The students showed respect to the teacher and promptly did what they were told to do.

After about half an hour of discussion the noise level rose and the group discussion stopped. The students were talking in smaller groups and were no longer on task, having finished what they were asked to do. The teacher continued to move among the groups and brought individual groups back on task, checking what they had done, reminding them of things they had forgotten, and asking questions. The class was called to attention and groups were asked to report back. The students quickly faced the front and were attentive. As the first group began to make a presentation, the lesson ended and the class was dismissed.

## **Case 2**

Lesson Observation: Animal Biotechnology

The class: 53 second year students, 15 of whom are females

Dr. Ayele is a large, imposing man with considerable presence. He has been teaching in the university for eight years. He has a PhD in Animal Biotechnology which he studied in Europe. His subject knowledge is excellent.

When you get into his class to observe his lesson, he acknowledges your presence and indicates where you can sit, with no break in his lecture. The students all have some typed sheets, stapled together and many of them are making notes on these sheets as he speaks. He talks as he writes formulas on the black board. His voice is loud enough for the students to hear him and he writes high enough on the board for all students to be able to see. He pauses occasionally to look at his own typed copy of the sheets the students have and sometimes tells them to follow as he reads out a sentence to them. At no time does he have an eye contact with individual students. As he talks, he looks over their heads. He asks two questions, but does not wait for an answer. A few students murmur a response. At the end of the lesson he asks whether any one has any question. The students look at their sheets and avoid eye contact with him. No one asks a question. The students all appear to be listening throughout and many of them write a lot of notes as he speaks, or copy formulas from the board. This is an organic chemistry lesson and he cites examples where the chemicals he is describing are used.

### **Case 3**

Lesson Observation: Animal Genetics

The class: 30 third year students; 20 males and 10 females

The teacher is an enthusiastic young woman with a Master's Degree in Animal Genetics. Her students are arranged into groups at random in the classroom, where there is adequate space and light, and an overhead projector. She has excellent biological knowledge and has planned a very well structured lesson on the crossing over of chromosomes. She starts by reminding the students of the work they covered in the previous lesson. Students are attentive and ready to work. Most students write notes as she speaks, using the key points that she writes on the black board as a guide. She has a series of hand drawn and colored overhead transparency sheets which she shows at appropriate points in her lecture. These are projected above the black board. So, they are quite

difficult to see. From the back of the room it is difficult to make out the number of chromosomes and the number of cross-over points. Students try to copy the diagrams in to their notebooks. Her explanations are generally clear, and she pauses occasionally to ask questions. Her explanations are generally clear, and she pauses occasionally to ask questions. The questions are usually answered by the same young man in the front row. She asks for student opinion about the significance of crossing over; several students are able to contribute. She finishes by asking the students to think, before the next class, as to why Gregor Mendel did not come across linkage.

### Activity 3.3

1. Teaching may be described as a process of facilitating student learning using appropriate planning and presentation, managing students and resources, guiding and counseling students and assessing student learning outcomes. Given the above three cases identify and describe those teaching skills you feel you have and you should develop and document your CPD track record. Look at the example of a CPD plan and then develop a CPD plan for yourself.

Table 3.4 CPD Track Records of AHEI Teachers

Types CPDs obtained/engaged	What I have gained	What I have improved
Training/short/medium/long		
Conference/workshop/symposium		
Online/e-learning		
Networking		
Dialogues		

### Reflective Activity 3.1

1. Carefully planned CPD can help sustain career-long high performance. There are many options for engaging in and benefitting from CPD. Evidence from professional organizations internationally suggests that a development action plan of some form is the best process for supporting CPD.

Check your own CPD Plan by answering the following questions:

1. Are my targets worthwhile?
2. What do I want to learn?

3. How will I learn?
4. What resources do I need?
5. How will I know if I have achieved anything?

Table 3.5 Example of CPD plans for AHEI teachers

What I would like to develop	Specific objectives	What I will do	By when (Date)	Review of objectives (How? By whom?)
Develop my IT skills	Making graphs and tables	Find a book or find a colleague who can teach me	13 July 202?	Utilization in report writing and record keeping

### Checklists' for successful CPD plan

1. What step can I take to set and achieve my learning targets?
2. What experiences, knowledge, skill, attitude and competence do I need?
3. What are the ways in which someone can tell I have been successful in achieving the goals?
4. What resources (human, material and finance) are available to help me assess my competence and identify learning needs on regular basis?
5. Are there any other ways I can extend my professional learning?

### Activity 3.4

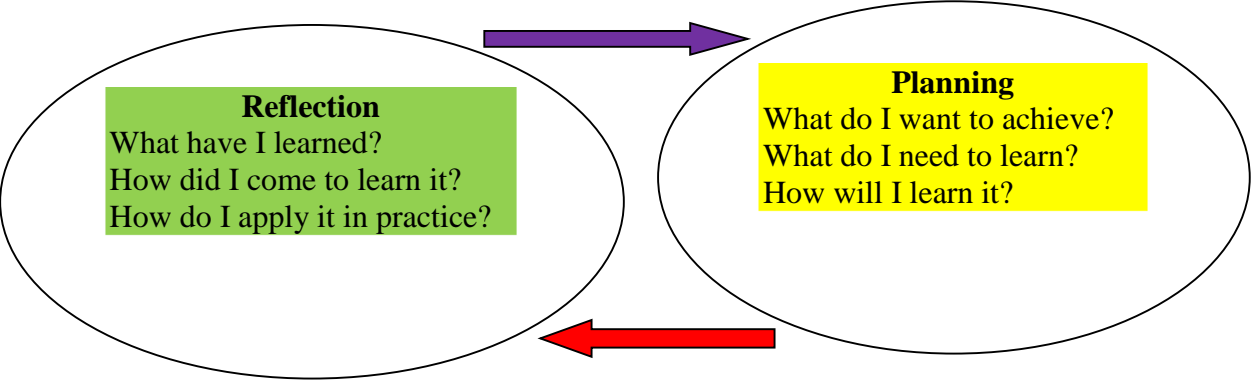
1. Prepare, your Continuous Professional Development Plan

What I would like to develop	Specific objectives	What I will do	By when (Date)	Review of objectives (How? By whom?)

### Reflective activity 3.2

1. How to reflect on your CPD plan?

In order to gauge the individual learning outcomes, which are of most value, you, the learner need the capacity to be a “reflective practitioner.” Reflective practice is the capacity to engage in a process of continuous assessment with regard to the professional development value of your experiences. Reflect on the following:



**1.3.4 Higher Education Teachers as Role Models**

Higher education teachers are those who, among others, show mastery of their subject matter, listen to their students, provide the necessary support for students, work collaboratively with their colleagues, and show self-discipline, open-mindedness and understanding. Students learn from their teachers. In this unit, you will be able to reflect on behaviors that can serve as positive role models by discussing role model cases indicated below and by drawing on your personal experiences.

**Reflective Activity 3.3**

- 1. Complete the following chart individually on a significant role model of your choice.

My significant role model: \_\_\_

Characteristics: e.g. competence and interest in subject area; years of service	Behavior: e.g. punctuality; responsiveness

2. Which of the characteristics and behaviors you listed above do you think are particularly important in influencing student values and conduct?

### **Cases in Role Model**

#### **Activity 3.5**

1. The following are case studies of teachers. Identify the positive and negative characteristics of each teacher, and the behaviors related to the characteristics.

##### **Case 1**

Ferdisa is liked by his students; he is always friendly and cheerful, and often arrives late for his classes and cracks a joke about his lateness. He is an entertaining teacher of Rural Development and makes his students laugh. He is helpful and encourages them with their work, and often uses his own experiences as teaching material for the lessons. He promises to help them improve their English, and they often hand him drafts of the work they are doing. He reads their work and makes helpful comments, but they rarely get feedback in time to make improvements before the final deadline. He is a good sportsman, and he organizes football games for the male students and boys in the local village.

##### **Case 2**

Fantu prides herself on account of her Master's degree in Animal Nutrition from Haramaya University. She has excellent knowledge in animal feeding principles and practices lectures, using many technical jargons in good English. She is impatient when her students ask her very basic questions, and does not waste her time going back over things she thinks they should already know and understand. She compares them unfavorably with the students she studied with, and is often highly critical of the comments they make when she occasionally asks a question or provides an opportunity for discussion. She is very strict with her marking. She gets disappointed when students do not live up to her expectations. She runs an English speaking club once a week where she enjoys conversing with students and helping them to improve their English.

##### **Case 3**

Aster is a new Botany teacher. She is trying hard to establish herself as a member of the teaching staff. Most students like her as she shows interest in them as individuals and tries to learn their names and is very patient when students ask her questions. Her subject knowledge is good. But, there is a group of male students who continually ask difficult (and often irrelevant) questions and disrupt the flow of the lessons. She is always neatly dressed and well organized. She always tries to get to class before students to greet them and set up her work and materials. That way the lesson can proceed smoothly. When she sets an assignment, she expects it to be done within a week and promises to return it the following week. Some of the boys in the class have handed in the work this semester. Those who have submitted it are pleased with the comments they have been given. They have found out that such feedback helps them improve their work. She has set up a support group for female students that meet once a week, but at the moment the group has no clear focus.

Comments on the cases

Case 1	
Positive characteristics	Negative characteristics
Recommendations	
1:	
2:	
3:	
Case 2	
Positive characteristics	Negative characteristics
Recommendations	
1:	

2:	
3:	
Case 3	
Positive characteristics	Negative characteristics
Recommendations	
1:	
2:	
3:	

**Activity 3.6**

1. What are your personal characteristics as a teacher?

Positive characteristics	Behaviors
Negative characteristics	Behaviors

**Reflective Activity 3.4**

1. What is your best characteristic as a teacher?
2. Which role model characteristic do you want to develop?
3. Write three things you can do to develop the characteristic you identified above.
4. Can discuss how can you develop best characteristics based on the following professional model habits?

## Unit Four: Diversity Management

This unit addresses contemporary educational issues particularly in reference to inclusion and gender, and the ways in which academicians can handle them appropriately to enhance students learning and foster cohesion among students.

### Unit Learning Outcomes

After the completion of this unit, a candidate will able to:

- ✚ describe the core principles, opportunities and challenges of diversity
- ✚ discuss mechanisms for handling diversity at higher education institutions
- ✚ demonstrate awareness on gender equity and gender responsive pedagogy
- ✚ appreciate the contribution of inclusive education to enhance students learning

#### 1.4.1 A Description of Diversity

Diversity refers to any kind of multiplicity that exists in the characteristics of individuals or groups of individuals. The dimensions of diversity include **agro-ecology**, ethnicity, gender, language, religion, mental and physical ability, social class, and others. Diversity itself is not a value-laden term, the way that people react to diversity is driven by values, attitudes, beliefs, and so on. Full acceptance of diversity is a major principle of social justice. The concept of diversity presents both extraordinary promise and daunting challenges for educators. On the one hand, educators and students have more opportunities than ever to learn about different experiences, languages, and cultures, whether through classroom curriculum, or a conversation with a peer or a neighbor. This learning enriches them and prepares them for life in our 21st century global society.

On the other hand, educators face growing challenges related to diversity including gaps in academic achievement between students of diverse background. Ethnic conflicts, sexual harassment, difficulties in teaching students with disabilities, and disparities in educational resources are also areas of concern.

Ethiopia comprises diverse **agro-ecology**, ethnic, linguistic, religious, and other features, and its universities are a reflection of this diversity. It is therefore essential to discuss the principles, handling mechanisms, challenges and opportunities of diversity. This unit deals with diversity in HEIs by focusing on its underlying principles and the challenges and coping strategies pertaining to it.

Some of the principles and strategies concerning diversity and equity include:

- ✚ responding to learners' voices
- ✚ active participation of learners
- ✚ positive teacher attitude
- ✚ effective teaching skills
- ✚ mutual respect
- ✚ freedom and flexibility
- ✚ knowledge and creativity

### **Reflective Activity 4.1**

1. Is diversity a problem or an opportunity for student learning? Yes/No? Why?
2. In your opinion, how fairly do teachers in your university treat students with diverse background?
3. You most probably had the experience of teaching students with different attributes (linguistic, socio-economic, etc). How well did you manage the task? If you faced problems in this regard, how did you resolve them?
4. How can the issue of diversity and equity be best addressed in your institution?

### **1.4.2 Inclusive education as a means of accommodating diversity**

#### **Activity 4.2**

1. How do you conceptualize inclusive education?
2. Do you think that there are people who cannot learn? Explain.
3. Have you ever taught students with any kind of disability? If yes, how did you handle them?

What is inclusive education?

Inclusive education is based on the right of all learners to equitable access to education that meets basic learning needs and enriches lives. Inclusive education focuses particularly on vulnerable and marginalized groups. It seeks to develop the full potential of every individual.

Principles of inclusion:

- ✚ Accommodate all learners with and without disabilities or special needs to learn together effectively.
- ✚ Advance value and support diversity and learner differences – Establish a welcoming, caring, respectful and safe learning environment. Create a sense of belonging for all learners and their families.
- ✚ Set high expectations for all learners - Creating a culture of high expectations begins with an accessible curriculum and meaningful and relevant learning experiences. Educators act on the idea that, with the right instructional supports, every learner can be successful.
- ✚ Understand learners’ strengths and needs - Meaningful data is gathered and shared at all levels of the system by teachers and others concerned to help understand and respond to the strengths and needs of individual learners.
- ✚ Reduce barriers within learning environments - All partners in education work together to identify and reduce barriers within the curriculum, the learning environment and/or instruction.
- ✚ Build Capacity- Professionals, the educational system, and the general community should exploit available opportunities, relationships, and resources in order to develop their capacity for creating flexible and responsive learning environments.
- ✚ Share responsibility - All education partners should have responsibility to contribute to the success of all learners.

### **Reflective Activity 4.3**






1. Identify at least three major problems that hinder the education of persons with disability or other marginalized groups in HEIs and suggest possible solutions.

Observed Problems or Issues	Suggested Solutions and Actions

**1.4.3 Gender Perspectives in Higher Education**

Integrating gender issues across all levels of education system is one of the means of addressing educational equity.

**Activity 4.4**

1. Describe the following first individually and then in pairs. Finally share your ideas with the whole class.
  -  Gender awareness
  -  Gender mainstreaming
  -  Gender responsiveness
  -  Gender Stereotype
  -  Gender Responsive Pedagogy

**Activity 4.5**

1. How do you address gender issues with respect to teaching-learning and evaluation?

**Activity 4.6**

Answer the questions below in relation to the gender case studies that follow.

1. What are the issues?
2. What strategies might the concerned university develop?
3. What positive outcomes could be achieved?

### **Case 1**

Ethiopia exercises positive action in favor of female students entering tertiary education. At one point, the Grade Point Average required for university admission for males was 3.2 and above, but for females it was 3.0. Once they were admitted to the university, all students followed exactly the same course and were assessed in the same way by written examination. It was later discovered that the number of female dismissals was larger than that of males. The following year, the university adopted a policy of admitting equal proportion (50:50) of male and female students.

### **Case2**

At the end of the academic year, one of your very best graduating students – a young woman – comes to see you. She is very distressed, as she has discovered that she is to be posted to a remote rural area, several hundred kilometers from her home. She has decided that she cannot go to the remote rural area to which she has been assigned to work and will instead try to find some unskilled job in the local town.

### **Case 3**

A small group of female students come to you to complain about the behavior of one of your colleagues. They say that he is promising to give them better grades if they meet with him in town at night after class. They say that they know a female student who dropped out of college last year because of the behavior of one of the male teacher educators and another good student who failed an examination and had to leave. They think she failed the examination because she would not agree to a relationship with the male teacher.

### Requirements for Successful accomplishment of Module one

Task to be accomplished	Candidate's	HDL	Coordinator	Remark
	Check	Check	Check	
CV <ul style="list-style-type: none"> <li>• Recent</li> <li>• European standard</li> </ul>				
Professional Interview <ul style="list-style-type: none"> <li>• Its purpose is all about letting the Candidate and HDL to know each other</li> </ul>				
CPD Plan <ul style="list-style-type: none"> <li>• Should be specific</li> <li>• Should relate to teaching</li> </ul>				
Two Reflective activities <ul style="list-style-type: none"> <li>• Should be your own reflections</li> <li>• Should be around 750 words</li> </ul>				
Evaluated Session plan <ul style="list-style-type: none"> <li>• You are supposed to develop a session plan and then you are expected to evaluate it after implementing</li> </ul>				
End of Module 1 Self and HDL assessment <ul style="list-style-type: none"> <li>• Focus on major achievements and challenges on the module</li> </ul>				

## End-of-Module Self-Assessment - Module One

Write a reflective comment on your overall performance and achievements in Module One with respect to each of the following areas.

1. Reflective activity
  
2. Planning sessions, conducting observations and evaluations
  
3. Contributions to group work
  
4. Carrying out projects
  
5. Attendance and punctuality

How would you evaluate your overall performance in Module One? Circle one.

PASS

INCOMPLETE

FAIL

Signature of candidate: \_\_\_\_\_ Date: \_\_\_\_\_

### Higher Diploma Leader/Tutor Assessment - Module One

Observations and comments from Higher Diploma Leader on the Module Performance

1. General comments on achievement in this Module

2. Please comment specifically on areas where you disagree with the self-assessment.

Please comment on what the candidate should do in the next Module to improve.

Overall performance of the candidate in this Module

PASS

INCOMPLETE

FAIL

Signature of candidate: \_\_\_\_\_ Date: \_\_\_\_\_

## References – Module One

- # Belay, K. (2008), Linkage of Higher Education with Agricultural Research, Extension and Development in Ethiopia, *Higher Education Policy*, 21 (1): 275–299.
- # Black, P. & William, D. (1998) *Inside the Black Box: Raising Standards through Classroom Assessment* (Cambridge: King’s College).
- # Continuous Professional Development Certificate Service (CPDC). 2018. Continuous Professional Development. [www.cpduk.co.uk](http://www.cpduk.co.uk)
- # Federal Negarit Gazeta .2019. Proclamation number 1152/2019, 10 August 2019.
- # Ghaye, T. (2010). *Teaching and learning through reflective practice: A practical guide for positive action*. Routledge.
- # **Job.ac.uk 2019**. What is Continuous Professional Development?  
[www.jobs.ac.uk/http://www.jobs.ac.uk/career-advice/managing-your-career/1318/what-is-continuing-professional-deveopment.cpd](http://www.jobs.ac.uk/career-advice/managing-your-career/1318/what-is-continuing-professional-development.cpd)
- # Maguire, C.J. (2000). Agricultural Education in Africa: Managing Change. Workshop presentation, Sasakawa Africa Association, Accra, Ghana.
- # Mengistu Hulluka (2013). Agricultural Higher Education in Ethiopia: Challenges and Perspectives, *J AD* 3(2) 2013
- # Stufflebeam, D. L. (2000). Guidelines for developing evaluation checklists: the checklists development checklist (CDC). *Kalamazoo, MI: The Evaluation Center*.
- # Tsedeke Abate, Abera Deressa and Amare Molla. 2004. The Ethiopian NARS: Evolution, Challenges and Opportunities. ASARECA Strategic planning paper No. 1. 26-28 Feb., 2004, Addis Ababa, Ethiopia.
- # Turnbull, J. (2009) *Coaching for Learning* (London: Continuum International Publishing Group).
- # UNESCO (1996) *Learning: The Treasure Within*. Report to UNESCO by the International Commission in Education for the 21<sup>st</sup> century (UNESCO Publishing).

