



***EVALUATION LEVEL OF COGNITIVE, AFFECTIVE AND PSYCHOMOTOR  
IN EXTENSION PROGRAMME PLANNING THROUGH EMPOWERMENT  
APPROACH OF UNIVERSITI PUTRA MALAYSIA STUDENTS***

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**BY**

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**A project submitted to Faculty of Agriculture, University Putra Malaysia, in  
fulfillment of the requirement of FINAL YEAR PROJECT (PRT 4999) for the  
award of the degree of BACHELOR OF HORTICULTURE SCIENCE**

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## CERTIFICATION

This project report entitles “Evaluation Level of Cognitive, Affective and Psychomotor in Extension Programme Planning through Empowerment Approach of Universiti Putra Malaysia Students. Prepared by Siti Nadzirah Binti Mohammad Daud and submitted to the Faculty of Agriculture in fulfillment of the requirement of PRT 4999 (Final Year Project) for the award of the degree of Bachelor of Horticulture Sciences based on my own original works.

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## ABSTRACT

Extension programmed planning is a process of situation, objectives, problems, and solutions which has been prepared on the basis of an adequate and systematic planning effort and which forms the basis of extension teaching activities in a specific area, for a given period. In agriculture, it is important to make sure among farmer uses the latest technology. Unfortunately, nowadays many extension agents do not develop and use their knowledge and skill effectively for farmers to be used through human resource development and technology transfer. Therefore, objectives for this study are (1) to evaluate the level of cognitive, affective, and psychomotor of students in extension programs planning through empowerment approach of class TKP3201 and TKP4203 semester 1 and 2 in the year of 2016/2017; (2) to study the the relationship between cognitive, affective and psychomotor with students' performance through empowerment approach among students; and (3) to compare the level of cognitive, affective, and psychomotor of students in extension programs planning through empowerment approach between both of semester. 153 students participate as respondents which are 112 students for semester 1 and 41 students for semester 2. Quantitative Method uses questionnaire design using a Likert scale. SPSS 23 and independent *t*-tests analysis were used for data analysis. The performance of students agriculture extension showed that no different for the level of cognitive, affective, and psychomotor of students in extension programs planning between these classes in semester 1 and 2, UPM.

## **ABSTRAK**

*Perancangan program pengembangan adalah proses keadaan, objektif, masalah dan penyelesaian yang perlu disediakan berdasarkan usaha perancangan yang mencukupi dan perancangan asas yang sistematik. Dalam bidang pertanian penting untuk memastikan di kalangan petani menggunakan teknologi terkini. Malangnya, pada masa ini banyak agen pengembangan tidak membangunkan dan menggunakan pengetahuan dan kemahiran mereka dengan berkesan untuk petani gunakan melalui pembangunan sumber manusia dan pemindahan teknologi. Oleh itu, objektif untuk kajian ini adalah (1) untuk menilai tahap kognitif, afektif, dan psikomotor para pelajar dalam perancangan program pengembangan melalui pendekatan pendayupayaan bagi kelas TKP3201 dan TKP4203 semester 1 dan 2 dalam tahun 2016/2017 ; (2) untuk mengkaji hubungan antara kognitif, afektif dan psikomotor dengan prestasi pelajar melalui pendekatan pendayupayaan dalam kalangan pelajar; dan (3) untuk membandingkan tahap kognitif, afektif, dan psikomotor para pelajar dalam perancangan program pengembangan melalui pendekatan pendayupayaan antara dua semester ini. 153 pelajar akan mengambil bahagian sebagai responden iaitu 112 pelajar untuk semester 1 dan 41 pelajar untuk semester 2. Kaedah Kuantitatif digunakan dengan reka bentuk soal selidik melalui skala Likert. SPSS 23 dan analisis t-ujian tak bergantung digunakan untuk menganalisa data. Prestasi para pelajar pengembangan pertanian menunjukkan tiada perbezaan bagi tahap kognitif, afektif, dan psikomotor pelajar dalam perancangan program pengembangan pertanian antara kelas ini bagi semester 1 dan 2, UPM.*

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# CHAPTER ONE

## INTRODUCTION

### 1.0 Introduction

Chapter one is all about the introduction of the study which comprised of Cognitive, Affective, Psychomotor, Extension Programme Planning, Performance of Students' in Agriculture Extension, Empowerment Approach, Problem Statement, and Objectives.

