

CHAPTER I

INTRODUCTION

A. Background of the Study

Education is an absolute requirement that must be fulfilled in the lifetime. By education, human being will experience the learning process. In the learning process, human being will be able to improve their quality in their life. Thus, without a process of education or commonly learning process referred to the *formal* and also *non-formal*, human being is impossible to live and develop consistently to their objectives to achieve a better standard of living.

According to Purwanto in his book of *Psikologi Pendidikan* (2004: 106), he states that learning is a process and as a process, of course, there should be processed (input), and processing of results (output). Purwanto also outlines the influenced factors of the learning process can be divided into three factors i.e. (1) learners factors (*Raw Input*), (2) supporting tools factors (*Instrumental Input*) and (3) Environment factor where the learning process is happened (*Environmental Inputs*). Each of these factors consists of several components. *Raw input* consists of all learner characteristics, namely: interest, talent, intelligence, maturity, and gender. *Environmental input* includes the physical environment such as temperature, location, and buildings, and non-physical environment such as family and community. While the *instrumental input* consists of teachers, objectives, curriculum,

textbook, method or learning approach, media, evaluation equipment, and infrastructure.

The three factors affect the learning process above and they are mutually correlated between one factor to another. Purwanto (2004: 106) describes the relationship between these three factors which can be shown in the following scheme:

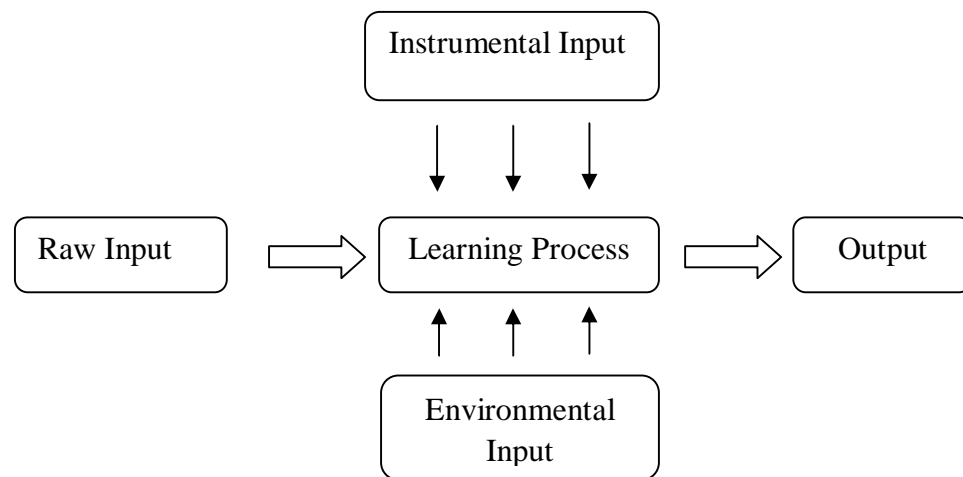


Figure 1.1: Learning Process Scheme

From the scheme above, the three factors that affects the learning process have a great role to produce the Output of the learning outcomes.

Teacher as part of the *Instrumental Input* factor has important role in the learning process. As guided to escort the students to learn, also there are some role of teacher in face-to-face learning expressed by the Moon (1989) in Purwanto (2004: 106), that are as learning designer (*Designer of Instruction*), as Learning Manager (*Manager or Instruction*), as Director of learning, as evaluators (*Evaluators of Student Learning*) and as a counselor and as executor of the curriculum.

These teacher roles have been listed in ARC of teachers and lecturers in 2005 article 1 paragraph (1) and REGULATION No. 74 in 2008 article 1 (1) which states that the teacher is a professional educator with the main task are educating, teaching, guiding, directing, training, assessing, and evaluating the learners in the early childhood education path of formal education, elementary education, and secondary education.

The number of teachers in Indonesia, like has been expressed by the Chairman of the Association of Teachers of the Republic of Indonesia (PGRI) Special Region of Yogyakarta (DIY), Zaenal Fanani in 2011 grew from 2 million to reach 2,7 million teachers. Zainal said that the increasing number of the teachers, has seen at the number of Numbers the Unit Educators and Classrooms (NUPTK) has increased, with many young teachers who recently graduated from college.