## **MODULE TWO: MANAGING TEACHING, LEARNING, AND ASSESSMENT IN AGRICULTURAL EDUCATION**

This Module introduces HDP candidates to the management of learning in Agricultural Education context. It specifically deals with understanding the concepts of learning, instructional planning, essence and methods of learning, and assessment in general and testing in particular. The Module also requires candidates to plan and implement in their courses a project incorporating different active learning methods (ALMS), assessment techniques and testing. Moreover, candidates are expected to translate their theoretical understanding into practice in carrying out the activities incorporated in project management.

### **Module Learning Outcomes**

Upon successful completion of this module, a candidate will be able to

- ✚ Describe learning
- ✚ state the use of active learning
- ✚ employ different teaching strategies
- ✚ integrate various assessment techniques
- ✚ Plan and implement a project incorporating active learning strategies and assessment techniques.

## **Unit one: Understanding Learning**

This unit deals with the concept of learning, different learning styles, and setting learning objectives with particular emphasis on Agricultural Education. Moreover, it outlines the basics of instructional time management.

### **Unit Learning Outcomes**

At the end of this unit, a candidate will be able to

- ✚ Differentiate among various learning theories that inform teaching
- ✚ Identify his/her learning styles
- ✚ Write SMART objectives
- ✚ Apply objective guiding teaching
- ✚ Apply time management skill tips in the teaching learning process

#### **2.1.1 Conceptualizing Learning**

Learning is a change in behavior or thinking which arises out of interaction and experience. Philosophers, psychologists and educators have examined how learning takes place and have put forward various theories to describe the process of learning.

Three perspectives of learning are

- ✚ Behaviorism (B.F. Skinner)
- ✚ Constructivism (J. Piaget)
- ✚ Social cognition (L. Vygotsky)

Behaviorism has been greatly influenced by Skinner who advocated the process of stimulus response-consequence in learning. According to this paradigm, the teacher as a subject expert arranges the situation (stimulus) for learning. The student reacts to the situation in some way (response) which results in consequence. The consequence could be attended by a feedback from the teacher. This feedback can reinforce or strengthen the students' response for the future. The reinforcement can assume two forms: positive-like a teacher appreciating a response of a student,

or negative, in which case the student is able to avoid unfavorable experiences like reproof by giving the correct response.

Constructivism suggests that people learn through interaction with their environment and organizing or restructuring experiences and ideas. Through the interaction the individual learns about the environment and what he/she can do to influence the environment. According to this perspective, the learner is active and negotiates with the teacher who manages the learning environment.

Social cognition theories affirm the importance of recognizing and building on students' existing knowledge and culture, while emphasizing the role of teaching and instruction in extending such knowledge. These theories can be divided into two approaches, socio-cultural and social constructivist. The former considers cultural contexts and social practices and the latter emphasizes the role of experienced participants in supporting less competent learners via collaborative learning.

**Activity 2.1**

1. Which perspectives of learning were dominant in your personal experience at the different stages of your education? Give an example in each case.

Stage	Behaviorist	Cognitive Constructivist	Social constructivist	Predominant Feature/s/and Examples
Primary				
Secondary				
Undergraduate program				
Postgraduate program				

2. Discuss the implications of each learning theory for classroom teaching and learning in Agricultural Education. Consult a reference on another learning theory such as the theory of Observational Learning and describe its importance in teaching and learning.

### 2.1.2 Learning Styles

Learning style is the way in which each individual learner concentrates on, processes, absorbs, and retains new and difficult materials. There are different learning styles. They account for differences in students' achievement over and above ability. A number of learning styles may be identified. These include:

- ✚ Activists, theorists, pragmatists, reflectors
- ✚ Divergers, convergers, assimilators, accommodators
- ✚ Verbalizers, imagers, analytics, wholists
- ✚ Analysts, changers, realists
- ✚ Visual, auditory, kinesthetic.

The most popular of the learning styles categorization is the last one - visual, auditory, kinesthetic (VAK) but remember that learning styles are not fixed categories. Everyone uses a range of learning styles. Therefore, we need to encourage HDP candidates to develop flexibility in thinking and behavior.

As a model, VAK provides a useful framework for helping us reflect about how we think and learn and it is therefore a popular and widespread tool. The model suggests that we receive information through our senses – what we see, hear, touch, taste and smell. That is we construct our thoughts by:

- ✚ Generating images (Visual)
- ✚ Hearing sounds (Auditory)
- ✚ Developing physical sensations and feelings (Kinesthetic)
- ✚ A combination of all three.

Knowing your students' and your own learning style enables you design teaching strategies that could address students' learning styles.

## Activity 2.2

Use the following questionnaire to explore whether you have a preference in the way you think and learn.

### VAK Learning Style Questionnaire

Read each statement carefully. To the right of each statement, write the number that best describes how each statement applies to you as follows: 1= almost never, 2= rarely, 3= sometimes, 4= often, and 5= almost always.

There are no right responses. React to each statement as quickly as you can. Once you have completed the 36 statements, put your total score in the spaces provided.

#### Section 1: Visual

No.	Statement	Score
1	I take lots of notes.	
2	When talking to someone else, I find it hard if s/he does not maintain good eye contact with me.	
3	When reading a novel, I pay a lot of attention to passages picturing the scenery, setting, etc.	
4	I make lists and notes because I remember things better if I write them down.	
5	I need to write down directions to a new place so that I remember them.	
6	I need to see the person I am talking to in order to keep my attention focused.	
7	When meeting a person for the first time, I notice the style of dress and the physical characteristics first.	
8	When I am at a wedding, I like to stand back and observe others.	

9	When I recall information, I can see it in my mind and remember where I saw it.	
10	If I had to explain a new procedure or technique, I would prefer to write it out.	
11	During my free time, I am most likely to read or watch television.	
12	If the dean has a message for me, I prefer if s/he sends me a note.	

Total score for Visual \_\_\_\_\_ (the minimum is 12 and the maximum is 60)

### Section 2: Auditory

No.	Statement	Score
1	I do not take a lot of notes but I still remember what was said.	
2	When talking to someone else, I find it hard with those who do not talk back to me.	
3	When I read, I read out loud, or move my lips to hear the words.	
4	When reading a novel, I pay a lot of attention to passages involving conversations, talking,	
5	I like to talk to myself when solving a problem or writing.	
6	I can understand what a speaker says, even if I am not focused on the speaker.	
7	I remember things more easily by repeating them again and again.	
8	When I am at a wedding, I like to talk about a subject that is important to me.	
9	I would rather prefer receiving information from the radio to the newspaper.	
10	If I had to explain a new procedure or technique, I would prefer talking about it.	
11	During my free time, I am most likely to listen to music.	
12	If the dean has a message for me, I am most comfortable when s/he telephones.	

Total for score for auditory \_\_\_\_\_ (the minimum is 12 and the maximum is 60)

Section 3: Kinesthetic

No.	Statement	Score
1	I am not good at reading or listening to instructions; I would rather just start working on the task or project at hand.	
2	When talking to someone else, I have the hardest time handling those who do not show any kind of emotional support.	
3	When I read, I move my lips.	
4	When reading a novel, I pay a lot of attention to passages about feelings, action, and drama.	
5	I take notes and doodle but I rarely go back and look at them.	
6	I use my hands a lot when I am trying to remember the right thing to say.	
7	My desk or work place appears disorganized.	
8	When I am at a wedding, I love to dance and sing.	
9	I like to move around; I feel trapped when seated at a meeting or a desk.	
10	If I had to explain a new procedure or technique, I would prefer actually demonstrating it.	
11	During my free time, I am most likely to exercise.	
12	If the dean has a message for me, I am most comfortable when s/he talks to me in person.	

Total score for kinesthetic \_\_\_\_\_ (the minimum is 12 and the maximum is 60)

Remember that VAK refers to preferences, not fixed and permanent categories. An individual's learning style may change and can incorporate all the three at different levels.

**Reflective Activity 2.1**

Share your responses to each of the following questions with a colleague.

1. What have you found out about your learning style from the above descriptions?
2. Do you think your learning style affects your teaching as in course planning, delivery, etc.? If so, how?
3. How can you as a teacher identify the learning styles of your students in the classroom so as to help them more?

### 2.1.3 Setting Learning Outcomes

Learning outcomes are measurable statements that articulate at the beginning what students should know, be able to do, or value as a result of taking a course or completing a program. It refers to an intended or pre-specified outcome of teaching and learning,

Learning outcomes can be general or specific.

- A. *General learning outcomes* are broad statements that describe what students will be able to do after a given learning process have been successfully completed. They are intended outcomes of instruction usually written in broad terms such as, to know, understand, recognize, conceptualize etc.
- B. *Specific learning outcomes* are statements that describe what a student will be able to do at the end of a certain instruction. They are stated in terms of specific and observable student performance such as, naming, identifying, categorizing, explaining, describing etc.

#### *Example of objectives*

1. Students will be able to write a full-length research paper on plant science and present their findings by the end of the class period. (this is not SMART)

Mistake: This is not an attainable goal for one class period. The teacher needs to adjust the time or their expectations.

2. By the end of the session, students will understand the significance of plant breeding. (this is not SMART)

Mistake: “Understand” is not a measurable verb. There’s no way for students to demonstrate their understanding of plant breeding.

3. By the end of the session, students will describe the significance of plant breeding in 50-70 words. (SMART)

Examples of action words which are frequently used in stating objectives in the three domains of learning

<i>Cognitive Domain</i>					
Knowledge	Define	Recall	Match	Identify	
	List	Describe	Recite	Name	
	Select	Outline	Label	State	
Comprehension	Convert	Summarize	Explain	Extend	
	Estimate	Defend	Distinguish	Paraphrase	
	Discriminate	Predict	Generalize	Infer	
Application	Change	Relate	Operate	Demonstrate	
	Modify	Compute	Solve	Organize	
	Transfer	Prepare	Develop	Use	
Analysis	Break down	Distinguish	Deduce	Relate	
	Subdivide	Point out	Illustrate	Diagram	
	Infer	Differentiate	Separate	Outline	
Synthesis	Categorize	Create	Formulate	Compile	
	Compose	Devise	Predict	Hypothesize	
	Design	Produce			
Evaluation	Appraise	Criticize	Support	Compare	
	Validate	Contrast	Justify	Judges	

<i>Affective domain</i>					
Receiving	Listen	notice	Be aware	Share	Discern
	Attend	Look	Hear	Control	
Responding	Comply	Discuss	Applaud	Volunteer	Obey

	Follow	Practice	Participate	Play	
Valuing	Help	Act	Prefer	Argue	Display
	Debate	Express	Convince	Organize	
Organization	Select	Practice	Systematic	Balance	Abstract
	Decide	Define	Theorize	Formulate	
Characterization	Display	Avoid	Resist	Revise	Exhibit
	Require	Manage	Internalize	Resolve	
<b><i>Psychomotor</i></b>					
Imitation	Repeat	Align	Hold	Step	Balance
	Place	Rest	Grasp	Follow	
Precision	Accurately	With control	Proficiently		
	Independently	With error	With balance		
Articulation	Harmony	Speed	Timing	Confidence	Proportion
	Coordination	Integration	Stability	Smoothness	
Manipulation	Construct	Operate	Control		
Naturalization	Naturally	Professionally	With ease	With routinely	Effortlessly
	Automatically	Poise	Spontaneously	With perfection	

### Activity 2.3

1. Indicate whether or not the following objectives are SMART (Specific, Measurable, Achievable, Relevant, and Time limited).

By the end of the session students will	S	M	A	R	TL
Know about flowers.					
Be able to recognize nature of plants					
Understand climate.					
Write a descriptive paragraph regarding food security					
Know about plant breeding					
Have completed a lesson plan.					
Explain the basics of plant classification.					
Be able to identify vegetable crops.					
Classify laboratory materials and justify their classification.					
Appreciate the properties of various plants.					
Know different categories of animals.					
Understand plant cell and their function.					

## 2.1.4 Time Management

### Activity 2.4

1. How do you define time management?
2. How effective are you in managing your time?
3. Do you manage time or does time manage you?
4. How effective/ punctual are you in using instructional time and appointment with your students or other clients?

#### a) Time Management Matrix

Stephen R. Covey (2015) identifies four ways in which we tend to spend our time. It can be broken into four types which are summarized in the matrix below.

The Time Management Matrix		
	Urgent	Not Urgent
Important	A Activities <ul style="list-style-type: none"><li>• crises</li><li>• pressing problems</li><li>• meeting deadlines</li></ul>	B Activities <ul style="list-style-type: none"><li>• forward planning</li><li>• prevention of problems</li><li>• relationship building</li><li>• recognizing new opportunities</li><li>• recreation</li></ul>

Not  Important	C	D
	Activities <ul style="list-style-type: none"> <li>• interruptions, some phone calls</li> <li>• some mail, some reports</li> <li>• some meetings</li> <li>• pressing matters, popular</li> <li>• activities</li> </ul>	Activities <ul style="list-style-type: none"> <li>• ‘busy’ non-productive work</li> <li>• mail</li> <li>• phone calls</li> <li>• time wasters</li> <li>• pleasant activities</li> </ul>

✚ Important responsibilities contribute to the achievement of your goals.

✚ Urgent responsibilities require immediate attention. These activities are often tightly linked to the accomplishment of someone else’s goal. Not dealing with these issues will cause immediate negative consequences.

Quadrant 1 – important deadlines with high urgency

✚ The first quadrant contains tasks and responsibilities that need immediate attention.

Quadrant 2 – long-term development and strategizing

✚ The second quadrant is for items that are important without requiring immediate action. Covey points out that this quadrant should be used for long-term strategizing.

Quadrant 3 – distractions with high urgency

✚ The third quadrant is reserved for tasks that are urgent, without being important. Covey recommends minimizing or even eliminating these tasks as they do not contribute to your output. Delegation is also an option here.

Quadrant 4 – activities with little to no value

✚ The fourth and last quadrant focuses on tasks and responsibilities that do not yield any value items that are unimportant and not urgent. These time wasters should be eliminated at any costs.

## **Reflective Activity 2.2**

1. Comment on the items in the matrix provided above.
2. How does the Time Management Matrix relate to your experience as an Agriculture teacher?
3. How much time do you spend on planning and preparation for your teaching?

If you apply Covey's Time Management Matrix to your own professional and private life, you will notice that the majority of your activities can be found within quadrant 1 and 3. Experience shows that quadrant 2 is neglected by most people, especially in the area of their own personal development. However, the importance of the second quadrant must not be underestimated. If you notice a big gap in this quadrant it means that your focus lies too much on the operative aspect, while the strategic perspective is left behind. For this reason, Covey addresses quadrant 2 as an exceptionally important part of the Matrix. Without this quadrant, efficient time management would not be possible, as it requires strategic elements as well.

More on the four-time management quadrants

### **Quadrant 1: Urgent and important**

The activities in quadrant 1 can be differentiated into items that could not have been foreseen, and those items that could. The latter can be avoided by developing plans and paying close attention to their execution. The first quadrant should only contain those activities and responsibilities that require your immediate attention. The space is reserved for emergencies and extremely important deadlines. Should a major crisis arise you will have to postpone other tasks.

### **Quadrant 2: Not urgent but important**

The items found in quadrant 2 do not have a high urgency but can play an important role in the future. This quadrant is not only reserved for strategic planning, but also to items related to health, education, exercise, and career. Investing time in these areas might not be urgent at present, but in the long term, it will be of great importance. Make sure that you have scheduled enough time for quadrant 2 activities, in order to prevent them from becoming quadrant 1 items. Doing so will allow you to increase your capability of finishing your tasks in time.

### Quadrant 3: Urgent but not important

The third quadrant summarizes items that appear to have high urgency, but are not at all important. Some of these activities might be entirely ego-driven, without contributing any value. In fact, these activities are obstacles that stand between you and your goals. If possible, try to delegate these items or consider rescheduling them. If another person is pressurizing you to take up quadrant 3 tasks, it could be appropriate to decline their request politely. If this is not an option, try to avoid being constantly interrupted by allocating time slots to those that often need your attention. This way, you can address all urgent issues at once without regularly interrupting your concentration.

### Quadrant 4: Not urgent and not important

The fourth and last quadrant contains all those activities that do not contribute any value at all the obvious time wasters. All the activities contained therein are nothing more than distractions; avoid them as much as you can.

### Activity 2.5

#### Time Management Questionnaire

Read each statement in the following chart and circle the number of your choice for each. Do this as quickly as you can

1= strongly disagree;      2=disagree;      3= slightly disagree;

4= slightly agree;      5= agree;      6= strongly agree

Statement	SDA	DA	StDA	StA	A	SA
1. I spend much of my time on important activities that demand my immediate attention, such as crises, pressing problems, and meeting deadlines	1	2	3	4	5	6

2. I feel I am always “trouble-shooting” and working in crisis mode. I am always being called to help with important problems.	1	2	3	4	5	6
3. I feel as if I am wasting a lot of time.	1	2	3	4	5	6
4. I spend much of my time on activities that have little relevance to my top priorities but demand my immediate attention (e.g. interruptions, unimportant meetings, non-critical phone calls)	1	2	3	4	5	6
5. I spend much of my time on activities that are important but not urgent, such as planning, preparation, prevention and relationship building	1	2	3	4	5	6
6. I spend much of my time on ‘busy’ but nonproductive work, watching TV, games, browsing the Internet, etc.	1	2	3	4	5	6
7. I feel I am on top of things because of careful preparation, planning and prevention.	1	2	3	4	5	6
8. I feel I am constantly addressing issues that are important to others but not to me.	1	2	3	4	5	6

Scoring:

<p>A</p> <p>Question 1 = _____</p> <p>Question 2 = _____</p> <p>Total A _____</p>	<p>B</p> <p>Question 5 = _____</p> <p>Question 7 = _____</p> <p>Total B _____</p>
---	---

<p>C</p> <p>Question 4 = _____</p> <p>Question 8 = _____</p> <p>Total C _____</p>	<p>D</p> <p>Question 3 = _____</p> <p>Question 6 = _____</p> <p>Total D _____</p>
---	---

Dominant type: \_\_\_\_\_

If you are an A, C, or, D type, how can you move to be type B? If you are type B, how can you support your colleagues in becoming type B?

**b) How to Apply the Time Management Matrix**

When using the Important-Urgent matrix it is recommended to try to maximize the time spent with quadrant 2 activities. This will allow you (in the long run) to reduce quadrant 1 activities, as many of them could have been quadrant 2 activities - if good planning had been implemented.

The objective of using the Time Management Matrix is to question whether a certain activity brings you closer to your goals or not. If this is the case, these responsibilities need to be prioritized over those tasks that might demand your time but do not contribute to your goals. Postpone activities that do not contribute any significant output until more important tasks are finished.

