

**THE BACKGROUNDS OF FEMALE STUDENT'S  
ENROLLMENT AT THE MATHEMATICS EDUCATION  
DEPARTMENT OF MUHAMMADIYAH UNIVERSITY OF  
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**THE BACKGROUNDS OF FEMALE STUDENT'S ENROLLMENT AT  
THE MATHEMATICS EDUCATION DEPARTMENT OF  
MUHAMMADIYAH UNIVERSITY OF SURAKARTA**

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***ABSTRACT***

*The purpose of this research is to describes: (1)the perception of prospective female students before enroll at the Mathematics Department of UMS, (2) the background of female students enroll at the Mathematics Education Department of UMS. The kind of this study is descriptive qualitative research. The subject in this study is the female students in 2011 academic year at the mathematics education department of Muhammadiyah University of Surakarta. Methods of collecting data used in this study are questionnaire, interview, and observation. Data analysis techniques used in this research is the analysis of qualitative data, with Miles and Huberman models. Validity of data used is triangulation technique. The conclusions of this research are: (1) Prospective student perceptions about mathematics education department of UMS are already good. Because they saw the accreditation of B and there are many interested person to enrol at mathematics education department of UMS. In addition, the score of test in one day service to enroll at mathematics education department of UMS are also high. (2) There are many factors that influence female students enroll at mathematics department of UMS namely, interest, ideals, religion, ability, others people influence, cost, certain situation, and prospect.*

*Keyword : Background, Female students.*

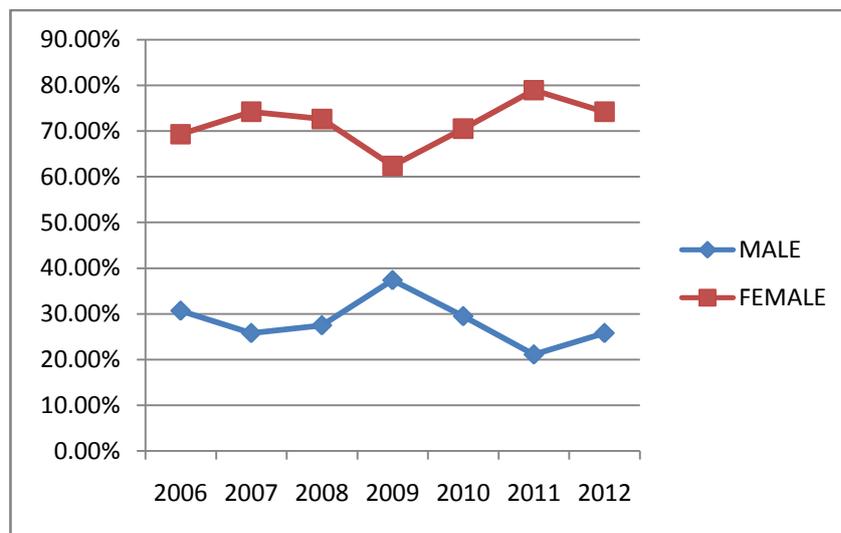
## 1. INTRODUCTION

Education is one of the basic needs of human beings, because through education human beings can develop all potentials that exist within individuals and reaches their maturity. According to Tardif in Syah (2008: 10) education is the entire stages of development capabilities and human behavior is also a process of almost the whole experience of life. The quality of education in Indonesia is currently still far lags behind when it is compared to other countries in the world, based on the data in the Education For All (EFA) Global Monitoring Report (2011): *The Hidden Crisis, Armed Conflict and Education* issued by the Organization for education, science, and culture of the United Nations (UNESCO) the education developments index (EDI) of Indonesia was 0,934. It puts Indonesia in position 69 of 127 countries in the world. The quality of education in Indonesia is still lagging from neighboring countries such as Malaysia (rank 65) and Brunei Darussalam (34 rank) (<http://viruspintar.blogspot.com/2012/05/pendidikan-indonesia-ranking-69.html>). Some of the factors the causing poor quality of education in Indonesia are expensive education cost, lack of equitable education, poor quality of infrastructure, the welfare of teachers, and low student achievement (Faturrahman et al.2012).