The Director of Quality Improvement General Classrooms Educators and Ministry of National Education Baedhowi in the description of the press at the Ministry of National Education, Monday (23/11) in the online newspaper *tempo.co*, He stated "The Ministry of National Education presents an increase in the number of honorary teacher in the last two years. The increase of the number of teacher is the amount of approximately 260 thousand in 2 years. The increase took place on public school teacher from 2.34 million (2007) to 2.67 million in (2008). In addition, there are a lot of honorary teacher. This dues to the bright prospect of the teaching profession and guaranteed by the Government, the

chances of the teaching profession and teachers welfare incentives that are reliable".

The increasing number of teachers are also affects in the increasing mathematics teachers. During the last ten years the increasing number of mathematic teachers, according to the data of *Musyawah Guru Mata Pelajaran (MGMP) Mathematics subject level Junior High School (SMP) Surakarta* has elevated quite high (Agus Budi: 2012). Suharso (2012), as the Secretary of mathematical *MGMP* Surakarta city, said that data from members of the Surakarta Mathematical *MGMP* recorded 146 active members comprising 50, 7% male and female 49, 3% in the period 2007 – 2009. The Data was significantly up until the period 2010 – 2012 which showed that registered members reached 181 active members, with a comparison of 48,6% male and 51.4% female. The number of mathematics teacher according to data of *MGMP* Mathematics Surakarta with the sex ratio further members is presented in the form of the following charts:

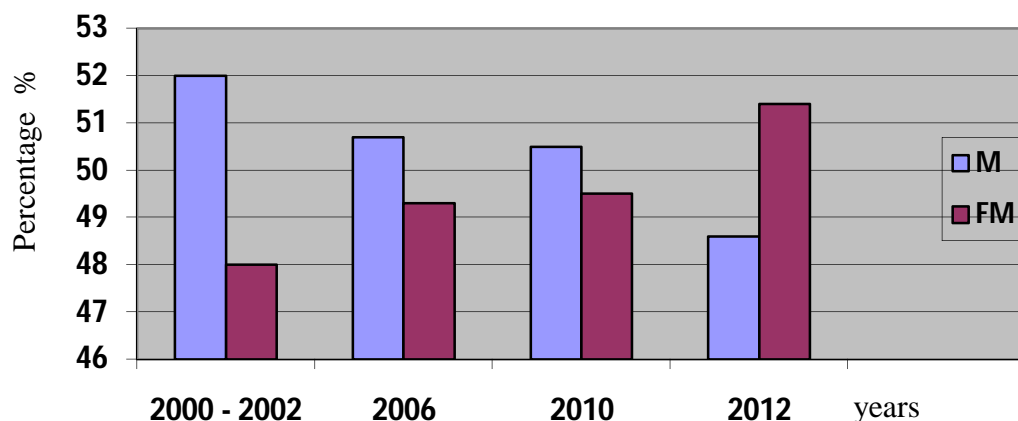


Figure 1.2: The number of data Graphs math teacher city of Surakarta and their comparison of sex. Source: *MGMP* Mathematics Surakarta

The improvement of Government's awards to teachers welfare, significantly encourages high public interest to achieve this profession. It is also consistent to still unfolding opportunities to become a teacher, both in public and private schools because the requirement of teachers from year to year has increased (Ida Pitaloka S, Suara Merdeka, 30/06/2012). Several colleges also excited to read this phenomenon as evidenced by the amount of pavement in the quota of students accepted on the program of teacher training and educational sciences.

Muhammadiyah University of Surakarta (UMS) as one of the organizers of teacher training programs provides considerable opportunities for prospective students who are interested in teacher training programs. Mathematics education department as one part of the program of teacher training in UMS get enough attention from prospective students after majoring in department of teacher education elementary schools (*Pendidikan Guru Sekolah Dasar*) and English language education (Kasiman: 2012). According to the data from the Bureau of Academic Administration (BAA) UMS about the number of students of the Faculty of Teacher Training and Educational Sciences (*FKIP*) particularly mathematics education departments from year to year has increased fluctuately, depending on the number of new student admissions quotas.