Characteristics of the ‘types’ and results of over emphasizing them

Type A	Results of spending too much time on A
<ul style="list-style-type: none"> <li>✚ everything is both urgent and important; everything seems to need immediate attention</li> <li>✚ activities are recognized as ‘crises’ or ‘problems’</li> </ul>	<ul style="list-style-type: none"> <li>✚ exhaustion</li> <li>✚ stress</li> <li>✚ crisis management</li> <li>✚ always reacting</li> </ul>

<ul style="list-style-type: none"> <li>✚ you are constantly trying to solve problems</li> <li>✚ work problems ‘take over’ your life</li> </ul>	
Type B	Results of spending too much time on B
<ul style="list-style-type: none"> <li>✚ is the heart of effective personal management?</li> <li>✚ deals with things that are not urgent, but are important</li> <li>✚ deals with things like building relationships, writing plans, making goals and planning how to achieve them, long-range planning, avoiding problems</li> <li>✚ deals with creating opportunities</li> </ul>	<ul style="list-style-type: none"> <li>✚ vision and balance</li> <li>✚ good perspective</li> <li>✚ discipline and planning</li> <li>✚ control over one’s life and time</li> <li>✚ very few crises</li> <li>✚ having time to organize priorities and activities for maximum benefit</li> </ul>
Type C	Results of spending too much time on C
<ul style="list-style-type: none"> <li>✚ spending most of their time reacting to things that are urgent, assuming they are also important although they are not that important</li> <li>✚ action is usually based on the priorities and expectations of others</li> <li>✚ being led by others and not taking responsibility for one’s action</li> </ul>	<ul style="list-style-type: none"> <li>✚ short term focus</li> <li>✚ crisis management</li> <li>✚ always trying to please other people</li> <li>✚ see goals and plans as worthless</li> <li>✚ feel out of control &amp; loaded</li> <li>✚ have problems with relationships</li> </ul>
Type D	Results of spending too much time on D
<ul style="list-style-type: none"> <li>✚ trying to escape realities</li> <li>✚ spending time on ‘escapist’ activities possibly using them to avoid responsibility</li> </ul>	<ul style="list-style-type: none"> <li>✚ avoidance of any responsibility</li> <li>✚ dependent on others or an institution</li> </ul>

### **c) Tips for Effective Time Management**

Are you usually punctual or late? Do you finish things within the time you stipulate? Do you hand in your reports/work on time? Are you able to accomplish what you want to do before deadlines? Are you a good time manager? If your answer is “no” to any of the questions above, that means you’re not managing your time as well as you want. Below are some tips on how to be a better time manager.

1. Create a daily plan. Plan your day before it unfolds. Do it in the morning or even better, the night before you sleep. The plan gives you a good overview of how the day will be spent. . Your job for the day is to stick to the plan as much as possible.
2. Peg a time limit to each task. Be clear that you need to finish X task by 10a.m., Y task by 3p.m., and Z item by 5:30p.m. This prevents your work from dragging on and eating into time reserved for other activities.
3. Use a calendar. Having a calendar is the most fundamental step to managing your daily activities.
4. Use an Organizer. The organizer helps you to be on top of everything in your life. It’s your central tool to organize information, to-do lists, projects, and other miscellaneous items.
5. Know your deadlines. When do you need to finish your tasks? Mark the deadlines out clearly in your calendar and organizer so you know when you need to finish them.
6. Learn to say “No”. Don’t take on more than you can handle. For the distractions that come in when you’re doing other things, give a firm ‘no’. Or, defer it to a later period.
7. Target to be early. When you target to be on time, you will either be on time or late. Most of the time you’ll be late. However, if you target to be early, you will most likely be on time. For appointments, strive to be early. For your deadlines, submit them earlier than required.
8. Time box your activities. This means restricting your work to X amount of time.
9. Have a clock visibly placed before you. Sometimes we are so engrossed in our work that we lose track of time. Having a huge clock in front of you will keep you aware of the time at the moment.
10. Set reminders 15 minutes earlier. Most calendars have a reminder function. If you have an important meeting to attend, set that alarm 15 minutes before.

11. Focus. Are you multi-tasking so much that you are just not getting anything done? If so, focus on just one key task at one time. Focus solely on what you're doing. You'll be more efficient that way.
12. Block out distractions. What's distracting you in your work? Instant messages? Phone ringing? Text messages popping in? Block them out and you concentrate better.
13. Don't fuss about unimportant details. You're never got everything done in exactly the way you want. Trying to do so is being ineffective.
14. Prioritize. Since you cannot do everything, learn to prioritize the important and let go off the rest.
15. Delegate. If there are things that can be better done by others or things that are not so important, consider delegating. This takes a load off and you can focus on the important tasks.
16. Eliminate your time wasters. What takes your time away from your work? Face book? Twitter? Email checking? Stop checking them so often.
17. Cut off when you need to: Intercept in meetings or draw a line to cutoff where appropriate.
18. Leave buffer time in between. Do not pack everything closely together. Leave a 5-10 minute buffer time in between each task. This helps you wrap up the previous task and start off on the next one.

### **Reflective Activity 2.3**

1. List three important things you have learnt about managing your time and reflect on them in relation to your personal practice.
2. How do you plan to improve your time management and be productive in your activities?

## Unit two: Active Learning Methods

This unit deals with the concept of active learning, challenges of its implementation, possible strategies to implement active learning, active learning methods and understand group varlets and its management is discussed with particular emphasis on Agricultural Education.

### Unit Learning Outcomes

At the end of this unit, a candidate will be able to

- ✚ Define active learning
- ✚ List possible challenges for implementing active learning methods
- ✚ Appreciate the role of active learning in higher education institutions
- ✚ Identify different active learning methods particularly in relation to Agriculture
- ✚ Differentiate between cooperative and collaborative learning methods
- ✚ Compare and contrast the different behaviors that exist in group activities
- ✚ Discuss independent learning

### 2.2.1 Essence of Active Learning

Active Learning can be defined as any teaching/instructional approach whereby students are fully and meaningfully engaged in the learning process. It requires a student-centered approach with a shift in emphasis from passive to participatory learning; a change in behavior underpinned by a change in thinking and encouraging students to take responsibility for their own learning. The purpose of employing active learning methods is to develop higher order levels of learning outcomes such as, application, analysis, synthesis, and evaluation.

#### Activity 2.6

If you have ever applied ALMs (active learning methods) such as pair work, role play, jigsaw, field trips, internships, seminars, e-learning, etc., give examples of those which you most frequently used.

Some of the common misconceptions about active learning are the following.

- ✚ Lecture method should be completely abandoned in favor of active learning.
- ✚ Active learning is simply group discussion and activities.
- ✚ Active learning is simply physical activity; it is about engaging the students' brains somehow.
- ✚ Active learning is simply a fashionable thing without any research to back it up.
- ✚ Active learning does not fit the cultural context of Ethiopian higher education institutions.

Several research studies demonstrate the positive impact active learning can have upon students' learning outcomes:

- Increased content knowledge, critical thinking and problem-solving abilities, and positive attitudes towards learning in comparison to traditional lecture-based delivery (Anderson et al, 2005)
- Increased enthusiasm for learning in both students and instructors (Thaman et al., 2013)
- Development of graduate capabilities such as critical and creative thinking, problem-solving, adaptability, communication and interpersonal skills (Kember & Leung, 2005)

Improved student perceptions and attitudes towards information literacy (Deltor et al., 2012)

### **2.2.2 Challenges of implementing active learning methods in Ethiopian HEIs**

#### **Activity 2.7**

- 1) What do you think are the challenges in applying the ALMs in Agricultural Education?
- 2) What strategies can you think of to overcome the challenges?

In general, we can list the following as perceived challenges of implementing active learning methods:

- ✚ Lack of knowledge and skill about utilization of ALMs
- ✚ Large class size
- ✚ Shortage of resources and facilities
- ✚ Nature and amount of course/module content

- ✚ Students' attitude towards ALMs
- ✚ Instructors' attitude towards ALMs and their reluctance to use it
- ✚ Instructors' workload
- ✚ Lack of management support
- ✚ Lack of planning, preparation and time management

### Activity 2.8

Read the following scenarios based on real life examples in HEIs. Consider them in order to identify effective strategies.

1. Instructors have tried to implement interactive learning methods in Agricultural Education but students are reluctant to participate. The students feel the instructor's role is to tell them what they need to know for the examination.
2. An HDP candidate from College of Agriculture says that the introduction to interactive learning during HDP is very general. The candidate further remarks that it is very difficult to apply interactive learning when teaching Animal Breeding and the candidate demands for more help.
3. An HDP graduate says, "During the HDP my teaching was observed by the Higher Diploma Leader and some of my peers. Now there is no systematic observation in my institution. It seems no one really cares about using active learning methods so I don't bother anymore."
4. An instructor says, "The Plant protection course/module I am teaching has very rich curricular contents. I have to get through the contents with my students. This situation forces me to become teacher-centered. Interactive learning takes too long and I will not be able to finish the course/module."
5. Another teacher reports, "Using interactive learning requires preparation and planning before my sessions. I am very busy with my 12 credit hours per week and don't have time for preparation. In any case, I have my notes and these are sufficient for teaching."
6. A graduate assistant observes, "I would like to use more interactive learning in the course Fruit Growing but it sometimes requires more resources. Usually I only have four pieces of marker and white board to write on. This means I have to use a teacher-centered approach."

7. “My usual class size is 60/70 and may be more and for some of my colleagues who teach common courses the number of students may exceed a hundred. This makes using interactive learning impossible but I would like to try it.” complained an instructor.
8. A long time faculty observed, “I was forced to complete the Higher Diploma Program but really I know all about teaching after 20 years of experience of teaching and I found nothing new in the course. I make sure my students know what is needed. I tell them what they need to know and no one has complained. So what’s the problem?”

Some strategies to help overcome the challenges to using active learning methods

#### 1. Lack of knowledge and skill about ALMs

##### Challenges

- ✚ Some instructors do not practice ALMs as expected.
- ✚ Absence of formal training on ALMs for HEIs instructors
- ✚ Lack of continuous professional development on ALMs

Some strategies that may be helpful

- ✚ Staff development strategies and induction trainings need to address the issues of ALMs.
- ✚ Individual instructors need to update themselves with the contemporary learning strategies.
- ✚ Departments and other concerned stakeholders need to prepare seminars, conferences, focusing on ALMs.

#### 2. Large classes/groups

##### Challenges

- ✚ Not knowing the characteristics of students
- ✚ Difficulty to accommodate all learning styles
- ✚ Difficulty to manage continuous assessment
- ✚ Failure to maintain student discipline and concentration

Some strategies that may be helpful

- ✚ Prepare detailed session plans with group activities.
- ✚ Establish ground rules.
- ✚ Arrange seating in the rooms so that students must sit in groups.
- ✚ Ask groups to elect a secretary and time-keeper; change these roles for different activities.
- ✚ Walk around the room in order to impress on students that you are watching their activities and build a friendly relationship with all students.
- ✚ Making Lectures active
  - Begin teaching by considering the level of knowledge/skill the students have on the topic at hand.
  - Occasionally, pause in between the lecture and ask students to explain concepts with examples.
  - Use pairs and buzz groups.
  - Use “think-pair-share” method to compare notes.
  - Use peer feedback, or let students assess each other’s written work,

### 3. Limited resources

Some strategies that may be helpful

- ✚ Start with whatever instructional materials available
- ✚ Improvise; example, using a chair as table top
- ✚ If possible, prepare a written outline for distribution to help students follow a lecture
- ✚ Use redundancy so that students do not miss an important point or concept
- ✚ Involve your students in making/providing resource

### 4. Bulky Course/Module content Some strategies that may be helpful

- ✚ Give more time and thought to planning and preparation of your sessions and select the most appropriate active learning methods for the topic to be covered.
- ✚ Encourage students to become independent learners and to take ownership of their own learning process.
- ✚ Empower students through additional coaching for learning rather than seeing teaching as telling.

- ✚ Allocate part of the module syllabus for students to cover in their own time with guidance and supervision.

### 2.2.3 Active learning methods

Teaching process in the field of agricultural sciences can be achieved by applying a number of teaching methods. The correct and appropriate choice of teaching methods is very important for successful learning of specific courses. See the Appendix to refer the different active learning methods that can be implemented in the teaching-learning process.

For learning to be active, students must do more than listening; they must read, write, discuss, or be engaged in solving problems. Most important, to be actively involved, students must engage in such higher order thinking tasks as analysis, synthesis, and evaluation. Students must be doing things, and then thinking about why they are doing them. These kinds of activities can include debates, case studies, simulation, and peer-teaching.

#### Activity 2.9

Check the application of the following activities related to student motivation, performance and cognitive development when they are implemented in Agriculture classroom teaching.

Activity	Response		Explanation of response
	Yes	No	
Is the task you set at the right level for your students?			
Is the work of mixed difficulty so every student can be challenged and experience success?			
Is the task interesting and relevant?			
Can students resubmit work that is not up to standard?			

Do students understand what they will gain from what you are asking them to do?			
Do students understand the relevance of what they are doing?			
Are your sessions varied?			
Do your sessions engage students in activities?			
Do you base your teaching on interesting and/or topical questions?			
Are you enthusiastic in your sessions?			
Do you have a good relationship with your students?			
Can students show creativity in your sessions?			
Are students able to work with others when undertaking tasks?			
Do your students get frequent feedback such as praise or positive comments, etc. about their work?			
Do you set personal goals for students?			
Is it possible to make all students active learners?			
Do you encourage students to take responsibility for their own learning?			

Despite the wide range of positive benefits listed above, Michael (2006) articulates an important point: “active learning doesn’t just happen; it occurs in the classroom when the teacher creates a learning environment that makes it more likely to occur”. There are many active learning methods for instructors to consider when they design their courses.

### Activity 2.10

1. Which of the Active Learning Methods (See the Appendix) could be suitable/unsuitable for your course? Explain with practical examples.
2. Read the following descriptions carefully and match with the appropriate methods.

Interactive teaching	Laboratory Exercises
University Lectures (ex-cathedral lecture)	Computing Exercises
The exercise in Practicum	Field trip
Student Debates	Case Study
Visiting Lectures	Student Research

Purpose of the Active Learning	Method
Practical work with the appropriate material (or other practical content) that monitors and clarifies particular matter, phenomenon or process, understand better and experience the visual content of the teaching that is elaborated in this way.	
Students master the techniques of calculating parameters and mathematization process that might be encountered in real life after graduation. The goal is to teach students the method of quantification of defined parameters and processes in the field where this method is used.	
Convey important information that are significant for further professional development by using available technical devices through encouraging the active participation of students in the course of work.	
Development of communication skills and confrontation of arguments, the culture of speech and the ability to rapidly analyze, reasoning and use of expert arguments.	
The application of theoretical knowledge through practical research and mastering the basic elements of research.	

To convey narrowly specific scientific knowledge and research methods specific for a particular topic. Presentations should affect the development of critical awareness and interest in a particular topic, bearing in mind that the visiting professors are usually highly specialized in the topic or field that he holds the lecture about (or group of lectures).	
Theoretical knowledge is explained to the students through practical work and implementation of process in laboratory conditions, clarifying teaching material that was mastered within the theoretical part of the teaching process.	
Inform as many students as possible in a short period of time on significant information related to the professional development of students within a specific field (modules- courses).	
Facing students with a situation in which the need to apply the acquired theoretical (and practical) knowledge on the relatively new event that is linked to the processed material. In this way, student develops critical thinking, innovation, the ability to see problems from different angles and in the case of group work develops the ability to work in a group.	

### Reflective Activity 2.4

- Using the VAK model identify useful active learning methods for supporting different types of learners and discuss their implications for classroom instruction.
  - Select one active learning method and try to demonstrate in the HDP session.

Learning style	Helpful method
Visual	
Auditory	

Kinesthetic	
-------------	--

### **2.2.4 Collaborative and Cooperative Learning**

The terms ‘collaborative learning’ and ‘cooperative learning’ have sometimes been used interchangeably because both strategies hold many similar qualities, such as favoring active student participation in small groups over lecture-based teaching. However, these two terms are different from each other. Both are also different from more traditional teaching methods that have been prevalent in classrooms.

Collaborative learning is a method of teaching and learning in which students work together as a team to explore an important question or develop a project. This can happen in either in a classroom setting or in eLearning platforms allowing students to converse freely on the subject. Collaborative learning redefines the traditional student-teacher relationship as activities can include debates, joint problem solving, collaborative writing, study teams and group projects. Learning here happens within the dialogue of the group, with student-led conversation that is not overseen by a teacher or instructor. The teacher will usually only prompt the group when asked questions about the work in order to direct the students on their learning path. At the end of the session, the work is shared between the group members and as such, it is assessed as a group effort.

In a cooperative learning environment, students work together in small groups on a structured task towards fulfilling specific academic and social goals. Unlike collaborative learning, students are individually accountable for their work and the group as a whole is also evaluated, ensuring that no student can ‘piggyback’ on the work of another. Group members must believe that each person’s efforts benefit not only themselves but the rest of the group because the success of the group depends on everyone pulling their weight. Everyone shares a mutual goal, and individuals are given separate sections or tasks to complete which are then compiled and edited to ensure

consistency throughout the work. Students are required to help each other through the work, providing students with the skills to effectively learn from their peers. This can include discussing key concepts in the task and explaining how to solve problems. This kind of interaction brings the members closer – they become personally committed to each other as well as to their mutual goals. Working closely together also promotes transferrable skills such as decision-making, trust building, effective communication and leadership. After completing a task, students are then given time to analyze how their work turned out and how well the group worked together. This processing time helps the students and teacher to determine what needs to be improved in the next activity.

- Formal cooperative learning groups - These are often used to teach specific content and problem solving skills. They might last for one session to several weeks to complete a specific task. Students work together to achieve shared objectives. Their responsibilities are to maximize their own learning and that of others in the group.
- Informal cooperative learning groups- These are often used to ensure active cognitive processing during a lecture. These are temporary and usually last for part of a session. Their purpose is to focus student attention on new material, give the students an opportunity to process this material and provide an active break from the ‘lecture method’.
- Base cooperative learning groups – These provide long term support for academic progress. A group stays together to provide mutual support both in and out of class.

### **Activity 2.11**

1. In your opinion, how practical and useful can cooperative learning be in Agriculture College classes? Explain.

### **2.2.5 Varieties of Behaviors in Group Situation**

Group behavior refers to the roles individuals play when they are working in a group. Therefore, instructors need to be aware of the fact that their students might be inclined characteristically to show specific types of behavior, and such varieties of behaviors should be considered in organizing or monitoring group work.

## Activity 2.12

Match the following eight labels with their corresponding behavioral descriptions.