In mathematics learning there is a presumption that math and science are the male area. Mellisa c. Gilbert (2002) suggests, many parents think that their boys are easier to understand than girls in mathematics and mathematics is more suitable for boys than girls. According to Sujatmiko (2009), confidence in female students in mathematics is included in the middle category, and the view that mathematics as the male area included in the high category. From this research, it is shown that the confidence of students in mathematics is still low, so the mathematics achievement of female student is lower than male. This is a problem because actually, achievement of female student on math literacy is not too much different compared with male students (Makkulau, 2009).

It is contradictory with the condition in Mathematics Education Department of UMS. The percentage of female student increases from year to

year. Not only in the UMS, according to JS, a student of mathematics education department in UNS, mentions that the number of male students in 2009 academic year is only 8 students from total 80 students. The following graphic is a comparison of the percentage of male students and female in Mathematics Education Department of Muhammadiyah University of Surakarta in last five years.



Graphic 1.1

The Percentage of Students in Mathematics Education Department of Muhammadiyah University of Surakarta

Source: BAA UMS (2012)

This is contradictory to the opinion of Subini et al. (2012: 29) stating that science and math ability of female tend to be lower than male. Female tend to be stronger in terms of verbal, art, and music. In addition, Masykur (2008: 118) states that there is a difference between the brains of female and male. The differences include differe spatial, verbal, chemicals, as well as the capacity of the central memory. Although the capacities of the central memory of female students are bigger than male students, however it is only used to remember things that are verbal. So it can be concluded that the achievement of female students in mathematics is lower than male students, but not too significant, so

need to realize that the female and male students have the same success potential in mathematics.

Look at the facts, there is a unique phenomenon that occur in Mathematical education Department of UMS, where the percentage of female students is larger than percentage of male students, moreover in 2011 the number of female students reached 78,9%. But in fact, the mathematics ability of female students is lower than male students. There are many backgrounds of female students enroll to mathematics department of UMS.

From the explanation above, the writer interested to (1) Explain the perception of prospective female students before enroll at Mathematics education department of UMS, (2) Describe the background of female students enroll at Mathematics Education Department of UMS.

## **2. Research Method**

This study uses a descriptive qualitative research. According to Arifin (2012: 41) descriptive research is research that is used to describe, explain, and answering questions about the phenomena and events that occur at this time. This research is conducted in Muhammadiyah University of Surakarta, precisely in Mathematics Department of Muhammadiyah University of Surakarta located in Surakarta, Ahmad Yani street tromol 1. The time of this research is from January - February 2013.

Subject in this research is choosen by purposive sampling technique, namely by selecting informants or respondents deemed to know and can be trusted to be a data source that precisely and accurately as well as knowing the problem of study in depth. The subject in this study is the female students in 2011 academic year at mathematics education department of Muhammadiyah University of Surakarta. Methods of collecting data used in this study are questionnaire, interview, and documentary study. Data analysis techniques used in this research is the analysis of qualitative data, with Miles and Huberman models. Validity of data used is triangulation technique and source.

### **3. The Result of Research and Discussion**

Description of the research results obtained from the questionnaire and interview to female students of Mathematics Education Department Muhammadiyah University of Surakarta. The data collection process beginning with spread the questionnaire. Questionnaire is the data collection method that contains a series of questions to collect data or information that needs to be answered by the respondent freely according to their opinion. In this study the form of questionnaire used is structured questionnaire with open answers. In the questionnaire, respondents were given a few questions and some possible answers, but also the respondents also provided the reason column to explain their answer. The questionnaire consists of 8 questions and spread to the 115 students of 2011 academic year of mathematics education department.

There are many backgrounds of female students enroll at mathematics department of UMS. The background is a basic reason that can encourage, motivate, or develop an activity. However, before they were interested to go into mathematics education department of UMS, mostly of female students indeed prefer to continue their education by studying at university, which is state university as the first choice. Most of female students enroll at private university because they are not received at the state universities. Their perception about mathematics education department of UMS is good. According to them, besides have many interested prospective students, also has a high competitiveness. This is proved by the score to enroll at mathematics department include high. In addition, they also saw the accreditation of mathematics education department of UMS, namely B.