### 1.1 Cognitive

Bloom's taxonomy was created to provide a common language to discuss and exchange learning and assessment methods. Taxonomy can be derived from the specific learning objectives, though it is most commonly used to assess learning on a variety of cognitive levels. The goal of an educator using Bloom's taxonomy is to encourage higher-order thought in their students by building up from lower-level cognitive skills. Behavioral and cognitive learning objectives were given to focus on Bloom's taxonomy which can be incorporated into larger-scale educational goals or guidelines.

Cognitive domain has six levels among which are knowledge (C1), comprehension (C2), application (C3), analysis (C4), synthesis (C5), and evaluation (C6). Bloom's levels of thinking process start by recognizing and recalling facts, concepts, theories, principles, procedures criteria and steps on self-learning which process is essential towards performing more complex cognitive tasks especially in understanding events, abstraction, cause and effect of physical phenomenon. The cognitive complexity rises as

the tasks move from understanding to higher order thinking skills such as justifying an idea or action or new ways of viewing things (Yunus et al., 2013). So, the cognitive domain in the simple word is more about understanding and knowledge about something.

### **1.2 Affective**

Affective domain has five levels are receiving phenomena (A1), responding to phenomena (A2), valuing (A3), organizing values (A4), and internalizing values (A5). The affective domain focus on interests, attitudes, opinions, appreciations, values, and emotional sets that includes the way we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes (Yunus et al., 2013). So, affective domain is more about the attitudes and behavior towards something.

### **1.3 Psychomotor**

Psychomotor domain has seven levels these are the perception (P1), set (P2), guided response (P3), the mechanism (P4), complex overt response (P5), adaptation (P6), and origination (P7). Simpson (1972) describes the psychomotor domain to include physical movement, coordination, and use of the motor-skills. Besides, development of skills requires related practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution. The psychomotor domain focus attention on physical skills that involves muscular or motor skill, some manipulation of materials

and objects, or some act which requires a neuromuscular coordination that captures the complexity of enhancing, strength and speed that is often involved in physical activity or skill acquisition (Yunus et al., 2013). So, the psychomotor domain can be described as practices and skills of something related towards someone after getting the knowledge and action the attitudes toward the related things.

#### **1.4 Extension Program Planning**

Planning is the process of achieving the desired result. It begins with a look at the past, then analyze the present, and ending in predicting the future. All process through the decision-making process. The extension program planning has three planning stages; these include long-term planning, medium-term planning, and short-term planning. The long-term planning is the overall planning of a program using a "top-down" approach which is the instructions from the authorities. Its objective is to overcome the problem issue at the highest level such as the State, and it has a long period of over 5 years. Next, the medium-term planning is that type of planning which also uses "top-down" approach which is the instructions from the authorities. This period is the shorter period of planning and the fifth Malaysia Plan (Rancangan Malaysia).

Finally, the short-term planning which is known as the project/program and annual activity, and it is a fraction of the medium-term program planning (five years). The period for this scheme is approximately one year. Therefore, it is more detail in the information to be carried out and is known as an action plan which is meant for detailed planning of activities. It contains objectives, activities, and resources (inputs) such as



finance, infrastructure, staff (human), and equipment. Each activity is clearly defined and precise. For example, as this study, the agricultural program planning method of study visits or trips of educational visits. It must contain elements of what? (Educational visit), when? (Date), who? (Students TKP3201 and TKP4201), and where? (Visited place). Implementation still uses a "top-down". Each state gets a "quota" to be carried out to meet the goal. Then, the states distribute the "quota" to the region, and next to the service area. Finally, the extension agents (students) identify appropriate locations for the implementation. In addition, it can also be used for the project implementation process using a "bottom-up" approach which is to identify the input needs of the project, collected by the district and sent to the state for the purchase/receipt. Input materials that were purchase/receive would be supplied to the district area and next to the service area. Time input supplied to the service area is very important to enable the project goes according to plan. Due to the input delay that causes its supplied the implementation of the project to be delayed.