Problem Solver

Diverger

Facilitator

Saboteur

Leader

Doer

Dominator

Silent Listener

Description	Label
<p>Takes responsibility when assigned, quickly identifies the characteristics of other group members, has a clear view of how best to achieve the task objectives, wants the group to succeed, is able to sum up main points, is able to bring discussion back to the point, may have predetermined personal agenda. May say:</p> <p>“The main point for consideration/agreement is ...”</p> <p>“One way to do this is...”</p> <p>“What do people think?”</p> <p>“Let us hear everyone’s opinion.”</p>	
<p>Accepts personal responsibility for enabling the group to succeed, understands the group members and the task, listens carefully and can clarify/expand the statements of others, recognizes areas of agreement and where agreement can be reached, understands where differences and misunderstandings lie and can expose these in a non-personal way, is able to bring a discussion back to the point. May say:</p> <p>“I think you are both saying...”</p> <p>“Do you mean...?”</p>	

<p>Assumes responsibility, thinks s/he knows best, has a low opinion of other's knowledge and experience, does not listen to or take account of other people's points of view, interrupts other speakers (usually with a contradiction). May say:</p>	
<p>"Well I think..."</p> <p>"Oh no, that's not going to work."</p>	
<p>Feels responsible for wider issues than the immediate one, can see connections with many other issues, brings other issues into the discussion, can be persuasive and entertaining when speaking, is reluctant to let go of an idea/issue. May say:</p> <p>"We can't ignore..."</p> <p>"What about...?"</p>	
<p>Takes no responsibility for the success of the group, has no interest in the task, may have an interest in causing the task not to succeed, does not listen,</p>	
<p>Says nothing at meetings, probably due to shyness, low self-confidence, or poor understanding of the language. When speaking outside of meetings has interesting ideas and suggestions as to how to move projects forward.</p>	
<p>Is able to understand the nature of a problem quickly, is not put off by complex problems, can think creatively and radically when coming up with solutions, is able to find more than one solution to a problem.</p> <p>"How about trying..."</p> <p>"Couldn't we ..."</p>	

<p>Will take responsibility for the tasks no one else wants to do, will do other things that need doing without being asked, is able to think ahead and attend to details that others might forget.</p> <p>“Why don’t I...?”</p> <p>“I thought someone should...so I did it.”</p>	
---	--

## Managing Group Work

To enable successful group work in Agriculture Education, a facilitator needs to

- ✚ explain the purpose of discussion clearly
- ✚ assure group members that their ideas are valued
- ✚ challenge comments made by group members
- ✚ listen to, and build on contributions of group members
- ✚ stop ‘dominators’ from talking
- ✚ summarize the discussion at the end, but try not to make a judgment
- ✚ encourage the ‘silent listener’ with prompt questions
- ✚ ensure that all group members feel part of the activity
- ✚ introduce activities or questions to stimulate discussion

### Activity 2.13

Identify the issues involved in each of the following cases for both the teacher and the learners and suggest possible solutions.

#### Case 1

A class of 60 has been divided randomly into six groups. You have prepared one sheet of instructions for each group. It takes a long time for students to start working. By the end of the session, no group has completed the task.

## Case 2

Students have been allocated to groups; it takes a long time to move the furniture. There is a great deal of noise. After the furniture has been moved, most groups are sitting and talking about the research they have done, but there is very little new activity taking place.

## Case 3

Groups have been formed and instructions given. Most groups seem to be working well, but only one or two group members seem to be contributing effectively to discussion. One group calls you over and says that they do not understand what they are expected to do.

## Case 4

Groups are working on a 30-minute task. One group seems to have finished after only 15 minutes, while another group has hardly started. The group that has nearly finished is looking bored.

## Case 5

When groups are asked to report back, nearly every group has only one group member contributing. The contributions from most groups are identical. This is time consuming and students are looking bored. One group gives ideas that you think are incorrect and contrast with what others are saying.

A reflective teacher may find it useful to consider some of the following questions when considering communication and interpersonal skills in group work.

- ✚ Do the participants take turns or do they frequently talk over each other or interrupt?
- ✚ Do they invite contributions, redirect contributions for further comment and give encouragement?
- ✚ Do they listen to each other?
- ✚ Are they willing to learn from each other?
- ✚ Do they draw on recognized expertise within the group?
- ✚ Does conflict emerge or is harmony maintained?

- ✚ Is conflict positively managed by
  - Modifying statements, rather than just reasserting them?
  - Examining assumptions rather than leaving them implicit?
  - Explaining/accounting for claims?
- ✚ Do the participants elaborate their contributions by - giving detail of events, people, and feelings?
  - Providing reasons, explanations, and examples?
- ✚ Do they extend ideas by:
  - Asking for specific information?
  - Asking for clarification?
- ✚ Do they explore ideas by:
  - Asking for alternatives?
  - Speculating, imagining and hypothesizing?
- ✚ Do they evaluate by pooling ideas and waiting before making choices?

### **Activity 2.14**

What should the instructor do during group work? Discuss the following scenarios, considering the advantages and disadvantages.

1. The instructor leaves the groups alone to get on with the work.
2. The instructor spends time with each group in turn.
3. The instructor moves around the room listening to what each group is saying. S/he only assists when asked, or if the group is unsure what to do.

### **Reflective Activity 2.5**

1. Write down three things you have learnt about effective group work.
2. What will you change the next time when you organize a group activity in your session?

### **2.2.6 Encouraging Independent Learning/Learner Autonomy**

In independent learning, students take responsibility for their own learning. Independent learners tend to be self-directed and self-reliant. They are aware of their own strengths and weaknesses as learners. They connect the learning within the classroom to the real world and can set their own goals. They tend to be intrinsically motivated by making progress in learning and can reflect on their own progress.

Teachers sometimes use the phrase ‘spoon-feeding’ to describe the heavy reliance students place on teachers. Dependent students may find it difficult to take responsibility for their own learning. They may lack confidence and need to be given opportunities to develop the skills of an independent learner. One way of looking at independent learning is as a continuum spanning from dependence to independence. Most of our students belong somewhere in the middle of this continuum.

People often assume that independent learning means that a student needs to work alone. Working alone does not automatically develop independent learning skills in students, equally importantly; independent learning can also take place in the classroom. Some details:

## Independent learning

- ✚ can be thought of as “the ability to take charge of one’s learning”
- ✚ should be seen as a desired end but perhaps not the best means to that end
- ✚ is rooted in effective questioning and dialogue (coaching is a core driver here)
- ✚ enables the learner to make informed choices; take responsibility for one’s own learning activities through planning, support and guidance from teachers
- ✚ represents a shift in responsibility for learning from the teacher to the student. This has to be gradual with scaffolding in place and a flexible path embedded in all schemes of work
- ✚ encourages curiosity, passion, inspiration, discernment, self-motivation, self-examination, accountability, critical thinking and persistence
- ✚ develops the ability to recognize at which point one needs support

In addition, strong and productive teacher-student relationships and meta-cognition are key elements of independent learning. Students should also develop the capacity to learn how to learn. Moreover, independent learners are able to transfer knowledge across a wide range of contexts. Good memory and retrieval are key components in this process. Independent learners have strong ‘affective skills’ which refer to the ability to manage feelings the most important of which is the ability to delay gratification.

One of the key issues in teaching is to ‘empower’ students to take responsibility for their own learning. This requires two things to happen:

1. Instructors must be prepared to ‘let go’ and trust their students to take responsibility for their own learning. During the HDP you have become familiar with the process of moving from ‘teacher-centered’ to ‘student-centered’ approach. This trend can be seen across the world. The focus is now on learning as opposed to teaching. You are also familiar with the concept of moving from simply ‘teaching’ to ‘facilitating the learning processes. For instructors this means placing more emphasis on guiding, coaching and supporting students to explore the subject on their own or in groups. All instructors need to develop new skills and must be given support to increase their motivation and confidence.

2. The other important thing is for students to want to take responsibility for their own learning. This requires them to become more independent and not simply rely on the teacher to provide the knowledge. To achieve this goal students need support and encouragement to increase their motivation and confidence and take advantage of the opportunities to become independent of the teacher. Initially students may resist this change and prefer to remain passive learners. Given time and encouragement, students can become independent and discover that learning can be fun.

Four Pillars of Learning (UNESCO, 1996)

1. *Learning to know* – learning how to learn and think
2. *Learning to do* – competence, communication and problem solving skills, interpersonal skills
3. *Learning to live together* – collaboration and social activities
4. *Learning to be* –engaging in independent thinking

From the above description, we can see the different aspects of learning with the last entry emphasizing independent learning.

**a) Teaching, Coaching and Mentoring to Promote Independent Learning**

Independent learning seeks to improve students’ higher order thinking skills through a process of coaching for learning. The following table (adapted from Turnbull, 2009) compares teaching, coaching and mentoring.

Teaching/teachers	Coaching /coaches	Mentoring/mentors
Possess subject specific expertise	Generic helping skills that can be applied to different contexts	Possess expert knowledge and experience in a particular area
Relationship of different status between teacher and student	Dependent upon creating a sharing trustful relationship	Relationship depends upon different status between mentor and mentee
Give advice	Avoid giving advice	Give advice

Offer answers from their own expert position	Maintain a belief that students can find their own answers	Offer answers from their own expertise
Have high level of knowledge in their own area of expertise	Possess high level of skills in precision, questioning and reflecting	Possess high level of skills in their area of expertise
Give guidance on the acquisition of subject knowledge and skills	Allow students the ownership of change and development	Provide a role model for potential change
Provide a blend of support and advice	Provide a blend of support with challenge	Provide a blend of support with advice
Focus on specific subject knowledge and skills	Take the perspective of the whole person in order to come up with solutions	Focus on specific issues and tasks

From the above table, we can see that there is a significant difference between coaching and mentoring. If we are to move towards ‘independent learning’ it is preferable to adopt a ‘coaching for learning’ approach. Coaching requires a very different range of skills and techniques and therefore for many teachers represents a significant shift in mindset. After many years of making judgments, giving advice, the first instinct of many teachers is to tell. Moving into coaching involves for many teachers breaking the habit of a lifetime.

In reality a teacher who has developed professional flexibility will change from teacher to coach to mentor depending on the situation. This move towards independent learning and the empowerment of the student can be seen in the model presented by Turnbull (2009). She sees the move in four stages:

#### Stage 1 Creating comfort

- ✚ Establishing rapport with students
- ✚ Creating a trust relationship between teacher and students

- ✚ Creating an optimum state for learning

#### Stage 2 Raising awareness

- ✚ Solution-focused not problem-focused
- ✚ Meta-cognition – thinking about how we think

#### Stage 3 Reawakening the flow of learning

- ✚ Self-efficacy – beliefs about ourselves (confidence or failure)
- ✚ Affirmation – there is no failure, only feedback.
- ✚ Learning readiness – openness to new ideas and practices effected by previous social and emotional experience.

#### Stage 4 Empowerment

- ✚ Self-motivated students should be able to relate to the learning objectives and see them as having purpose and relevance to their own interests
- ✚ Ownership of the learning process
- ✚ Celebration of learning

A teacher cannot hand out empowerment. Empowerment is constructed by the joint activities of the teacher and the students.

How can we help students to become independent learners?

- ✚ Promote their critical thinking skills
- ✚ Help them develop their skills for work and life
- ✚ Provide support and guidance in learning how to learn
- ✚ Enhance their motivation through different means

#### **Reflective Activity 2.6**

1. Do you consider yourself a teacher, coach or mentor? Explain.
2. Do you think that your students can take responsibility for their own learning? Why or why not?
3. Is your role to be an expert and give students answers or to ask questions and challenge them? Explain.

4. What type of help do your students need to be independent learners?

**b) Promoting Critical Thinking Skills: Teaching for Thinking**

Checklist for instructors on what they can do: You can ask yourself the following questions.

1. Is this activity worth thinking about?
2. Does it improve open inquiry?
3. Is it suitable to the level of my students?
4. Does it provide for a wide range of possible responses or does it lead to one correct answer?
5. Will it lead to new ideas and insights?
6. Will it provoke students to be more curious, and sustain their attention and interest?
7. Does it allow students to do most of the thinking?

**Activity 2.15**

Read the following statements and determine whether or not the teacher is teaching for thinking.

Statements	Yes	No	Not sure
I try to ask students questions which might bring a variety of responses.			
If a student does not answer my question immediately, I move on to another student.			
When a student answers a question and doesn't get it right, I tell him/her the answer.			
When a student is not sure how to answer I encourage him/her to try.			
I try to involve the group in discussing possible answers.			
I always verbally reward students' answers.			

Critical thinking is important for the success of students. In this respect teachers should prepare students by helping them to acquire the skills they need. These include:

#### People skills

- ✚ Leadership
- ✚ Team working
- ✚ Interpersonal skills

#### Self-reliance skills

- ✚ Self-awareness
- ✚ Resourcefulness
- ✚ Networking skills

#### General/generic skills

- ✚ Problem-solving
- ✚ Commitment
- ✚ Flexibility

#### Specialist skills

- ✚ Management skills
- ✚ Communication skills

To develop these skills during their learning, students need to be aware that they will be taught using active learning methods and be encouraged to be independent learners. The purpose of the approach needs to be explained at the beginning of their academic program. They need to realize that active learning and independent learning significantly improve their experience and help them succeed in assignments and exams.

## Unit Three: Instructional Planning

Planning is a kind of paper-based decision making about how future activities are accomplished. It is the first and one of the most important steps for effective implementation of the intended learning task. Teaching tasks begin before the teacher steps into the classroom. Prior to each lesson or unit delivery, effective teacher identifies what students need to know, understand, and do, using the curriculum standards.

In order to bring a desirable behavioral change in the learner, the first step requires careful and conscious planning. Instructional planning is a process of preparing appropriate curricula, instructional strategies, and required resources to address the diverse needs of students. Effective instructional planning requires teachers to have a deep understanding of the curriculum, as well as student background. Instructional plan should have objectivity, logical sequence, flexibility, comprehensiveness, clarity and simplicity.

There are several key pedagogical questions that need to be addressed through planning:

- a. Why to teach?
- b. What to teach?
- c. Whom to teach?
- d. When to teach?
- e. Where to teach?
- f. How much to teach?
- g. How to teach? and
- h. How to assess and evaluate?

This unit deals with course and session planning to help the instructors to undertake effective teaching.

### Unit Learning Outcomes

Upon successful completion of this unit, a candidate will be able to

-  know the importance of planning

- ✚ explain the purposes of course and session plan
- ✚ identify components of course and session plan
- ✚ prepare course and session plans
- ✚ appreciate the relevance of session planning
- ✚ Use different instructional media that can be applicable in their classroom

### 2.3.1 Course Planning

Course planning refers to the process of organizing elements that constitute a course to be given. In colleges and universities, instructors are expected to inform their students, at the beginning of the academic semester, about the contents to be covered in the course, strategies to be followed, assessment techniques, what the learners are expected to do, etc. A course plan is basic for proper course delivery to achieve the goals of teaching.

#### Activity 2.16

1. Based on your own experience what does the following statement mean to you? If you fail to plan, you plan to fail.
2. Have you ever prepared a course plan for the courses you taught? YES/NO, why?
3. If YES, did it help you to achieve the objectives of the course?
4. Do you think that two instructors who have similar qualifications, work experience and academic achievement will demonstrate the same performance in their instruction? Why /Why not?

Read the case presented below and discuss the following questions.

#### **Case** – The Working Practice of Two Instructors: “K” and “Y”

Instructors “K” and “Y” graduated from Jimma university, agricultural college majoring in Plant science that qualify them to instruct in the faculties as graduate assistants. They were outstanding students of their batch scoring the same CGPA. After five years of teaching experience with M.Sc. qualification, and pedagogical training, their students’ evaluation

indicates a significant difference in the way they treat the Seed Science and Technology course they are offering to different groups of final year plant science students.

Similarly, similar results were also observed when peer evaluation was conducted. The evaluation results and interviews conducted with students are described as follows.

Instructor “K” has good knowledge of the subject matter and used this to provide appropriate references. But the way he used to manage the course was not orderly; he did not even communicate objectives, units that are included in the course and strategies of teaching and evaluation.

On the other hand, instructor “Y” was evaluated differently both by her students and peer observer. She was quite orderly, communicated to her students appropriately as to what topics were included in the course, gave enough information about the expected results of attending the course and provided well developed specifications about the whole features and components of the course.

### **Reflective activity 2.7**

1. What were the major strengths and weaknesses of instructors’ “K” and “Y” in the case report presented above? What do you suggest as a remedy to manage their weaknesses?
2. What do you learn from the above case?

### **Components of a Course Plan**

Basic elements of a course plan are:

1. **Background information** about the course/module such as: course title, course code, schedule, etc. (university, college, department level, prerequisite)
2. **Course description:** it is expected to provide a general overview of the course coverage. (list of topics and sub topics with conjunction)
3. **General objectives** of the course: general objective is a statement of what students are expected to achieve at the end of the course.

4. **Specific objectives** of the course: specific objective is a statement that address what is anticipated to be achieved by students in the process of the course. It is necessary to employ specific terms (action/behavioral verbs) and make it SMART (Specific, Measurable, Achievable, Relevant and Time-limited) objectives.
5. **Contents of the course:** It includes list of each unit, topic and sub topics of the course. It is a means to achieve and maintain the objectives.
6. **Approach/Method of course delivery:** In this part of the course outline different strategies of teaching the course content are identified.
7. **Instructional materials:** It is the list of materials to be used in the instructional process such as laboratories, intelligent boards, models and ICT facilities.
8. **Assessment and evaluation:** List of assessment mechanisms to evaluate students' progress using various tools such as, quiz, test, assignments, field work, projects, laboratory reports, final exam, observation, checklist etc.
9. **Course requirements or prerequisites:** Statement of what is expected of students to complete the given course. For example, indicating the required project work to be undertaken, course attendance, level of competency etc.
10. **References:** List of reading materials such as; books, journals, websites etc to be used by students during the course.

	Name of the University				
Program					
Level/BSc/Msc					
Course Title					
Course code					
Instructor					
Credit h. (E)					
Contact hours	Lectures	Tutorials & seminars	Laboratory & workshop	Home Study	Total
Year /semester					
Pre-requisites					
Course description					
Course objectives	General objectives	Specific objectives			
Duration	Unit/ Contents	Delivery method	Assessment method		
	•				
	•				
	•				
Resource:					
Course requirement:					

Practical session					
No	Topic	Activities	Hours	Delivery method	Assessment method

### Sample format of course plan

#### Reflective activity 2.8

1. Choose a specific course in your discipline and prepare a course plan, and exchange with your classmate.
2. Do you see difficulties in preparing a course plan, if only course description is given to you? If so, what are they? How can they be tackled?

#### 2.3.2. Session Planning

Session plan is carefully developed and written outline of a lesson to help an instructor to achieve the objectives of a specific topic, skill or ideas. Session planning is essential and expected to ensure that the learning experience is meaningful for the students. Therefore, teachers should plan their courses in terms of individual sessions.

#### Components of a Session Plan

Basic elements of a session plan are:

1. **Background information** about the session such as session title, schedule, etc.
2. **Session objectives:** Indicating what students are expected to achieve in the session.
3. **Contents of the session:** List of the topic and the sub-topics of the session.
4. **Approach/method of session delivery:** Outlining the strategies of treating the session
5. **Instructional materials:** are augmentative and appropriate resources to be used for successful session delivery.

6. **Assessment and evaluation:** List of assessment mechanisms to evaluate students' progress using various tools such as, oral questioning, quiz, test, assignments, observation, checklist etc.
7. **Session requirements:** Specifying what is expected of students to complete the given session.
8. **References:** Listing reference materials to be used by students during the session

**Guidelines for session planning**

- Know your learners – Take note of the cultural background of students, their individual learning needs and classroom setting.
- The teaching methods should be appropriate for the topic and the learning group. That is, the methods to be employed should consider the following.
  - I. The prior knowledge and experience of the learners
  - II. Activities which encourage the students to find out for themselves
  - III. The accommodation of different learning styles
  - IV. The use of appropriate language and of independent learning.