Backgrounds of female students enroll at mathematics education department of UMS are very diverse, but we can conclude became eight factors namely, the goals, interests, abilities, religious belief, the influence of others people, the cost/tuition, a particular situation, and the future prospects.

#### **a. The Ideals**

According to Dewantari (2012) ideals is the desire, expectations, or purpose that always in mind. There is no one alive without goals, without

doing the virtues, and without the attitude of life. From the results of questionnaire, known that most student actually wish to become mathematics teachers. They reasoned that being a teacher is a good thing because it can share knowledge with other people, makes students more understand mathematics, the mathematics teacher prospects are good, and not time-consuming if she become a teacher.

b. Religious belief

Religion has a very important position in people's lives, not only as a tool to build character and morals, but also determine the philosophy of life in a society. In determining the decision to enroll at mathematics education department of UMS, the religion is also as the important factors. They reasoned that with study in the Islamic University will be more comfortable and support their religion activities. Moreover, in UMS there are religion subject (Islamic studies) and many Islamic organizations, so that the student can deepen their religious studies in UMS.

c. Interest

One of the background of female students enroll at mathematics education department is interest, where female students since the beginning have interest in mathematics, so the encouragement to enroll at mathematics education department UMS bigger. Interest can be interpreted as a high fellow feeling to something. From the questionnaire, we know that most of them are interest with the mathematics for several reasons, among others, mathematics is challenging lessons especially in resolving the problem. Moreover, they say that mathematics is the exact science, where there is more calculating than memorizing/rote, and they want to become a teacher of mathematics itself.

d. The Abilities or skills of mathematics

Self-ability factors or skill in mathematics is also one of background of female students enroll at mathematics education department of UMS. According to Milkovich and Boudreu in Nuridin (2010:4) Abilities are capabilities to engage in some behavior. Abilities derive from

knowledge (awareness of information, techniques or facts), skills (proficiency at basic tasks necessary for achieving more complex behaviors) and aptitude (potential abilities that have not yet been fully developed or applied). Mathematical ability is necessary to easier in understanding the material of lecture.

e. The influence of other people

The influence of other people is one of background that encourages female students enroll at mathematics education department of UMS. The others people here can be interpreted as friends, teachers, parents and others. Most of their parents see the job opportunities and the good prospect in the future of mathematics teachers. It made them drive their children enroll at mathematics education department of UMS. The background of the parents who work as teachers also become one of the reasons they enroll at mathematics education department of UMS.

f. The cost

The results of questionnaire, known that the cost factor also affects the female students in determining the enrollment at mathematics education department of UMS. The costs is the value of the funds needs to be provided to finance a particular activity, such as academic activities, student activities, and so on (Ardiansyah, 2011). Many female students says that they studying in mathematics education of UMS is expensive. They argued that in mathematics education is the more expensive than others departments in Teacher Training and Education Faculty of UMS. Although the cost of study at mathematics department is expensive, but they look the prospect and her daughter ability in mathematics, so the cost is not a problem for parents.

g. Certain situation and condition

The other background that encourages female students enroll at mathematics education department is certain situation or condition of UMS. The situational factor is the momentary conditions appearing on a particular place and time. Based on the questionnaire, most of female

students enroll at mathematics education department of UMS because of a situation or certain condition, namely not being accepted at the State University.

h. Prospect in the future

The prospect factor is one of background of female students enroll at mathematics education department of UMS. Based on the questionnaire, they choose to enroll at mathematics education department because they look the mathematics teacher prospect in the future. According to them, mathematics is the science that is needed by all levels of school so that mathematics teachers will always be needed. In addition some of them argue that except be a teacher, graduate of mathematics education department can also open their own business such as private tutoring and study club teacher.