Moreover, extension program in this context is a process of obtaining and/or disseminating information, technology transfer such as agricultural technology, carried out systematically to help the parties involved in helping themselves to enhance their ability to make progress on a goal by achieving better. It can be defined as a process of generating change and satisfaction within the individual and in turn to achieve the objective of a larger group. Extension program should be carried out as a continuous string of actions by extension effective methods for disseminating information that fit, meeting the needs and requirements of a party to produce the desired changes. It involves everyone such as the words of Moris (1991) who explain agricultural

extension, whether public or private, operates in a context or an environment that influences the organization, form, and content of transfer activities.

Indeed, the procedures for program planning are laid down by the extension organization, have six distinct stages that can be identified starting from: (i) analyze the present situation, (ii) set objectives for the extension programmed, (iii) develop the program by identifying what needs to be done to achieve the objectives, and then (iv) prepare a work plan, (v) implement the program by putting the work plan into effect, and lastly (vi) evaluate the program and its achievements as a basis for planning future program. This will lead to a review of the situation and the planning of a new program, which should build on the achievements and learn from the failures of the previous one. The different stages of extension program planning are interrelated and the planning does not always proceed neatly from one stage to another. Objectives may have to be altered still further as unexpected difficulties arise while the program is being implemented. However, it is useful for the agents (students) to think of program planning as involving these five activities, each of which will be considered in more detail, as each can be broken down into smaller steps.

### **1.5 Students Performance**

Students are to the country. The mission and vision of the government are to produce students who have the talent to have a first-class mind to face the challenges of economic development based on knowledge and innovation, and therefore human capital development must-have features that are competent and capable in knowledge

and skills and characteristics personal excellence. Through that, the transformation of higher education is in the context of Malaysia as a center of excellence in higher education at international level by laying the foundation towards excellence and sustainability of higher education to reach 2020. The academic field of study is an important platform in the education system.

Performance is a relative value to the organization in terms of capability, and potential. It also means that the contribution made by each people related to the organization (Rozhan, 1991). Dzulkifli (1996) performance can be displayed on the production aspect of a job. Aspects of the result in the learning process can be measured and evaluated by five criteria which is the quality of the results, quality of work, cost effectiveness, timeliness and implementation, and management directives. Performance can also be defined as the capacity and ability of the individual in terms of knowledge about the work and management abilities. Besides to efficiency, positive attitude and leadership will be taken into account. It is same with the ability to make judgments, delegation, creativity, dependability and communication skills (Khong, 1999). It can be concluded that the performance means the ability of an individual to demonstrate competence and excellence results from a study that followed including in terms of efficiency, attitude, leadership, communication and decision-making skills. Performance in this study mean that any positive improvement or change that involves aspects of knowledge, attitudes, skills or academic students. Knowledge and attitudes are a significant element in determining a person's willingness to accept and implement any changes (Habib 2005).

## **1.6 Empowerment Approach.**

The concept of an empowerment approach to be the concepts such as water can change the form through the container used, the concept of change ice to water, and changes cloud into the rain. This concept is used in various fields with the understanding that varies with their respective interests. It comes from English term is 'power' which is derived from the word 'empowerment' which means that power can be used to be owned and developed. Power exists in the context of the relationship between humans and they can be changing according to the situation living environment. Empowerment is a multidimensional social process to help people (students) to control their lives. It is a process that forms power in human-self to be used toward the betterment of the lives of themselves, their families, and communities to make action on issues that are important in their lives such as planning extension programs in developing agricultural industry. In addition, it involves learning through experience and learning among mankind. Knowledge obtained through an interactive process and encourage yourself to make your own decisions.

Among the features of empowerment is having the power to make the right decisions, has links to information and resources, has a wide range of decision-making, have hope for progress, critical thinking and practical towards rights and responsibilities, minded self-belonging rather than individualistic and lonely, have the knowledge and the ability to learn, involve significant changes to self, family and society, can influence the perception of others on one's ability to change, have dignity (shame, pride, and responsibility), and continue to be independent and developing. Abdul Hamid (2000) notes which are psychologists agree that individuals 'can' and have potential to improve

in all aspects of their lives if they are guided properly. In this study, we can look through learning and teaching process are the ways to empower the students in extension program planning. The training program is a structured procedure to enable effective learning process takes place through the presentation of an idea, innovation or technology that can regularly produce one treatment among coaches and so can contribute to the organization (Ibrahim, 1996). This effort is aimed at improving the performance of current and future performance of an individual to increase the ability to perform their tasks so that organizational objectives are achieved. therefore, it can be concluded that the training programs like approach empowerment is a process that is designed specially by certain parties to provide educational facilities to a person with the aim to increase knowledge (cognitive), attitudes and behaviors (affective), and improving one's skills (psychomotor).