***Sample Format for Planning a Session***

Name of the Instructor; _____		Date: _____
Department; _____		Year/semester; _____
Course title; _____		Credit hour; _____
Session Topic; _____		
General learning outcome; _____		
Specific learning outcomes;  By the end of this session students will be able to;		
I.		
II.		

Sub-topic	Teacher activity	Time	Student activity	Delivery method	Assessment method
Indicate the title of the lesson	Include details of what the instructor will be doing	Indicate how much time is spent on each activity	Include details of the activities the students will do and the expected outcome of the task	Indicate the style of delivery (eg, discussion, lecture gap)	Identify the methods to assess the knowledge, skills and attitude of the students (oral questioning, observation, portfolio, quiz).
Resource	_____				

### Reflective activity 2.9

1. Using the session plan sample format given in this unit, prepare session plan with SMART objectives for the course in your specialization and discuss it them with your colleagues.
2. What are the sources used to create a session plan?

### 2.3.3. Self-Session Evaluation

#### Activity 2.17

Write two successful things about the recent session you delivered. Think your success in terms of the questions cited below

1. Review your session plan. Were the activities clear? Were the teaching methods appropriate?
2. Did the students stay on task? Was the expected outcome achieved?

Self-session evaluation is a systematic procedure for reviewing session performance and analyzing the review to identify strength and weakness of the session. Session evaluation can be

done by observer or by the teacher him/herself. The following self-Session evaluation form can be used as a model to evaluate a session plan and also indicate improvement area and strategies. Here only self-evaluation is dealt, peer evaluation is presented in detail under unit four of this section (See there). Use the following sample form to evaluate your session.

***Self-session evaluation form***

Instructor Name;	Date;
Department;	Year/semester;
Course title;	Credit hour;
Session Topic;	
General learning outcome;	
Mention some successful things in the session and just what makes them successful I. II. III.	
Indicate weaknesses/ targets for improvement I. II.	
Indicate the aspect why something didn't go so well I. II.	
Reflections on the overall completion of the session	
Reflections on the assessment methods used I. II.	
HDL Comment:	
Candidate sign:	

### 2.3.4. Action Planning

An action plan provides a detailed outline of the tasks required to accomplish after findings of evaluation. It breaks down the process into actionable steps based on a given timeline. Action plan is required because a session evaluation is not something that can improve teaching performance unless things which are not go so well during observation is not corrected. Action plan preparation format is presented below.

#### *Sample action plan format*

Instructor Name;	Date;
Department;	Year/semester;
Course title;	Credit hour;
Session Topic;	
General learning outcome;	
1. Target for improvement a. b.	
2. Strategies for improvement a. b.	
3. Expected evidence of improvement a. b.	
HDL Comment:	
Candidate sign:	

### Reflective activity 2.9

Complete self-session evaluation for one of your latest session and prepare action plan based on the information from self-session evaluation and share to your classmates.

### 2.3.5. Use of Instructional Media

Higher education institutions are increasingly using different types of media (LCD, intelligent board, Internet, DVDs, etc.) to enhance their teaching and improve the learning experience of students. This is likely to increase in the future as technology advances and access to ICT becomes less difficult to teachers and students.

#### Activity 2.18

1. How do your students use the media to enhance their learning?
2. How does access to different media affect your teaching?
3. How do you select appropriate media in relation to your session objectives and content during your classroom sessions? Give an example.

#### *Guidelines for Using some Types of Media in Learning and Teaching*

Media can be used on some occasions but avoid relying on technology alone.

##### 1. Power Point

- ✚ Keep the text on the screen short and simple.
- ✚ Deliver a PowerPoint presentation by making pauses in between. The pauses can be used to make students engaged in an activity related to the previous slides.
- ✚ Make sure you have set up and tried out the equipment before you start.
- ✚ Always have a backup plan and an alternative session plan in case you might face a power cut.
- ✚ Include one idea, or a limited number of ideas per slide.
- ✚ Use illustrations (charts, diagrams, pictures, graphs, etc.) as appropriate.
- ✚ Use colors for effect.

##### 2. Internet

- ✚ Select websites that are useful and relevant to your course and students.
- ✚ Carefully check the information you are using from the Internet comes from reliable and credible sources.
- ✚ Think of how you can link your course assessments to useful websites and research material on the Internet.

- ✚ Encourage your students to access the Internet for learning purposes where possible. Suggest suitable websites.
- ✚ Encourage students to be critical of what they are reading and to ensure that their sources are reliable and referenced.
- ✚ Advise your students that copying and pasting without proper acknowledgement is plagiarism and unacceptable.

### 3. TV/Video

- ✚ If you are aware of a suitable TV program for your course or topic advise your students to watch it.
- ✚ Try to link the TV program to your session plan with a suitable activity.
- ✚ Encourage your students to become independent learners and develop ideas related to your course or topic through suitable TV programs.
- ✚ If you are aware of a suitable Video for your course or topic, try to link it to your session plan with a suitable activity.
- ✚ Ask your students if they are aware of any Videos which might be appropriate to your course or topic.
- ✚ Use digital camera to help you and your students create your own Video.
- ✚ Always have a backup plan and an alternative session plan in case of power interruption.

### **Reflective Activity 2.10**

Based on your experience, as Agriculture instructor, write down some advantages of using instructional media in your classrooms.

## Unit Four: Assessment

This unit deals with the concepts, strategies and methods of assessment which enhance students' learning and determine the extent to which students achieve the learning outcomes of their courses. It gives particular attention to continuous assessment, self-assessment and peer assessment. It looks at an assessment of knowledge, skill and attitude with authentic and realistic conditions. In addition to this, the unit discusses test construction methods for the purpose of helping candidates to develop appropriate tests to assess students' competencies.

### Unit Learning Outcomes

At the end of this session, a candidate will be able to:

- ✚ differentiate between summative and formative assessment
- ✚ state clearly the why, when, how and by whom the assessment is done
- ✚ evaluate students' performance using a variety of assessment techniques considering the three domains (Knowledge, skill and attitude)
- ✚ describe the importance of testing in instructional process

#### 2.4.1 Concept of Assessment

Assessment is the process of collecting, interpreting, and recording information about the students' and the teachers' achievements. It suggests changes or improvements that should be made in the teaching learning process. Teachers need to use a range of assessment techniques that are appropriate to the learning activities of the students in order to fulfill the primary aim of assessment, which is to support learning.

#### Activity 2.19

1. Answer the following questions individually, and then discuss your answers in group.
  - A. Why do we assess?
  - B. What do we assess?
  - C. When do we assess?
  - D. Where and how do we assess?

E. Who or whom do assess?

F. What do we do with the assessments results?

2. Look at the table below and decide whether the statements describe assessment or not. Put tick (✓) under Yes or No in the right hand column and then add an explanation.

Statement	Yes	No	Explanation
1. You set and mark an assignment based on the three sessions you taught.			
2. At intervals throughout your teaching you raise questions to your students but do not give feedback.			
3. You direct the students to copy your notes from the board, completing some sentences and filling in gaps. You do not intend to check their work.			
4. You set a brief assignment. Students hand in their work to you. You mark it and suggest/write a way in which they can improve their work for next time.			
5. You set an assignment to be done in the class. You give the students a marking scheme and after the allocated time you instruct each student to swap their work with their partner and then mark their partner's work using the marking scheme.			
6. You grade students' work giving the highest achiever A and the lowest F.			
7. After presenting an explanation to the students, you ask "Is it clear?" but you do not give them time to answer.			
8. To start a new session, you create a mind map with the whole group to check what they had previously learnt; in order to find out what they have already known about the new topic.			

## 2.4.2 Types of Assessment

*There are various types of assessments and the most relevant ones are described below:*

- **Diagnostic assessment** determines what knowledge a learner comes with. It can be helpful to instructors by providing important information on placement in programming and addressing individual learner's needs. It occurs at the beginning of a course or unit of study. Furthermore, it assesses students' strengths, weaknesses, knowledge, and skills prior to instruction.
- **Formative assessment** measures students' progress throughout the course. The purpose of formative assessment is to help students improve their performance. It gives students an opportunity to apply new knowledge, skills, and attitudes and to receive feedback from teachers. Formative assessment also reinforces important or difficult content areas. In addition, it provides feedback to both the instructor and learner about their performance, thereby providing directives for continuing learners' improvement. Formative assessment guides instructors' professional judgments on delivery and design of the course. It can be done in nearly all learning environments, including the classroom, simulated practice
- **Summative assessment** is the formal assessment of a student's achievement at scheduled points during the course. Summative assessments assign a grade or mark to the student's level of competence in key learning objectives. Typically, the results of summative assessments are used to decide whether a student can complete a course, move on to another course in the academic program, or graduate.
- **Norm-Referenced Assessment** is an assessment method which compares a student's performance against those of other students' (a national group or other "norm") to develop a ranking of students.
- **Criterion-Referenced Assessment** is an evaluation approach which measures a student's performance against a goal, specific objective, or standard. It is scored based on clear criteria; these criteria are found in the learning objectives for the course. In other words, the student is being tested against predefined performance criteria and not against other students.
- **Interim/Benchmark Assessment** is an evaluation of student performance at periodic intervals (frequently) and at the end of a grading period. Teachers administer benchmark

assessments to ensure that students are on track to achieve the relevant learning outcomes. If the students are not on track, it is not too late for a teacher to adjust instruction.

### **Activity: 2.20**

1. Discuss the advantages and disadvantages of each type of assessment.
2. Which types of assessment do you most frequently apply in the courses you teach and why?

### **2.4.3 Principles of Assessment**

**Principle 1** - Assessment should be an integral part of program design and should relate directly to program aims and learning outcomes. Assessment tasks should primarily reflect the nature of the discipline or subject and the learning outcomes/objectives set, but should also ensure that students have the opportunity to develop a range of generic skills and capabilities.

**Principle 2** - Assessment should be valid. Validity ensures that assessment tasks and associated criteria effectively measure student attainment of the intended learning outcomes at the appropriate level.

**Principle 3** - Assessment should be reliable and consistent. There is a need for assessment to be reliable and this requires clear and consistent processes for the setting, marking, grading and moderation of assignments.

**Principle 4** - Information about assessment should be explicit, accessible and transparent. Clear, accurate, consistent and timely information on assessment tasks and procedures should be made available to students, staff and other external assessors or examiners.

**Principle 5** - Assessment should be comprehensive. Implies that all the objectives of the curriculum must be evaluated-objective, cognitive, recall and all other domains. Generally, it has to evaluate the three domains (Knowledge, Skill and Attitude). Since there are many things and variables to be tested in instructional evaluation a wide range of assessment types must be employed.

**Principle 6** - Assessment should be inclusive and equitable. As far as possible, without compromising academic standards, inclusive and equitable assessment should ensure that tasks and procedures do not disadvantage any group or individual.

**Principle 7** - The amount of assessed work should be manageable. The scheduling of assignments and the amount of assessed work required should provide a reliable and valid profile of achievement without overloading staff or students.

**Principle 8** - Formative and summative assessment should be included in each program. Diagnostic, formative and summative assessment should be incorporated into programs to ensure that the purposes of assessment are adequately addressed.

**Principle 9** - Timely feedback that promotes learning and facilitates improvement should be an integral part of the assessment process. Students are entitled to feedback on submitted formative assessment tasks, and on summative tasks, where appropriate. The nature, extent and timing of feedback for each assessment task should be made clear to students in advance.

**Principle 10** - Staff development policy and strategy should include assessment. All those involved in the assessment of students must be competent to undertake their roles and responsibilities.

#### 2.4.4 Key Characteristics of Assessment for Learning

##### Activity 2.21

In the second column of the chart below, indicate (by circling the relevant bullet) the activities which you have been applying and those which you still need to work on.

Key characteristics of assessment for learning	Teaching strategies: The Teacher	Impact on learning: The students
--	----------------------------------	----------------------------------

<ul style="list-style-type: none"> <li>✚ Sharing learning objectives and success criteria with students</li> </ul>	<ul style="list-style-type: none"> <li>✚ Agrees on learning objectives with students</li> <li>✚ Expresses objectives in everyday language and grounded in students' prior experience</li> <li>✚ Uses a range of modes of communication</li> <li>✚ Reviews learning against the objectives at the end of the lesson.</li> </ul>	<ul style="list-style-type: none"> <li>✚ Gain clear understanding of what they are to learn</li> </ul>
<ul style="list-style-type: none"> <li>✚ Helping students to know and recognize the standards they are aiming for</li> </ul>	<ul style="list-style-type: none"> <li>✚ Shows students examples of good outcomes from previous lessons;</li> <li>✚ States what s/he expects each student to have achieved by the end of the lesson</li> <li>✚ Differentiates outcomes according to individual students' ability</li> </ul>	<ul style="list-style-type: none"> <li>✚ Are clear about what they should have achieved by the end of the lesson</li> <li>✚ Recognize the features of good work</li> </ul>
<ul style="list-style-type: none"> <li>✚ Involving students in peer and self-assessment</li> </ul>	<ul style="list-style-type: none"> <li>✚ Asks students to peer assess their work</li> <li>✚ Asks students to suggest improvements that could be made to another student's work</li> <li>✚ Provides plenty of time for students to reflect on what they have learned</li> </ul>	<ul style="list-style-type: none"> <li>✚ Can assess progress they have made</li> <li>✚ Can identify ways of improving their own work</li> </ul>

<ul style="list-style-type: none"> <li>✚ Providing feedback which leads students to recognize their next steps and how to take them</li> </ul>	<ul style="list-style-type: none"> <li>✚ Repeatedly asks students: ‘What next?’ insisting on accurate responses</li> <li>✚ Provides oral feedback throughout the lesson</li> <li>✚ Collaborates with other teachers</li> <li>✚ Continuously discusses ‘next steps’ at different stages</li> </ul>	<ul style="list-style-type: none"> <li>✚ See clearly what they need to do next</li> <li>✚ Learn how to improve from the teacher and their peers</li> </ul>
<ul style="list-style-type: none"> <li>✚ Promoting confidence in every student</li> </ul>	<ul style="list-style-type: none"> <li>✚ Provides positive and constructive feedback</li> <li>✚ Matches learning objectives to needs at an appropriate but challenging level</li> <li>✚ Celebrates success and sets appropriate targets.</li> </ul>	<ul style="list-style-type: none"> <li>✚ Gain satisfaction regarding their own progress</li> <li>✚ Have a sense that they can continue to improve</li> <li>✚ Remain engaged and on task throughout the lesson</li> <li>✚ Take responsibility for their own learning</li> </ul>
<ul style="list-style-type: none"> <li>✚ Involving both teacher and student in reviewing and reflecting on assessment information</li> </ul>	<ul style="list-style-type: none"> <li>✚ Maintains continuous dialogue with students about progress made</li> <li>✚ Frequently reminds students of learning objectives and success criteria</li> <li>✚ Observes the group’s activities by reviewing and reflecting on individual achievements</li> </ul>	<ul style="list-style-type: none"> <li>✚ Have many opportunities for reflection on their learning</li> <li>✚ Focus on the learning objectives and success criteria</li> <li>✚ Measure their own progress:</li> </ul>

### 2.4.5 Peer Assessment and Self-assessment

At the end of this session, a candidate will be able to

- ✚ state the advantages and disadvantages of peer and self-assessment
- ✚ list and prioritize the requirements for effective peer and self-assessment
- ✚ draw up and implement a plan for using a new method of peer assessment in one of their lessons in the coming two weeks

#### Activity 2.22

1. How do you define peer assessment?
2. How do you define self-assessment?
3. Complete the table in the next page

Mention examples of peer assessment that you know	Tick if you have used any of these in your teaching	Tick if you could use any of these in your teaching	Mention examples of self-assessment that you know	Tick if you have used any of them in your teaching	Tick if you could use any of these in your teaching

**Self and peer assessment** are important aspects of ‘assessment for learning’ practice. Assessing their own work or that of others can help students to develop their understanding of the Intended Learning Outcomes and the Assessment Criteria. Research has shown that learners make more progress when they are actively involved in their own learning and assessment.

Self and Peer Assessment will:

- Enhance students' active engagement with their studies
- Increase the amount of feedback students receive
- Augment learning as peer feedback invariably requires explanation and justification
- Help students understand what is considered good work and why, thereby increasing their ability to achieve

In **self-assessment**, students assess their own performance. Of course, self-assessment should be used only for part of the course, and teachers or external examiners will decide whether students should pass or fail. Nevertheless, self-assessment gives students experience in assessing themselves, something that they will need to do on the job after graduation. This form of evaluation is usually a fundamental component of problem-based learning. In addition, it helps save time and gives students a greater sense of responsibility.

**Peer assessment** is another way to monitor teaching is to ask a student, other teacher, administrator, or outside consultant to observe your teaching and provide you with feedback. Ideally, ask someone who is not a close friend or in a position that would interfere with the ability to be objective, and is familiar with effective teaching approaches. It is important for observers to decide, in advance, what questions about your teaching they wish to answer. The results of observations of the content, context, and process of teaching can be recorded on videotape or on an observation questionnaire. (i.e., knowledge, skills, and attitudes).

### **Activity 2.23**

Plan a new form of peer assessment for your sessions in detail. In the space below write the details of how you will use a self-assessment in the coming two weeks. Consider the following key questions during your planning.

- What exactly will happen? Be sure to answer each of the following questions in what you write.
- Who will assess? Why will the assessment take place? What will be assessed? How will the assessment take place? What will be done with the results?

Course \_\_\_\_\_ Year/semester \_\_\_\_\_ Class size \_\_\_\_\_

Date and time of lesson \_\_\_\_\_ Room No \_\_\_\_\_ Topic of lesson or assignment \_\_\_\_\_.

Details of peer assessment Plan



### **2.4.6 Continuous Assessment**

Continuous assessment is a process of checking the work or response of a student as frequently as possible so that the result can be used as a guide for improving or enhancing the achievement or behavior of the student. Continuous assessment may include course work, practical exercises, assignments, projects, laboratory work and ancillary written examinations or tests, depending on the program of study and on individual course making up a program.

The purpose of continuous assessment is to facilitate student learning by:

- ✚ Enhancing the students' overall chance/rate of success
- ✚ Motivating students to work throughout the program
- ✚ Reinforcing and expanding students' learning
- ✚ Assessing the students' practical application of a learning material as well as their theoretical knowledge in each course
- ✚ Assessing the students' ability to conduct research as well as their reporting and presentation skills
- ✚ Providing feedback primarily to students and also to instructors
- ✚ Encouraging the use of diverse learning styles.

#### **Reflective Activity 2.12**

1. List the methods of assessment used in the HDP sessions so far.
2. Comment on the list given in number 1 above. Did it involve continuous assessment? If so, how?
3. Can you give an example of the methods of assessment you used in your classes?

#### **Practical Strategies for Continuous Assessment**

Continuous assessment should be based on learning objectives. It should utilize a variety of questions to check learning and probe thinking. Continuous assessment should involve feedback. Black and William (1998) have identified risks with assessment for learning. These include:

- ✚ Valuing quantity and presentation rather than quality of learning
- ✚ Lowering the self-esteem of students by over-concentrating on judgments rather than advice for improvements
- ✚ Demoralizing learners by comparing them negatively and repeatedly with more successful learners
- ✚ Giving feedback that serves social and managerial purposes rather than helping students to learn more effectively
- ✚ Working with an incomplete knowledge of students learning needs

It is important to clearly indicate to students which assessment tasks are summative (i.e. will count towards their final mark or grade) and which are formative. In addition to providing students with information about their progress, continuous assessment provides the teacher with feedback. Planning can be adjusted according to the results of the assessment.