#### **4. Clossing**

a. Conclusion

There are many factors that background female students enroll at mathematics education of UMS. Background is defined as the basic reasons an act of someone to do a certain thing. The background is actually very closely related to motivation. In any activity, there is needs a motivation. Motivation is factors that can encourage, drive, underlying, and affect a person's behaviour, so that it could motivate someone to perform a variety of activities with a specific purpose and goals. Based on the results of research and discussion, some conclusions can be drawn:

1. Previously, the female students had already a passion to continue their education to a higher education level. According to them, the lecture is an important thing because it will be easier to get a job.
2. Prospective student perceptions about mathematics education department of UMS are already good. Because they saw the accreditation of B and there are many interested person to enrol at mathematics education department of UMS. In addition, the score of

test in one day service to enrol at mathematics education department of UMS are also high.

3. There are many factors that influence female students enroll at mathematics department of UMS namely, interest, ideals, religion, ability, others people influence, cost, certain situation, and prospect.

b. The Implications

The conclusions above gives the implication that intrinsic motivation strongly influenced the choice of female students to enrol at mathematics education department of UMS. It motivation include the interest in mathematics, the goals as a teacher, mathematical ability, and religion/belief. However, extrinsic motivation is needed in order to increase confidence and support them enrol at mathematics education department of UMS. So, combine of both motivations can increase their achievement in lectures to reach their goals. In addition, mathematics education department of UMS have been known to have good quality in the community.

c. Suggestions

Based on the results of the descriptive qualitative research about the female students motivation enrol at mathematics education department of UMS, there are a number of suggestions as follows:

1. To female students of mathematics department of UMS

The female students should increase their motivation in study in mathematics education department of UMS. In addition, the student should maximize all potential that exists within their selves to reach maximum achievement.

2. To the Mathematics Education Department of UMS

Mathematics Education department should always improve the quality of lecturers and facilities of mathematics department. It

should, because beside the cost lecture is expensive, also to increase the potential of the female students can be maximized. In addition, education courses necessary to increase the grade of accreditation, so that interests of prospective students for enrol at mathematics education department is increasing.

### 3. The next researcher

Researchers know that this study is not perfect, that is less detailed about the intrinsic motivation or extrinsic motivation of female students. Therefore, the next researchers in mathematics can do similar research but more specific, so that we know the motivation of the student to study in mathematics education department of UMS in detail.

#### **d. Bibliography**

Anonim. <http://viruspintar.blogspot.com/2012/05/pendidikan-indonesia-ranking-69.html>, diakses pada tanggal 20 November 2012 pukul 19.00 WIB.

Ardiansyah, 2011. "*Pengertian Biaya Pendidikan*". <http://www.majalahpendidikan.com/2011/04/pengertian-biaya-pendidikan.html> diakses pada tanggal 10 Februari 2013, pukul 19.00 WIB.

Dewantari. 2012. <http://laras-dewantari.blogspot.com/2012/04/pengertian-cita-cita.html>, diakses pada tanggal 8 Februari 2013, pukul 07.50 WIB.

Makkulau. 2009. "*Perempuan dan Matematika*". Jurnal Egalita Volume IV, Nomor 2.

Masykur, Muhammad.dkk. 2008. "*Mathematical Intelligence*". Yogyakarta: Ar-ruz Media.

Mellisa C. Gilbert . 2002 ."*Challenges in Implmenting Strategies for Gender-Aware Teaching*".*Mathematics Teachers. An Official Journal of The National Council of Teachers of Mathematics.Vol.7,No.9.2002*. Reston.Va : NCTM

Nuridin. 2010. "*Pengaruh Kemampuan Manajerial dan Kematangan Bawahan terhadap Efektifitas Gaya Kepemimpinan Kepala Sekolah*". Jurnal Universitass Islam Sultan Agung.

Subini, Nini.dkk. 2012. *Psikologi Pembelajaran*. Sleman : Mentari Pustaka.

Sujatmiko, Ponco . 2009. "*Sikap Siswa Wanita Terhadap Matematika (Kasus Pada Siswa Menengah Umum)*". Jurnal Varia Pendidikan, Volume 21, Nomor 1.

Syah, Muhibbin. 2008. "*Psikologi Pendidikan dengan Pendekatan Baru*". Bandung: Remaja Rosdakarya.