There is an interesting phenomenon on increasing student interested in mathematics education departments. Most students interested in mathematics education department actually are female students. Data of

BAA UMS mentions that in 1982, the percentage of female student in mathematics education department UMS was only 21,43%, in 1987 the percentage rose to 46,67% and in the span of time over the last eight years percentage number of student in mathematics education department are presented in the following graph:

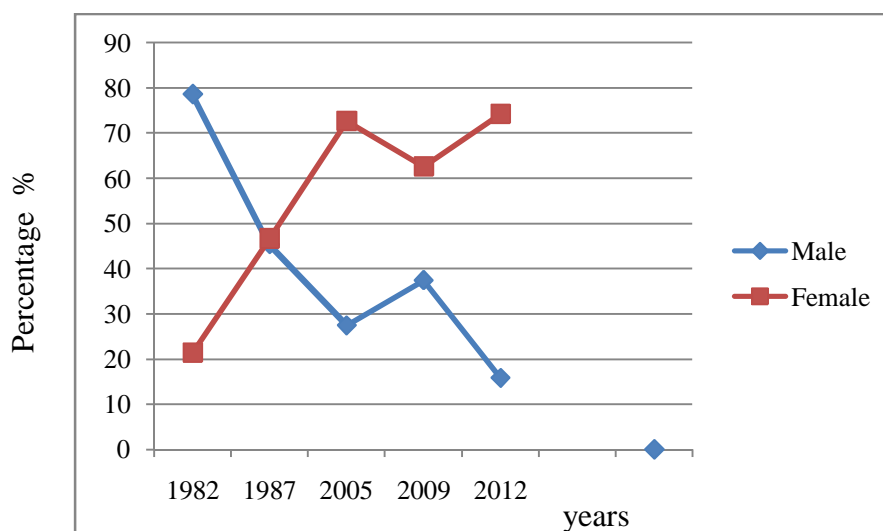


Figure 1.3: Data on the number of student Mathematical FKIP UMS 1982 – 2012 based on gender. Source: BAA UMS

From the description above, it can be concluded tentatively that the growing number of female students who entered in mathematics education department, it will be more and more also a number of graduate female students of mathematics education department. Moreover, it will affect the large number of female mathematic teachers. However, this conclusion is inversely proportional to the data from General Director of *PMPTK* Director of Education, up to the year 2008, the number of mathematics teacher who is still active in Indonesia is 98.082. This number includes

private teacher, servants, and honorary at junior high school and high school. From these data can also be seen that the number of female mathematics teachers in the field less than male mathematics teachers. The comparison is 54: 46. As for the Central Java, the comparison between both of them is 53: 47 (<http://tiaraangresiya.wordpress.com/2012/01/12/pkm-porientasi-profesi-guru-matematika-ditinjau-dari-gender/>). Moreover, data from *MGMP* Mathematics Surakarta 2012 indicates that the comparison between male and female teachers of mathematics in junior high school is 48,6: 51,4. Lately, data from the city of Surakarta, shows that female mathematics teacher does more, but its ratio is still too little given to the number of student input in mathematics education department that is very high (figure 1.2).

B. Problem Identification

Based on the background that has been presented, the issues can be identified as follows:

1. There is the possibility of female graduates of mathematics education department UMS not be interested in working as mathematics teacher.
2. There is the possibility of female graduates of mathematics education department UMS to continued their studies to a higher level (S2).

3. There is the possibility of female graduates of mathematics education department UMS more interested in another profession than the profession of mathematic teachers.

Based on the background and the identification of the issues above, in this study, the researcher will examine why the number of female mathematics teacher is less than the number in male mathematics teacher. In addition, researcher will also examine the cause factors of graduate female students of mathematics education department in UMS does not work as a mathematic teachers, and other professions that are more attractive to the female students graduate programs of mathematics education department in UMS.

C. Research Focuses

This research focuses on describing about the fact that females graduate of department of mathematics education of UMS and teacher professions that include:

1. What are the perceptions of female graduates of department of mathematics education of UMS about mathematics teacher and other career profession?
2. What are factors making female graduates of department of mathematics education of UMS not become mathematics teacher?

D. Research Objectives

1. General Objectives

This research aims is to find out the cause of the role of mathematics teacher at the Junior and Senior High School in Central Java particularly is dominated by male teachers.