### Activity 2.25

1. Answer the following questions by ticking under 'Yes' or 'No'.

Question	Yes	No
1. Are you satisfied with the present assessment methods you are using?		
2. Do you have any choice in how you assess your students?		
3. Do you think the assessment methods you are using are fair to your students?		
4. Do your students think the present system of assessment you are using is fair to them?		
5. Do you think the assessment methods you are using give you time to reflect and use the results for the benefit of yourself and your students?		
6. Is all the time taken by your assessment methods justified by the benefits to you and your students?		
7. Do you and your colleagues have the opportunity to change the assessment system?		
8. Do you fully understand the assessment system you are using?		

9. Is there any 'moderation' procedure to ensure that the assessment or grade you give your students would be the same as the grades given by other teachers?		
10. Does your assessment really make any difference to whether your students pass or fail your course?		
11. Are your assessment methods related to the aims and objectives of your course?		
12. Do your students use your assessments to improve their progress?		
13. Do your assessment methods support less able as well as more able students?		
14. Do your methods recognize and reward qualities that are difficult to assess objectively?		
15. Do you ever use self-assessment in your teaching?		

2. Answer the following questions by circling or writing your answer.

How effective are your present assessment methods in improving your students' performance? Circle one.  very effective            not sure            not very effective            has little effect
How effective is your present assessment system in improving your own performance? Circle one.  very effective            effective            not sure            not very effective            has little effect
What do your answers tell you about the system of assessment you have been using?
What can you do about any limitation that you may have discovered?

**Reflective Activity 2.13**

1. Have you ever experienced any difficulties while implementing continuous assessment?
2. What remedial actions have you taken?

**2.4.7 Assessment Methods**

The learning objectives for your course should guide the selection of appropriate assessment procedures or methods. Will the assessment measure understanding of a subject (i.e., knowledge), or the ability to do something (i.e., skills)? Will it measure opinions or feelings (i.e., attitudes)? Or will it assess a combination of these? Will it help students to improve their performance by providing feedback (i.e., formative assessment), or determine if a student should move to the next stage of studies (i.e., summative assessment)?

**a) Selecting Methods for Knowledge Assessments**

*Plan for Teaching* explains how to choose valid, reliable, and feasible methods for assessing the students' knowledge. Similar methods can be used for both formative and summative assessment of students' knowledge. The difference lies in how the results are used. For example, you can use a short quiz as a formative assessment to give students feedback and also to help them prepare for a summative written test on the same topic. In addition to being assessed by a teacher, tutor, or laboratory instructor, students' knowledge can also be measured through self-assessment and peer assessment.

Depending on how the questions within an assessment are constructed, attitudes and cognitive skills such as reasoning and laboratory application—not just pure recall—can be assessed. For example, reasoning and laboratory application can be assessed through case studies for which students must determine a course of action to overcome a problem or manage a farm. The following methods can be used for the formative and summative assessment of students' knowledge (See their details in appendix):

- ✚ Case Scenarios
- ✚ Objective written examinations (e.g., true-false, multiple-choice, matching, cloze and short-answer questions)
- ✚ Essay examinations
- ✚ Project reports
- ✚ Structured practical examinations
- ✚ Direct observation of students as they apply skills
- ✚ Structured feedback reports on students' performance
- ✚ Oral Interview

### **Reflective activity 2.13**

1. Develop two case scenarios based on the course that you are teaching to your students.  
(For reference see appendix)
2. Develop Structured Practical Examination

### **Activity 2.26**

Do the following exercise individually and discuss with the group for 10 minutes.

1. Discuss the advantages and disadvantages of each method of assessment.
2. Which method of assessment do you most frequently apply in the courses you teach?  
Why?

## **b) Preparation of Skills Assessments**

Students must build and demonstrate competence in essential skills in order to deliver high-quality services in agricultural sector after graduation. To help students improve their performance, use of formative assessments of skills, which correspond to step two of the skills development process—observing students while they are practicing and give feedback. To verify that students are competent in the skills at the end of the session or course, summative assessments can help. When assessing skills, competency-based assessment tools, such as checklists should be used to help ensure that students are assessed in an objective and standardized manner. Students, as well as teachers and tutors, can use these tools for self-assessments and peer assessments.

### **Select Methods for Assessing Students' Skills**

*Plan for Teaching* describes how to choose valid, reliable, and feasible methods for assessing the skills of students. For a valid assessment, a combination of methods and techniques should be used. Similar methods can be used for both the formative and summative assessment of skills. For example, tutors may formatively assess students by observing them during clinical practice and giving feedback that will help students prepare for an observed summative examination on the same topic. In addition to being assessed by teachers, tutors, and clinical instructors, students' skills can also be measured through selfassessment and peer assessment. It is important to note that the methods and tools described in this module also can be used to assess demonstrated attitudes. For example, you can assess whether students demonstrate respect for patients by checking for behaviors such as greeting patients with a smile and maintaining eye contact with patients. The following methods can be used for the formative and summative assessment of skills:

- Direct observation of students as they perform skills
- Structured feedback reports on students' performance
- Logbooks, learning journals

**Direct observation** is the most valid method for assessing skills. However, because reliability of direct observation may be low or inconsistent due to observer bias, an assessor needs tools to standardize the assessment results. Fortunately, tools are available, or can be developed, to help make direct observation a more reliable method of assessment. It is essential that the students have access to and be familiar with the instruments that will be used to assess their skills.

**Structured Feedback Reports** is a standardized way to give feedback to students on their performance during a specific period of time. When you use this method you are assessing sustained performance rather than just taking “a snapshot” as you would with an examination.

Teachers, laboratory instructors, or staff working with or alongside students can complete these feedback reports. The reports can cover areas such as overall performance, demonstrated attitudes, and essential laboratory skills. They are particularly useful for assessing characteristics such as personal attributes, attitudes, and professional values, which are difficult to test by other methods. Most feedback reports include objective rating scales to allow the assessor to quickly provide a formative assessment of the student’s performance. Standardized feedback reports are useful because they:

- Are easy, efficient, and consistent
- Provide a formal structure for assessment, particularly formative assessment
- Reinforce essential skills
- Ensure that each student receives feedback

**Logbooks** (also called a casebook) contains a list of skills or tasks that students should be able to perform. These tasks reflect the learning objectives for the course. The students are responsible for learning how to do each of the tasks, and when they believe they are ready, they can ask a teacher, tutor, or clinical instructor to assess their performance. During the session or course, students must perform all of the tasks to a satisfactory standard.

**Checklists:** A checklist requires minimal judgment on the part of the assessor. It simply indicates whether a specific characteristic is present or absent, or if a particular action was taken or not taken. The checklist is a list of steps needed to perform a skill correctly, given in the correct sequence. The assessor must indicate if each step was performed or not performed and may also

have to indicate the quality of the performance. Each step must be clearly and quickly defined to make the tool easy to use. Well-constructed checklists should contain only sufficient detail to help the assessor evaluate and record the student's performance.

### **Activity 2.27**

How do you develop structured practical examinations?

#### **Administering and Scoring Skills Assessments**

##### ❖ Conducting Direct Observations

##### *Before the Skills Assessment:*

- Discuss previous practice sessions with the student. Ask if the student has any questions about the skill and is ready to be assessed
- Review the assessment tool. Briefly review the checklist, recording form, or rating scale with the student. Whether the student is being assessed with a model, a simulated patient, or an actual patient, provide an opportunity for reviewing the essential steps.

##### *During the Skills Assessment:*

Observe and assess the student's performance:

- Stand to the side or somewhere else where you can see, without intruding and let the student perform the skill.
- Do not interfere or interrupt the student unless the student is about to make a mistake that may endanger or hurt the patient.
- Provide only essential feedback while the student is performing the skill.

##### *After the Skills Assessment:*

- Review the skill with the student. Ask the student to share feelings about what she or he did well during the session and what could be improved.

- Provide positive feedback and offer suggestions for improvement. Tell the student what she or he did well and then offer specific tips or instructions on how to improve performance.
- Determine if the student is competent or needs practice. Based on the pre-determined criteria, decide if the student is competent in performing the skill or needs additional practice.

### **Facilitating a Structured Practical Examination**

There are several considerations in facilitating this type of examination:

**Location:** A skills development lab/farm is the ideal place for a structured practical exam. If one is not available, an empty ward is another option. You need ample space to set up the different stations.

**Logistics:** Arrange for adequate numbers of assessors and simulated situations. Because many students will be rotating through the stations, you may wish to set up two to run simultaneously so that you can assess many students at once. Otherwise, in order to avoid the sharing of answers, all students should wait together in a room before entering the exam. Students can use this waiting time to take a written examination or to prepare themselves for the practical exam. One person should be responsible for coordinating student flow, answering questions, and providing overall supervision over the process. Decide which stations will require an assessor and assign appropriate individuals. Provide the students with information on the examination beforehand to help decrease their anxiety level.

<b>Prepare Skills Assessments</b>	<b>Check when completed</b>
1. Review your course learning objectives, and select the ones that are skills-related.	

2. Review your syllabus and schedule. For each skills objective, are there opportunities for the students to practice the skill and receive feedback? If not, revise your schedule to allow time for this.	
3. Review the skills-related objectives again. Which ones are “core competency” objectives that will require summative assessment by direct observation or a structured practical examination? Select these.	
4. For each of the objectives selected, review how summative, or final, assessment will occur. If there is no summative assessment, revise your plan to include summative assessment of the core competency skills.	
5. For each summative skill assessment, ensure that there is a standardized means of assessment. Share this with clinical instructors or whoever will be observing the student.	
6. Ensure that the students are aware of when assessment will occur and what is expected of them.	
7. For formative assessments, decide if a numerical score or a rating scale (i.e., poor, fair, good, excellent) should be used.	
8. For summative assessments, determine if it will be “pass/fail” or if points will be assigned for each step.	
Administer Skills Assessments	Check when completed
1. Discuss previous practice sessions with the student.	
2. Review the assessment tool.	
3. Observe and assess the student’s performance.	
4. Review the skill with the student and provide feedback.	

Prepare Skills Assessments	Check when completed
Score Skills Assessments	Check when completed
1. Use a checklist or other tool for assessment.	
2. Determine if the student will pass or fail, if using that scoring system.	
3. Assign a point for each step completed or task accomplished, if using that scoring system.	
4. Inform the student of the results.	
5. Provide opportunities for practice and re-assessment if possible.	

**Activity 2.28**

1. How do you evaluate the student’s attitude towards their work during practical sessions?

**Reflective Activity: 2.14**

Prepare one skill assessment and administer and score skill assessment based on the above checklist.

### **c) Attitude assessment**

#### **Activity 2.29**

1. How do you assess students' attitudes in your teaching learning process?
2. Read the following scenario individually and think about the problems or issues related to assessment types, methods and then suggest solutions for each points in detail. Finally discuss in small group and reflect for the whole class accordingly

#### **Case**

W/ro Martha is an assistant professor of Animal production in Debre Markos University. She is teaching a course dairy cattle production and management for 3<sup>rd</sup> year Animal Science students who are 40 in number. There is a dairy cattle farm at the campus. Many of the lessons of the course are taught outside the class in the farm and laboratory. W/ro Martha tried to examine students' practical work with a move exam 'on milking procedure' in the farm and at the same time; she tried to assess their interest for the work. But, the examination processes took 8 hrs to finish. Because of this, Martha is tired a lot and she decided not to repeat such assessment in the future.

It is very difficult to assess attitudes separately (e.g., the student is respectful of farmers), it is recommended that attitudes be assessed as part of the demonstration of skills (e.g., the student's ability to greet farmers in a respectful manner). In addition, written examinations can assess "expressed" attitudes by asking students to what extent they agree or disagree with value-based statements.

#### **2.4.8 Planning a Test**

The planning of a test can take many forms, but both professional test makers and classroom teachers have found the following series of steps to be most useful.

1. Determine the purpose of the test.
2. Identify the learning outcomes to be measured by the test.
3. Define the learning outcomes in terms of specific, observable behavior.
4. Outline the subject matter to be measured by the test.
5. Prepare a table of specifications /blueprint/exam syllabus/.
6. Use the table of specifications as a basis for preparing tests.

### **A) Preparing table of specification (TOS)**

#### **Activity 2.30**

1. Do you know about Table of Specification/test blueprint?
2. As a University Instructor have you been using TOS in your test planning while you develop tests? How?
3. Do you think developing TOS is important? Why? How?

TOS is one of the most important tasks of test planning is the construction of table of specification. Table of specification also called test blue print or test matrix is a two way chart that is used to relate the instructional objectives to the course content in order to obtain a representative sample of pupil performance in each of the areas to be measured. In sum preparing table of specifications has several advantages, these are:

- ✚ helps a teacher to design representative items from all the content covered in the classroom
- ✚ helps a teacher to design items that address all learning objectives and contents
- ✚ helps a teacher to relate the content with some specific objectives the contents sought for
- ✚ helps a teacher to determine the number of items designed for each objective and content
- ✚ improves the skill of a teacher in test construction

Thus, a teacher needs to prepare a table of specification to achieve these functions.

#### ***Sub-Steps in Preparing a Table of Specifications***

The construction of table of specification usually involves certain steps that each teacher should be aware of. The activities in each step are discussed below.

- A. *Obtaining a list of Instructional Objectives:* Write down horizontally the domain of knowledge the objective corresponds to: in our discussion of planning classroom test in step 3 above we saw how to obtain, how to identify and clarify the specific objectives.
- B. *Outlining the course content.* Write down vertically the contents of the course a teacher wants to extract items: in our discussion of planning classroom test above in step 2, we discussed how to outline the content and a teacher expected to list-down the content vertically.
- C. *Preparing the Two-Way Chart.* Table of specifications is prepared by a) writing the instructional objectives across the top row of the table, b) writing the contents down in the column left side of the table, and c) drawing a two-way chart or table.
- D. *Assigning weights:* The weights are assigned by indicating the a) total amount of items included in the test at the right bottom corner of the table, b) proportion or amount of the test items to be assigned to each objective (bottom row), c) proportion or amount of items to be assigned to each content area (right column), and d) giving weight to the two-way cells within the chart that relate each objective to each content area (Then allocate the number of items for each cell (intersection of the content and the specific objectives).

The guidelines to be used for assigning the relative weights to be allotted to each instructional objectives and content areas are based on the relative importance of the learning outcomes (objectives) and amount of instructional time devoted during teaching the contents. Note that the amount of items in each cell can be written in number, percentage, or both in number and percentage.

**Table 2.1 Example for Test Blueprint or Table of Specifications**

Level of Objective	Content				Total
	Topic A	Topic B	Topic C	Topic D	
Knowledge	1	2	1	1	5 (20%)
Comprehension	2	1	1	2	6 (24%)
Application	2	1	1	1	5 (20%)
Analysis	1	1	2	2	6 (24%)
Synthesis		1		1	2 (8%)
Evaluation			1		1 (4%)
Total	6(24%)	6(24%)	6(24%)	7(28%)	25(100%)

**Table2.1**

**Table 2.2: An Example for Table of Specification**

**Course title/ Code: Nutritional Epidemiology/FScN 3135; Course Credit/ECTS:3/5**

Course specific objectives	Learning Objectives	Competency area and level					Types of test Item	# of questions	Point value	% weight of test
		Knowledge		Skill		Attitude				
		Rem-App	Ana-Cre	Cognitive	Psycho.					
Discuss nutritional epidemiology and methods of epidemiological study	Define nutritional epidemiology	Remembering					MCQ T/F	1 1	2 pts each	4
	List types of epidemiology	Remembering					Short answer	1	2 pts	2
	Explain principles and methods of epidemiology	Comprehending					MCQ T/F Match	1 1 2	2 pts each	8
Determine epidemiologic frequency measures	Describe measure of diseases frequency	Comprehending					MCQ	4	2	8

used in Epidemiology	Compute relative risk, odds ratio & attribute risks	Applying	Analyzing				MCQ	3	2 pts	6
Analyze methods of epidemiological designs	Compare epidemiological designs and their applications		Analyzing				MCQ	3	2 pts.	6
							Match	2		4
							Case Scenario	3	3 pts each	9
Perform nutritional assessment using the appropriate method	Select the appropriate measurement to conduct nutritional assessment	Applying	Analyzing				MCQ	2	2pts.	7
							Case scenario	1	3 pts	
	Perform nutritional assessment				Psychomotor	Affective	OSPE	3	5 pts each	15
Execute nutrition screening and surveillance	Explain nutrition screening and surveillance	Comprehension					MCQ	3	2 pts each	8
							T/F	1		

	Perform nutrition screening for communities				Psychomotor	Affective	OSPE	1	5 pts	5
Investigate nutritional outbreak risks.	Discuss major nutrition-related diseases	Comprehension	Creating				MCQ	3	2 pts	10
							T/F	2		
							Essay	1	5 pts	5
	Investigate the outbreak prevalence			Cognitive	(Psychomotor)	Affective	Case scenario	1	3 pts	3
	<b># of questions</b>						MCQ	20	2	40
							T/F	5	2	10
							Match	4	2	8
							Short answer	1	2	2
							Essay	1	5	5
							Case scenario	5	3	15
							OSPE	4	5	20
							<b>Total</b>			<b>100%</b>

## **b) Test Construction for knowledge assessment**

Test is a systematic procedure for determining the amount of information that students have learnt. It plays a prominent role in all types of instructional programs. It is the most widely used method of assessing achievement in classroom instruction. Despite the widespread use of testing and its importance in evaluating and guiding student learning, some teachers receive little or no training in how to construct good tests. In order to realize the full potential of tests as learning aids, it is necessary to make testing an integral part of the instructional process. Testing should be considered during planning for instruction, and it should play a significant role in the various stages of instruction.

A test should:

1. Measure clearly defined learning outcomes that are in harmony with the instructional objectives.
2. Measure a representative sample of the learning outcomes and subject matter included in the instruction.
3. Include the types of test items that are most appropriate for measuring the desired learning outcomes.
4. Be designed to fit the particular uses to be made of the results.
5. Be made as reliable as possible and should then be interpreted with caution.
6. Be used to improve student learning.

### **Activity 2.31**

1. What do you understand by the term “testing”?
2. Discuss and note down the difference among the following terms: testing, assessment, measurement, and evaluation.
3. Describe the rationale behind testing students’ performance.

## Constructing Different Types of Tests

Test construction is the set of activities involved in developing and evaluating a test of some functions. The steps include specifying the contents of interest, deciding the test's function (diagnosis, description of skill level, prediction of recovery), choosing a method (performance, behavioral observation, self-report), designing item content, evaluating the reliability and validity of the test, and modifying the test to maximize its utility. There are two general categories of test items, namely, objective items and subjective items.

### I. Objective Type Tests

Objective items are those items which require students to select the correct response from several alternatives or to supply a word or short phrase to answer a question or complete a statement. Objective items include: true/false items, matching items, and multiple choice items.