The teaching and learning process of TKP3201 and TKP4203 is using the class task and small group task (three students per group) in class. TKP3201 had a class task which is Agriculture Extension program in the field trip and small group task is to choose technology development and explain in presentation day to develop their cognitive, affective, and psychomotor skills performance. While, TKP4203 also uses class task of Agriculture Extension program in the field trip, but the small group task is interview farmers and present their result interview in presentation day to develop their cognitive, affective, and psychomotor skills performance.

## 1.7 Problem Statement

Agriculture Extension subject was still new introduced which is in the year 2010. It is a core subject at UPM while the name of UPM is University Pertanian Malaysia and in accordance with the requirements of the implementing agencies, which is agriculture, is using the term extension program. After the name of UPM changed to University Putra Malaysia, the extension agent workers do not have basic in extension program subject at UPM. When the year 2010 new introduced back and offered to Faculty of Education with name Extension subject. Dr. Salim Hassan was taken over the lecturer of this subject at Faculty of Agriculture in the year 2013. The problem occurs when this subject still new and the awareness for students to take this subject low, and not very interest of students to take this subject as an elective in addition to core subject for TKP3201. The new approach should be designed to attract students towards this subject. This method was introduced by the lecturers of this study in 2013 was made in the beginning. So it is still continued until the method is made, but not much effort to implement this program. So, a new approach must be a plan to make this subject program that can attract the students to take with interest.

In addition, research of Wani Binti Sidek in year of 2016/2017, students of Faculty of Agriculture, University Putra Malaysia about Farmer's Perception Towards Competency Of Extension Agents In Transfer Of Technology In Granary Areas, Malaysia show that the rice yield at IADA Pulau Pinang, IADA Seberang Perak, IADA KETARA, and IADA Kerian at the low level on the year of 2016 to compare the importance of rice as staple food. There are many efforts done by the government or agencies to improve the production of paddy to feed the population. According to Rashid and Dainuri (2013), the

government gave incentives and subsidy programs to sustain paddy sector and help the farmers. For example, Malaysia Agriculture Research and Development Institute (MARDI) generated many technologies to increase the yield production such as introducing Rice Check technology in 2002 and released by DoA as a guide to the farmers in paddy production, producing new quality varieties to achieve 10 metric ton per ha, improved the agronomy practices and production system and the management of postharvest handling. Other than that, DoA also involved in leading the transfer of technology while Farmers Organization Authority (FOA) give help in financial to farmers. Although, the biggest cultivated paddy land in MADA still also cannot achieve the national target average yield. All above is about the extension in the agricultural sector, thus abilities of extension agents are related to the effectiveness of the extension services or in delivering the information about the agriculture extension. It is highly dependent on the ability of the extension agents to transfer information from extension organization to the farmers (Tiraieyarie, 2009). Hence, this study will look the students of agricultural extension that learn to act as an extension agent.

Students are the most important resources in agriculture to raise the performance level of the better through the extension program. They also are important for continuity in agricultural projects. The question here is to what extent the level of cognitive, affective, and psychomotor of the students in the planning of the extension program for industrial development in Malaysia such as agriculture industry.

## **1.8 Objectives**

### **1.8.1 General Objectives**

To study the performance of students in extension programme planning through empowerment approach among student TKP4203 and TKP3201, UPM.

### **1.8.2 Specific Objectives**

The specific objectives of the study were as follows:

- i. To evaluate the level of cognitive, affective, and psychomotor of students in extension programs planning through empowerment approach of semester 1 and semester2 (2016/2017).
- ii. To study the relationship between cognitive, affective and psychomotor with students' performance through empowerment approach among students.
- iii. To compare the level of cognitive, affective, and psychomotor of students in extension programs planning through empowerment approach between classes of semester 1 and semester 2 (2016/2017).



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