2. Special Objectives

- a. Describing the perceptions of graduate female student mathematics department of UMS about mathematics teacher and other career profession.
- b. Describing the cause factors making female graduates of department of mathematics education of UMS not become mathematics teacher.

E. Research Benefits

As a descriptive research, this research expected to contribute in the development of its main conceptual vocabulary of scientific literature in mathematics education and its output based on gender.

1. Theoretical Benefits

Generally, this research should be able to give donations in mathematics education, especially in optimizing the role of female in education.

Futhermore, this research give an overview about the active role of female in choosing interest profession.

2. Practical Benefits

Practically, this research is also able to give a contribution of quality improvement and optimization for female graduates of department of mathematics education of UMS in the workplace.

F. Definition of the Term

1. Education

The definition of education in perspective of policy, according to the formal and operational definitions, as set forth in law No. 20 of 2003 on the National Education System (*SISDIKNAS*), namely:

Education is a conscious and deliberate effort to create an atmosphere of learning and the learning process so that learners are actively developing the potential for him to have a religious spiritual strength, self-control, personality, intelligence, morals, as well as the necessary skills for themselves, society, the nation and the State.

Based on definition above, Akhmad Sudrajad (2012) finds the 3 (three) the main thoughts contained therein, namely: (1) a conscious effort and deliberate; (2) create an atmosphere of learning and the

learning process so that learners actively developing potential of himself; and (3) have a religious spiritual strength, self-control, personality, intelligence, morals, as well as the necessary skills themselves, society, the nation and the State.

2. Female Students

Female students are students who are female-sex (Great Dictionary of Indonesian Language: 1989). Students in simple terms can be defined as groups of people who may be pursuing a high level of formal education. Student is also an aspiring young scholars or intellectuals in layer of society that often the terms with wide range of predicate.

3. Mathematics Education Department Level Of Higher Education (Universities) Graduate

Mathematics education Department College majoring in mathematical learning is a program under the auspices of institutions of higher education. Umar Tirtahardja and S. L. La Sulo lights in a book entitled *Pengantar Pendidikan* (2005: 228) explain that "higher education is a continuation of secondary education, which is held to prepare learners to members of the community who have the academic ability and/or professionals who can implement, develop and/or create science, technology and/or the arts. Education Unit which hosts higher

education called College may take the form of academic, technical colleges, high schools, institutes, and universities.”

In the same book, it is mentioned the meaning of the term University College that is made up of a number of faculties who hold academic and/or professional in a number of specific disciplines.

Graduates in the dictionary of the Indonesian Language have a synonym for "alumnus" that mean people who have attended or graduated from a school or College. From some of the above sense, we can draw a conclusion that the female students graduate programs of study mathematics education college or University are female who have graduated or completed graduation from undergraduate program department mathematics education at a university or high school level.

4. The Perception of Mathematics Teacher

a. Definition of teacher

In Indonesian dictionary, the term teacher is defined as "people who work livelihood or profession of teaching." (Great dictionary of Indonesian Language, 2001). Meanwhile, according to A. Malik Fadjar, a teacher is a figure that task to teach, educate, and guide. (A. Malik Fadjar, 1998). If the nature of all function are not attached to a teacher, it cannot be viewed as a teacher.

While according to the laws of Indonesia about teacher and lecture, Number 14 in 2005, chapter I, article 1, paragraph 1, it is

explained that a teacher is a professional educator with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating learners in the early childhood education path of formal education, elementary education, and secondary education.

b. Definition of perception

The definition of perception, which is described by Desiderato (in Rakhmat, 1996:51) is the experience of objects, events, or relationships obtained by inferring information and interpreting the message. Perception is giving meaning to sensory stimuli.

Based on the above description, it can be concluded that the perception of a mathematics teacher is processing information from the environment in the form of stimulus, received through the sensory organs and transmitted to the brain to be selected, organized in the form of interpretation leading to an assessment of sensing or previous experience of the intricacies of the profession of a teacher of mathematics. Perception is the result of interaction between individuals outside the world (environment) with the experience of individuals who have internalized a sense organ of a sensory system as a liaison, and interpreted by the nervous system in the brain.