**Table 2.3 Some of the advantages and disadvantages of each question format.**

Question Type	Advantages	Disadvantages
<p>True-False</p> <p>A statement is determined to be true or false.</p>	<ul style="list-style-type: none"> <li>✚ Require more time than multiple-choice questions to score</li> <li>✚ The simple, one-word response format is not suitable for higher level learning</li> <li>✚ Questions need to be constantly reviewed and revised when used for summative assessment</li> </ul>	<ul style="list-style-type: none"> <li>✚ Very easy to answer 50 percent chance of guessing the correct answer</li> <li>✚ Difficult to construct items that are absolutely true or false</li> <li>✚ Low reliability</li> </ul>
Multiple-Choice	<ul style="list-style-type: none"> <li>✚ Require students to apply knowledge</li> </ul>	<ul style="list-style-type: none"> <li>✚ To produce valid questions,</li> </ul>

<p>One or more correct answers are selected among a variety (commonly four or five) of suggested answers</p>	<p>rather than only provide a rote response</p> <ul style="list-style-type: none"> <li>✚ High validity and reliability</li> <li>✚ Guessing is reduced compared to the true-false format</li> <li>✚ Broad range of content can be tested in a short time period</li> <li>✚ Easy to administer and score</li> </ul>	<p>competence, experience, and time are required</p> <ul style="list-style-type: none"> <li>✚ Difficult to construct, especially for realistic distracters</li> <li>✚ Questions need to be constantly reviewed and revised, especially when used for summative assessment</li> <li>✚ A bank of questions could overcome these problems</li> </ul>
<p>Matching</p> <p>Lists of items are matched based on specific criteria.</p>	<ul style="list-style-type: none"> <li>✚ Maximum coverage of knowledge level</li> <li>✚ Good item to test ability to recognize or identify</li> <li>✚ Easy to score</li> </ul>	<ul style="list-style-type: none"> <li>✚ Time-consuming for the student to answer</li> <li>✚ Not suitable for higher-level learning</li> <li>✚ Good items difficult to construct</li> </ul>
<p>Short-Answer</p> <p>Questions requiring a short (one to two sentences) written answer are given.</p>	<ul style="list-style-type: none"> <li>✚ Require students to provide the answer rather than choose from a list of possibilities</li> <li>✚ If well-constructed, high validity</li> </ul>	<ul style="list-style-type: none"> <li>✚ Require more time than multiple-choice questions to score</li> <li>✚ The simple, one-word response format is not suitable for higher-level learning</li> </ul>

<p>No pre-defined possible answers are given to students.</p>	<p>✚ If an answer key is prepared, good</p> <p>✚ Reliability</p>	<p>✚ Questions need to be constantly reviewed and revised when used for summative assessment</p>
---	--	--

a. **True/False Items** is simply a declarative statement that the student must judge as true or false. In any event, this item type is characterized by the fact that only two answers are possible. Rules for constructing true-false items include:

1. Include only one central, significant idea in each statement.
2. Avoid words such as *more*, *few*, *large*, and *good*, because these are relative and may confuse the students. Avoid using negatively stated items (e.g., It is not recommended that...) because students may not read the question accurately and may misunderstand the meaning.
3. Keep the statements short, and use simple language structure.
4. Avoid words such as more, few, large, and good, because these are relative and may confuse the students. Avoid using negatively stated items (e.g., It is not recommended that...) because students may not read the question accurately and may misunderstand the meaning. Use short statements that contain only one idea.
5. Avoid words or expressions that frequently identify a statement as true or false. Words often found in false statements are only, never, all, every, always, none, and no. Those often found in true statements are usually, generally, sometimes, customarily, often, may, could, and frequently.
6. Use statements that are either completely true or completely false. Avoid a statement that is partially true and partially false. True-false items should focus on one idea and should challenge, but not trick, the students.
7. Word the statement so precisely that it can unequivocally be judged true or false.
8. Use negative statements sparingly, and avoid double negatives.
9. Statements of opinion should be attributed to some source.

10. Avoid extraneous clues to the answer. Make the true statements equivalent in length and number to the false statements.

### Activity 2.32

1. Construct at least five True/False test items related to one of your courses and discuss them with your colleagues.

**b. Matching Items** is a modification of the multiple-choice form. Instead of the possible responses being listed underneath each individual stem, a series of stems, called premises, is listed in one column and the responses are listed in another column. Rules for constructing matching items include:

1. Include only homogeneous material in each matching type of test.
2. Keep the lists of items short and place the brief responses on the right.
3. Use a larger or smaller number of responses than premises (i.e., adding a few distractors) or including some responses that may be used more than once if the lists are of equal length.
4. Keep the list of statements brief (no more than 10 to 15 statements): If the list is long, students may spend considerable time on one matching item even if they have a rather clear idea of what the response should be.
5. Keep the matching exercise on one page: it is confusing when it runs onto the next page.
6. Arrange the premises and responses in a logical order: If the premises or responses are names or titles, they may be arranged alphabetically. If they are numbers, they may be arranged sequentially. Any logical order can be used.
7. Write clear directions: indicate the basis on which the lists are to be matched and how the student is to respond. Can answers be used more than once? Are the answers to be indicated on the test or on another sheet? Are there distractors? What is the point value of each item? *Example:*

*Directions: The two columns below are lists of Vegetables and their major nutritional values. Read the Vegetables in the left column and select its major*

*nutritional values from the right column. Write the corresponding letter of the response in the blank provided in the left column. Note that each answer may be used only once and that there is one extra response. One point will be earned for each correct response.*

### **Activity 2.33**

Individually construct a set of matching items consisting of at least five premises related to your course and compare with your colleagues.

#### **c. Multiple Choice Items**

The multiple-choice item consists of a stem, which presents a problem situation, and several alternatives, which provide possible solutions to the problem. The stem may be a question or an incomplete statement. The alternatives include the correct answer and several plausible wrong answers, called distracters. The function of the latter is to distract those students who are uncertain of the answer. Rules for constructing multiple-choice items include:

1. Design each item to measure an important learning outcome.
2. Present a single clearly formulated problem in the stem of the item.
3. State the stem of the item in simple, clear language.
4. Put as much of the wording as possible in the stem of the item.
5. State the stem of the item in positive form, whenever possible: Avoid using negative terms in the stem (such as *no*, *never*, *none*, and *not*) because students sometimes misread or misunderstand them. Such as *no*, *never*, *none*, and *not*) because students sometimes misread or misunderstand them.
6. Emphasize negative wording whenever it is used in the stem of an item.
7. Make certain that the intended answer is correct or clearly best.
8. Make all alternatives grammatically consistent with the stem of the item and parallel in form.
9. Avoid verbal clues that might enable students to select the correct answer or to eliminate an incorrect alternative.

10. Make the distracters plausible and attractive to the uninformed: Avoid obviously wrong or silly distractors. Use distractors that are clear
11. Make the relative length of the alternatives similar to eliminate length as a clue.
12. Avoid using the alternative “all of the above”, and use “none of the above” if obligatory.
13. Avoid options like A and B but not C...
14. Vary the position of the correct answer randomly.
15. Control the difficulty of the item either by varying the problem in the stem or by changing the alternatives.
16. Make sure that each item is independent of other items in the test.
17. Use an efficient item format.
18. Consider the number of options (4-6)
19. Avoid patterns and clues in response: example, ACDB, ACDB, ACDB/ BBC, EBC
20. Write clear directions that indicate how and where the students are to respond. Should they indicate the correct responses on the test or on a separate form? Is there only one correct answer or one best answer? What is the point value of each item?

**d. Short-Answer Items** require the student to provide one or several responses to a question or situation. They are not as easy to complete or score as MCQ or true-false questions, but they require the student to spontaneously respond rather than choose from a selection of responses. This type of question assesses higher-level thinking, but is less reliable because a teacher must interpret the responses. Rules for constructing short-answer items include:

1. State the item so that only a single, brief answer is possible.
2. Start with a direct question, and switch to an incomplete statement only when greater conciseness is achievable.
3. The words to be supplied should relate to the main point of the statement.
4. Place the blanks at the end of the statement.
5. Avoid extraneous clues to the answer.
6. For numerical answers, indicate the degree of precision expected and the units in which they are to be expressed.

### Activity 2.34

Construct individually three short answer type items related to one of your courses/modules/ and discuss the items with your colleagues.

#### II. Subjective Type Tests

Subjective or essay items permit the student to organize and present an original answer. Subjective items include short answer essay, extended-response essay, and problem-solving and performance test items.

**Constructing Essay Tests** are a common type of written examination in which students are asked to write down what they know about a subject or question. Essay questions are easy to develop and can test students' ability to organize and express ideas. However, the scoring of essay questions is subjective and very time-consuming.

✚ Extended Response Question; Great deal of latitude on how to respond to a question.

✚ Restricted Response Question; More specific, improved reliability and validity

Rules for constructing essay tests include:

1. Use essay questions to measure complex learning only.
2. Relate the questions as directly as possible to the learning outcomes being measured.
3. Formulate questions that present a clear task to the student.
4. Do not permit students a choice of questions unless the learning outcome requires it.
5. Provide ample time for answering the questions and suggest a time limit for answering each question.

### Activity 2.35

Construct individually four essay type items (2 extended and 2 restricted types) related to one of your courses and ask your colleagues to give your comments. (Please refer back in chapter 2 the bloom's cognitive domains and make sure that they are in line with objectives).

#### Rules for scoring essay tests

1. Evaluate answers to essay questions in terms of the learning outcomes being measured.
2. Score restricted response answers by the point method, using a model answer as a guide.
3. Grade extended response answers by the rating method, using defined criteria as a guide.
4. Evaluate all of the students' answers to one question before proceeding to the next question.
5. Evaluate answers to essay questions without knowing the identity of the student.
6. Whenever possible, have two or more persons mark/score each answer.

#### **2.4.9. Feedback for Assessment**

Feedback ensures that students gain experience with knowledge, skill, attitude and improve their performance where needed. Effective feedback helps you reflect on what you do well and helps you identify how to make changes to enable you to do things even better

#### **A) Importance of Giving Feedback to Students**

Simply giving grades will not help students develop. Some suggestions for effective feedback follow.

- ✚ Give soon after the delivery of the session but allow enough time for reflection for both the teacher and the student/observer.
- ✚ Set students at ease.
- ✚ Always ask the student to self-reflect first, "What did you feel about your work?"
- ✚ Ask some probing questions to help the student improve his/her work.
- ✚ Keep to the point.
- ✚ Be open and flexible.
- ✚ Be sensitive and think carefully about the language you use.
- ✚ Ensure you say at least some successful things about the session.
- ✚ Give only one or two areas for development (if there are several priorities).
- ✚ Use the 'sandwich model' below
- ✚ Peer support is a powerful tool to support different needs, but it is not to be confused with peer assessment.

#### **B) The Feedback 'Sandwich'**

The **feedback sandwich** is one way to organize your **feedback** so it's more balanced and easier to deliver. By offering “keep behaviors,” or praise, at the same time you're offering “change behaviors,” or criticism, you demonstrate to students that you see performance strengths as well as performance deficits. Try to establish empathy with your students before you start the feedback ‘sandwich’. It consists of the following components:

Positive layer

- ✚ Be encouraging; ask how they thought the lesson went and add something positive.

Improvement layer

- ✚ Suggest how the students could have improved by doing some things differently. Share and/or demonstrate ideas and set new targets.

Positive layer

- ✚ Finish off with more positive comments.

### **Activity 2.36**

Read the following scenario individually and think about the problems or issues related to assessment types, methods and then suggest solutions for each points in detail. Finally discuss in small group and reflect for the whole class accordingly.

### **Case**

Mr Solomon teaches fruits and vegetable processing technology course to BSc students of Horticulture. He rarely asks the students questions what they know about fruits and vegetable processing between the sessions, but he doesn't give them responses. He only prepares final examination which consists of multiple choice and true/false items. Then he lets students to know their final score result posted on the notice board. During the laboratory works, he

demonstrates them how fruit juice is prepared and packed. He also gives them oral examination to respond on the fruit juice preparation process; however, he failed to give them response.

#### **2.4.10. Monitoring and Evaluations**

Monitoring is defined as a **continual** process of gathering information about teaching for practical judgment and decision-making. Evaluation is the **periodic** assessment of the overall process and final results of a course or academic program. The results of evaluations should be used to demonstrate to teaching institutions, funding agencies, and national authorities to what extent the resources invested in teaching produced the expected effect. In addition, the results should be used to identify areas in which teaching could be strengthened. Many of the same indicators, techniques, and tools that are used for monitoring of courses also can be used for the evaluation of a course or academic program. Therefore, if monitoring is done well, evaluation is simplified and, in many cases, may not be needed. There are four main types of evaluations. These are the evaluation of the process; final outcomes, effectiveness, and impact (see Table 2.4)

- **Process** refers to the changes made in the way a course or academic program is taught, the methods and materials used, and how teachers and students respond to those methods and materials.
- **Outcomes** refer to the final results of a course or academic program, particularly with regard to students' knowledge, skills, and attitudes (i.e., competence). You can evaluate outcomes by testing students at the end of a course or academic program. The examination, however, must be relevant and based on defined learning objectives that reflect the job that the students are being trained to do.
- **Effectiveness** assesses the ability of students to apply knowledge, skills, and attitudes to their work after graduation (i.e., performance). It can be evaluated by finding out how well students are doing after they have left the teaching institution and started work.
- **Impact** concentrates on improvements in the health status of a population that may, or may not, be related to changes in the quality of care provided by graduates.

**Table 2.4 Evaluating the Results of Academic Programs: Process, Outcomes, Effectiveness, and Impact**

	<b>PROCESS</b>	<b>OUTCOMES (COMPETENCE )</b>	<b>EFFECTIVENESS (PERFORMANCE )</b>	<b>IMPACT (QUALITY)</b>
<b>Basic question</b>	How did they learn it?	Can they do it?	Do they do it?	How well do they do it?
<b>Process of evaluation</b>	Describing changes made to the teaching and learning process	Assessing if learning objectives were achieved	Observing service delivery by new graduates	Applying a continual, cyclical audit
<b>Responsibility for formal evaluation</b>	Teaching institutions, national academic associations	Teaching institutions, national academic associations	Licensing authorities, professional associations, societies, employers	food systems, organizations, vet clinics, services, farms, productivity
<b>Responsibility for routine or informal evaluation</b>	Teachers and instructors	Teachers and instructors	Self (professional), patients, peers (coworkers)	Groupings of service providers: colleagues, teams, managers, planners

## **Unit Five: Managing Teaching Sessions (Teaching project)**

### **Unit Learning Outcomes**

Upon the completion of the unit, a candidate will be able to

- ✚ Plan to teach and evaluate a series of sessions
- ✚ Write a report on the implementation of the session plans.

#### **2.5.1. Steps to be followed while conducting Teaching Session Project**

1. Determine the topics to be addressed in each session.
2. Identify specific active learning methods (student-centered) that are suitable for the topics, could be altered and enable assessment to take place.
3. Determine self, peer and group assessment methods by considering the following questions:
  - i. When will a self-assessment be a useful exercise?
  - ii. When will a peer assessment be relevant?
  - iii. Which part of the topic could be suitable for group work and group assessment?
4. Prepare a plan for the sessions.
5. Discuss your plan with a colleague who will observe one of your planned sessions and have a feedback session with you.
6. Make an appointment with your HDL/T to discuss your plan, make the necessary adjustments and obtain his/her approval.
7. Arrange a discussion session with a fellow candidate to observe you and provide you with a feedback.
8. Teach your sessions and reflect on each session.

#### **Activity 2.37**

1. Prepare notes in preparation for your report addressing the following points.
  - The reasons for your choice of learning methods and how they were successful in enhancing quality learning

- How the planned assessments informed the students of their progress in their learning
- The contribution of the sessions in improving your competence in terms of planning, teaching, evaluation and reflection.

### **2.5.2. Session evaluation by peer/HDL observation**

Peer evaluation is known by another name called Learning from one another. Peer evaluation involves teachers or other observers closely watching and monitoring a lesson in order to gain understanding of some aspect of teaching, learning or class room interaction. The process is often conducted as a reciprocal exercise, with staff observing each other, sharing their insights and providing mutual support. It is a method to gain feedback from colleagues for the improving of teaching skills. It is supportive and developmental process for improving the quality of teaching in the university. Peer observation can benefit both the teacher being observed and the observer in the following ways.

- Disseminate best practice across staff
- Support continuing professional development
- Provide opportunity for reflective practice
- Bring people together and strength friendship

Peer or HDL observation is step-wise procedure. Anyone who want to conduct peer or HDL observation could follow the following four steps.

#### *Step 1: Providing Context to the Observer*

The observer and a teacher should set up a time to meet prior to observation. Possible discussion between the teacher and observer could include issues like goal of the course, specific objectives of particular session, challenges facing (student and resource) and area of focus.

#### *Step 2: Observing the Classroom*

Observation in the classroom should focus on what students are doing not just what the teacher is doing. The following issues could be emphasized during observation; students interest and

engagement in the lesson; interpersonal interaction among students and ability of the instructor to engage all students.

*Step 3: Debriefing*

The observer and teacher should meet after the session. The teacher wants to know how things going on (whether his/her goal is met or not). The observer should share notes and comments including strength, weakness and making suggestion for improvement. The observer need to start his/her comment from the positive side of the session (that is to follow sandwich model of giving feedback).

*Step 4: Documentation*

The observer shall provide written feedback addressing his/her class observation as well as discussions during debriefing.

**Session observation format**

Observer's name:	Candidate's name:
Course:	Date:
Lesson topic:	
Focus of observation:	
<ul style="list-style-type: none"> <li>• <i>Session plan:</i></li> </ul>	
<ul style="list-style-type: none"> <li>• <i>Teacher activity:</i></li> </ul>	
<ul style="list-style-type: none"> <li>• Student activity:</li> </ul>	
<ul style="list-style-type: none"> <li>• Active learning methods used</li> </ul>	
<ul style="list-style-type: none"> <li>• <i>Assessment:</i></li> </ul>	
How successful was the lesson from the point of the objectives?	

What is the evidence?
How could the lesson be improved?
Reflections by the candidate

**Reflective Activity 2.15**

Managing teaching project: Design four consecutive session plan based on session planning principles and formats presented under the second unit of this module. Each session could be followed by session evaluation and action plan. Each session plan must have different active learning methods and assessment techniques. There must be improvement and progress from session to session. Before implementation of this project candidate must submit session outline based on the following format.

<i>Session outline from</i>					
Candidate Name;					
Course Name;				Date;	
Department;				Year/semester;	
Course title;				Credit hour;	
Session Topic;					
General learning outcome;					
Session Number	Session topics for each day	Date	Time	Location (classroom, field, lab)	

1					
2					
3					
4					
HDL Sign:					
Candidate sign:					

## **MODULE THREE: ACTION RESEARCH**

Instructors working in agricultural higher education institutions are expected to engage in action research. This helps them to improve their teaching thereby enhancing the achievement of their students. This module focuses on the concepts, characteristics, ethics, importance, procedures, and write-up concerning action research on a particular problem and identified organization or school.

### Module Learning Outcomes

Upon the completion of this module, a candidate will be able to:

- ✚ Define the term action research
- ✚ Describe the specific characteristics of action research
- ✚ Understand basics of action research
- ✚ Identify possible action research topic/areas
- ✚ Asses, collect and prioritized the key challenges of learning and teaching
- ✚ Conduct action research on identified problem and location.
- ✚ Write and submit well compiled action research report/research findings for HDL
- ✚ Using the proposed format (see page number could be indicated here).
- ✚ Appreciate the relevance of action research for improving teaching learning process

## **Unit One: The Concept and Characteristics of Action Research**

### Unit Learning Outcomes

Upon the completion of this unit, a candidate will be able to

- ✚ Define action research
- ✚ Explain/describe the characteristics of action research
- ✚ Explain the importance of action research.

### **3.1.1 Conception of Action Research**

#### **Activity 3.1**

1. How do you define action research?
2. What makes action research different from other forms of research?
3. What is the importance of action research?
4. Discuss your previous experience on Action Research

#### **Defining Action Research**

According to Robson (2002), action research is an exercise intended to bring about change in the teaching-learning process often involving learners in the process of investigation. It may also be defined as a process of investigation, reflection, and problem-solving intended to improve the teaching-learning. Action research involves purposefulness, reflection, flexibility, practitioner empowerment and commitment to teaching-learning. It is implemented to solve problems faced at hand in teaching learning process. It is also goal oriented activity. Action research can give research based solution and leads to decision making capacity. Action research is also known by other names: participatory research, collaborative inquiry, action learning, contextual research, school-based research or organization-based research, self-reflective inquiry, teacher research, practitioner inquiry, etc.

#### **Activity 3.2**

1. How useful do you think action research in teaching effectiveness for agriculture professionals?
2. How do you characterize action research?

#### **Characteristics and Importance of Action Research**

Like all other types of research, action research seeks to solve a problem. In addition, action research is cyclic, participatory, reflective, and systematic. The purpose of action research is to improve the understanding of teaching practice and to influence or change some aspect of whatever is the focus of the research. It is participatory research and usually involves collaboration between researchers. The evidence collected is qualitative and meaningful to those involved individuals.

Generally, the importance of action research includes;

- ✚ Connects theory to practice
- ✚ Create synergy between teachers and students
- ✚ Improves educational practice and quality
- ✚ Empowers teachers
- ✚ Gives chance for a student to participate in and learn research process
- ✚ Helps teachers to grow professionally.

### **3.1.2 Why action research is preferred for HDP?**

Action research is the most preferred type of research for the aim of solving teaching learning hindrances. It gives rapid evidence based solution using limited resource in a short time. It can give a chance to look at another subsequent solution in other cycle incase if the first doesn't work. It also brings together theory and practical knowledge to test each other with purpose of developing practices.

### **3.1.3 Procedures and Ethics in Conducting Action Research**

#### **Procedures**

- ✚ Reviewing existing teaching learning process like assessment, classroom management, instructional planning and method of teaching
- ✚ Identifying and prioritize problems concerning teaching learning
- ✚ Decide action research title
- ✚ Collect, analyses and interpret data on determined topic
- ✚ Propose and implement a possible intervention method
- ✚ Testing, monitoring and evaluating the outcome,
- ✚ Modifying the solution (if necessary) in light of the evaluation

- ✚ Trying another option if the initial solution fails.

When deciding your topic for the action research project consider these issues:

- ✚ Is the topic manageable in the time allowed within the HDP?
- ✚ Is the topic in an area where you can really make an influence and bring about change?
- ✚ Do you have access to the relevant data to conduct this research?
- ✚ Have you chosen a topic within your day-to-day activities in the classroom, is small enough to be achievable and meaningful?
- ✚ Is your research proposal smart and relevant to improving the learning?
- ✚ How will you assess the output of your project?
- ✚ Ensure your topic comes from a problem in your classroom?

### **Ethical considerations**

Maintain ethical standards applicable to scientific research such as confidentiality, use of original data (primary or secondary), source acknowledgement, free from plagiarism, participant welfare etc.

### **Activity 3.3**

1. What is your proposed issue that you are going to troubleshooting through this action research?
2. What are the possible intervention methods to solve problems encountering in your teaching learning process?

## **Unit Two: Action Research Project**

During action research write-up the candidate should give emphasis to;

- ✚ Clear statement of the problem
- ✚ Detailed account of the rationale for intervention and the intervention itself
- ✚ The results of the intervention including the problems encountered
- ✚ Any modifications of the initial intervention
- ✚ The way forward

### **3.2.1 Components of Action Research Report**

A formal action research report to be submitted by the HDP Candidate is expected to have the following basic components though there can be slight variations based on the nature of the study under consideration.

1. The Cover Page (Title Page)
2. Approval Sheet (To be approved by HDPL)
3. Acknowledgment
4. List of Tables (if any)
5. List of Figures (if any)
6. List of appendix (if any)
7. Abbreviation/Acronym (if any)
8. Abstract
9. Table of Content
10. Background and statement of the problem
11. Objectives
12. Methods (a portion where data collection, analysis and interpretation undertake)
13. Plan or propose action/ Intervention Strategies
14. Implementation of action/Intervention strategies.
15. Result /Evaluation of Intervention/action
  - Observation of the out-come
  - What Changed as a Result of the action taken?
  - How the students benefited from the interventions made?

16. Conclusion (Subsequent Proposed Action)

- Identify further possible changes and identify the challenge in order to repeat the cycle again.

17. References

18. Appendix (if any) - Include relevant material e.g. questionnaires, interview notes, worksheets etc.

**Action Research Project checklist and HDL comment**

	<b>Item description</b>	<b>Candidate</b>	<b>HDL</b>	<b>HDP- C</b>
1.	<b>Group project</b> identifying learning hindrances, plan, their cause, background information, intervention & evaluation criteria, implementation – observation & evaluation against criteria, outcome.			
2.	HDL approved meeting minutes			
3.	<b>Individual report :</b>			
	a. Your contribution to the group project.			
	b. The groups’ interaction throughout the process			
	c. Your assessment of the effectiveness of the group.			
	d. Your evaluation of the success of the project.			
	e. Your suggestions for improvements with reasons.			
	f. How you have developed – your group work skills, organizational skills, understanding of Action research as a daily teachers activity, problem solving skills, communication skills, use of reflection and reflective skills.			

Candidate's Module 3 Self-Assessment

Write a reflective comment on your overall performance and achievements in Module Three.

How would you evaluate your overall performance in Module Three? Circle one.

PASS

INCOMPLETE

FAIL

Signature of candidate: \_\_\_\_\_ Date: \_\_\_\_\_

Higher Diploma Leader's *Module Assessment*

Observations and comments by the Higher Diploma Leader on the Module Performance

1. General comments on achievement in this Module

2. Please comment specifically on areas where you disagree with the self-assessment. Also recommend what the candidate should do in the next Module to improve his/her performance on HDP.

Overall performance of the candidate in this Module

PASS

INCOMPLETE

FAIL

Signature by the HDL: \_\_\_\_\_ Date \_\_\_\_\_

## **MODULE FOUR: PLACEMENT IN ORGANIZATION OR EDUCATIONAL INSTITUTION**

Higher education teachers have to work with organizations to integrate the largely theoretical training they offer in universities with practical application in the world of work. For teachers, this kind of engagement helps to fill gaps in their knowledge of the world of work as it relates to their areas of teaching and to identify community problems. Organizational or school placement also helps students to develop practical skills and appropriate professional values in their field of study.

### **Module Learning Outcomes**

Upon completion of this module, a candidate will be able to

- ✚ Evaluate the gap in higher learning institution teaching practice and agricultural organization work. Take measures to fill the identified gaps in the working environment.

### **Unit One: Organizational placement-guidelines and report**

#### **Learning outcomes**

Upon completion of this unit, a candidate will be able to

- ✚ Analyze the training needs of a local agricultural related organization
- ✚ Design, deliver and evaluate training
- ✚ Reflect upon and evaluate their experience from the point of view of their own professional development
- ✚ Build and improve institutional linkage.

Each candidate on the HDP is required to spend 12 hours in a local organization. The organization selected must be appropriate to the candidate's subject and experience. It may include agricultural offices, flower farm companies, research centers, veterinary clinics, industries, markets, farms, breeding sites, natural resource management offices, national parks, farmer teaching centers, environmental protection organizations, conserved forest sites and so on. The Organization Placement provides the opportunity for HDP candidates to transfer their

HDP skills from their university environment to an organization. The selection of a suitable organization for the placement will be determined in consultation with the HDL.

#### 4.1.1 Personal priorities for organizational placement

##### Activity 4.1

Write down three personal priorities for your organizational placement. What do you hope to gain from the experience?

##### Before Placement

List your priorities below. Write the expected gain in relation to each priority.

Priority 1	
Expected gain	
Priority 2	
Expected gain	
Priority 3	
Expected gain	

##### After Placement

##### Activity 4.2

Write your reflection on the outcomes of each priority.

Priority 1	
Reflection on the outcome	
Priority 2	
Reflection on the outcome	
Priority 3	
Reflection on the outcome	

#### Task A: Interview with the Management Team

Conduct an interview with one of the management team of the organization such as the general manager and the training officer.

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of organization: \_\_\_\_\_ Duty of organization: \_\_\_\_\_

Name of interviewee: \_\_\_\_\_ Position: \_\_\_\_\_

Number of employees: \_\_\_\_\_ Male: \_\_\_\_\_ Female: \_\_\_\_\_

Name of HDP Candidate (Interviewer): \_\_\_\_\_

**Questions for the interviewee (sample only):**

1. What are the main objectives of the organization?
2. Do you carry out a training needs analysis within the organization? If yes, how is this done?
3. What do you consider are the main training and development needs of the employees in this organization?
4. What relationship does the organization have with your local university?
5. How could the local university help you in the training and development of your employees?

**Task B: Interview with Employees**

You are required to conduct an interview with 4 up to 6 employees (considering gender ratio) with different jobs and in different positions within the organization.

Use the following as a guide only.

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of organization: \_\_\_\_\_ Duty of organization: \_\_\_\_\_

Name of interviewee: \_\_\_\_\_ Position: \_\_\_\_\_

Name of HDP Candidate (Interviewer): \_\_\_\_\_

**Questions for the interviewee (sample only):**

1. What do you think are the main training and development needs of employees in your organization?
2. Does your organization provide training to employees? If so, what types?

**Task C: Planning and Delivering**

As a result of your interviews you should be able to identify some training and development needs within the organization. In the discussion with the relevant manager, your task is to design and deliver a suitable training and development workshop. This will provide an opportunity to practice all you have learned from the HDP, including session planning, preparation, time management, using appropriate active learning methods, and giving feedback.

**Please use the following checklist as a guide only**

- + Title of the training
- + Date and time
- + Venue
- + Number and description of participants
- + Objectives of the training
- + Schedule
- + Active learning methods to be used
- + Resources required – e.g. flip charts, handouts, laptop and LCD projector
- + Evaluation sheet for participants.

**Task D: Evaluation of Training**

The evaluation should address the following questions among others.

1. Were the training objectives achieved?
2. Were your planning and preparation sufficient?
3. Were the training methods appropriate?
4. What were the strengths and limitations of the training as evaluated by the participants?
5. How did you modify the initial training scheme based on the evaluation of participants and your own observation(s)?

**4.1.2 Report Format**

This form must be completed and submitted to the HDL by all candidates.

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of organization: \_\_\_\_\_

Duty of the organization: \_\_\_\_\_

Name of the Head of Organization: \_\_\_\_\_ Position: \_\_\_\_\_

Number of employees: \_\_\_\_\_ Male: \_\_\_\_\_ Female: \_\_\_\_\_

Name of HDP Candidate: \_\_\_\_\_

University: \_\_\_\_\_

Date	Summary of activities	Hours spent

I confirm that the above is an accurate statement of the time I spent in the organization. .

Signature of Candidate: \_\_\_\_\_ Date: \_\_\_\_\_

I confirm that the above is a true statement of the candidate.

Signature: \_\_\_\_\_ Position in organization: \_\_\_\_\_

*Organization's stamp*

#### **4.1.3 Final Reflection on the Organization Placement**

The reflection should include among others the following items.

1. What did you learn from your organizational Placement as a whole?
2. What did you learn about yourself as a facilitator of the training?
3. In what ways will this experience influence your work?

## **Unit two: Placement to Agricultural Educational Institution**

### Learning Outcomes

Upon completion of this unit, a candidate will be able to

- ✚ identify Agricultural Educational Institution situations and the challenges therein
- ✚ investigate and reflect on the organization and management of the Agricultural Educational Institution describe the predominant teaching-learning process in the Agricultural Educational Institution specify mechanisms by which Agricultural Educational Institution -based challenges could be overcome
- ✚ state the contribution of local institutions and the community in improving educational standards
- ✚ apply pedagogical methods for improving school practices

### **4.2.1 Collaboration with Educational Institutions**

#### **Case study**

A college of agricultural education has an extensive campus. Unfortunately, the college does not have enough money to employ the required staff to take care of the grounds. The grass, trees, shrubs and flowers grow as an untidy wilderness; there is rubbish around and the paths are not clear. Everyone complains about this but it is accepted as ‘the way things are’. A group of students studying natural resource management become interested in ecology and decide to set up a garden with a pond. Their tutor supports the idea and they are allocated some land on the campus.

They have already fenced off their garden, dug and filled a pond and planted waterside and other plants. They are excited about the number of different species of animals they find attracted to this space. Their excitement is communicated to other students and gradually many more students become involved in the project. Teachers and visitors comment on the improvement of that part of the campus.

The students form a Garden Committee and ask the management whether it will be possible for them to extend the garden. The authorities of the institution discuss with the students on

the possibility of planning for a better campus landscape by the interested students. The Garden Committee is expanded to include teachers and gradually the campus landscape improves.

### **Activity 4.3**

How could you help to develop a greener campus?

## **Unit Three: Agricultural Educational Institution Placement Guidelines and Report**

### Unit Learning Outcomes

Upon the completion of this unit, a candidate will be able to

- ✚ Investigate and reflect on the organization and management of a local Agricultural Educational Institution
- ✚ Describe the teaching-learning processes in the Agricultural Educational Institution  
Use methods to overcome the challenges that new teachers face.

### **4.3.1 Personal Priorities for your Agricultural Educational Institution**

#### **Activity 4.4**

Write down three personal priorities for your Agricultural Educational Institution placement.

What do you hope to gain from the experience?

#### **Before Placement**

List your priorities below. Write the expected gain in relation to each priority.

Priority 1	
Expected gain	
Priority 2	
Expected gain	
Priority 3	
Expected gain	

#### **After placement**

#### **Activity 4.5**

Write your reflection on the outcomes of each priority.

Priority 1	
Reflection on the outcome	
Priority 2	
Reflection on the outcome	
Priority 3	
Reflection on the outcome	

Agricultural Educational Institution Information: Report on Agricultural Educational Institution Placement

Name of Agricultural Educational Institution: \_\_\_\_\_

Level of Agricultural Educational Institution: \_\_\_\_\_ Location: \_\_\_\_\_

Duration of placement \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_

Total number of hour's \_\_\_ Education level \_\_\_ Section/s \_\_\_ Number of students  
\_\_\_\_\_ Males \_\_\_\_\_ Females \_\_\_\_\_

Number of students with special needs \_\_\_\_\_ Males \_\_\_\_\_ Females \_\_\_\_\_

Student-teacher ratio in the Agricultural Educational Institution \_\_\_\_\_

Average class-student ratio: \_\_\_\_\_

Proportion of girls to boys: \_\_\_\_\_

Books and Equipment: Describe briefly the availability and utilization of books, equipment and other teaching-learning materials in the Agricultural Educational Institution. Comment on the quality and adequacy of the materials.

Student Background: Describe briefly the social and economic background of the students commenting on parental support, interest and expectations. Mention details of drop-out rates, including any gender differences you find.

## Activity 4.6

Lesson Observation format for Agricultural Educational Institution placement

Peer observer: \_\_\_\_\_

Candidate: \_\_\_\_\_

Subject: \_\_\_\_\_ Date: \_\_\_\_\_

Title of the lesson: \_\_\_\_\_

Number of students: \_\_\_\_\_

Comment on teacher plan and activity and student activity:

- Teacher plan and activity (Focus on the following areas: objectives, teaching methodology, use of assessment, subject knowledge and classroom management.)
- Student activity (Focus on the following areas: participation, learning style, understanding and behavior.)

Were all the students fully engaged? If not, how could the teacher improve the engagement of students?

Was there a range of activities? Were they appropriate?

Other comments on the lesson

How successful was the lesson? What is the evidence?

Could the lessons have been improved? If so, how?

**Activity 4.7**

Individual interviews with six Agricultural Educational Institution teachers (3 female and 3 male)

In your report consider the following

- ✚ The specific roles and responsibilities of the teachers
- ✚ Teachers’ perceptions of their roles and responsibilities
- ✚ The challenges the teachers face
- ✚ The roles teachers can play to enhance the quality of education in the school
- ✚ Measures your university should take to better prepare student teachers for their profession.

**4.3.2 Teaching Practice in the Agricultural Educational Institution (Project)**

As part of your Agricultural Educational Institution placement, you are required to teach two lessons in your subject area preferably in different grades. Complete two lesson plans and evaluations for these lessons using the following format.

**Activity 4.8**

Report format

University \_\_\_\_\_ Name of HDP candidate \_\_\_\_\_

Agricultural Educational Institution \_\_\_\_\_

Head /Director \_\_\_\_\_

Date	Summary of activities	Hours spent in school

I confirm that the above record is an accurate statement of the time I spent in Agricultural Educational Institution doing the placement for the HDP.

Signature of candidate \_\_\_\_\_ Date \_\_\_\_\_

I confirm that the above statement is a true of the Agricultural Educational Institution.

Signature of the Head of the Institution \_\_\_\_\_ Date \_\_\_\_\_

This statement must be included in the Portfolio as evidence that the requirement for a Agricultural Educational Institution has been completed for the HDP.

### **4.3.3 Final Reflection on School Placement**

#### **Activity 4.9**

To be completed by candidates at the end of the Agricultural Educational Institution.

1. What did you learn from your Agricultural Educational Institution?
2. What did you learn about facilitation at placement?
3. How will your experience on your placement change the way you teach in your institution?

### Placement Project checklist and HDL comment

	<b>Item description</b>	<b>Candidate</b>	<b>HDL</b>	<b>HDP-C</b>
1.	Placement information sheet (where to work placement project)			
2.	Plan for collecting information for needs analysis; who, questions, resources etc.			
3.	Collated information, subsequent decision for training with reasons.			
4.	Training plan – times, numbers, structure, objectives/outcomes, planned evaluations (trainees and trainer), and resources.			
5.	What changes you would make if repeated and why.			
6.	The signed, stamped and completed record of the hours at the organisation.			
7.	Candidate report: Your evaluation of the training, trainees' evaluation of the training, challenges faced and how overcome, what you have learnt for your future trainings.			

**End of Module Self-Assessment- Module Four**

Write a reflective comment on your overall performance and achievements in Module Four.

How would you evaluate your overall performance in Module Four? Circle one.

Pass

Incomplete

Fail

Signature; \_\_\_\_\_ Date \_\_\_\_\_

**Higher diploma leader/tutor assessment- Module four**

1. Observations and comments by the HDL on the Module Performance
  
2. General comments on achievement in the HDP
  
3. Please comment specifically on areas where you disagree with the self-assessment
  
4. Overall performance of the candidate in HDP

Pass

Incomplete

Fail

Signature (HDL); \_\_\_\_\_ Date: \_\_\_\_\_