Utilization of Social Aritmatics in Growing Interest of Students Entrepreneurs

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Abstract:- Cultivation and correcting entrepreneurship is very important to be applied in universities, especially for students. One effort to foster entrepreneurial spirit is through learning mathematics, especially social arithmetic, through learning that always prioritizes entrepreneurial values in every subject. This research uses a quantitative method with a quasi-experimental approach, where students' entrepreneurial interest will be measured before and after the provision of social arithmetic courses. The sample of this study was 48 respondents and made two samples before and after treatment by using Wilcoxon union. Wilcoxon Signed Rank Test results, the value of Z obtained was -6,019 with a p value (Asymp. Sig 2 tailed) of 0,000. The study program also needs to develop special methods such as public lectures that present local and national entrepreneurial figures who can become role models for students in developing entrepreneurship at university environments.

Keywords:- Entrepreneurship, Interest, Mathematics.

I. INTRODUCTION

In organizing entrepreneurship education in the tertiary education environment, the problems faced include unemployment. It is assumed that there are factors that influence it in the form of competency skills of university graduates who have not met the needs of the job market. The diversity of readiness of each tertiary institution in managing entrepreneurship such as the PMW Entrepreneurial Student Program, PKM Student Creativity Program, the Center for Business Development (Pusbengbis), the MKU Entrepreneurship Internship Program, and the Business Incubator (INBIS) are still not in line with the expected goals.

Furthermore, the results of the Research and Development Media Group survey written in Media Indonesia Editorial on April 30, 2007 entitled "Lack of Interest in Being an Entrepreneur" shows that the motivation of Indonesian people, including university graduates to become entrepreneurs, is still very low. The survey results are in line with the results of the 2001-2006 National Labor Survey (in Balitbang, 2010) stating that the profile of Indonesian workers is controlled by workers.

Cultivation and correcting entrepreneurship is very important to be applied in universities, especially for students. The fact that the growth and development of Indonesian entrepreneurs on entrepreneurship is hereditary and not through education Actually everyone is destined to have an entrepreneurial spirit. All human beings are equipped with entrepreneurial qualities from birth, including courage, creativity and entrepreneurial initiatives or entrepreneurship is not only needed for business, almost in all fields is needed by an entrepreneurial spirit for the success of work and the success of any organization. Because didalmnya there is enthusiasm for work, creativity, discipline, innovative, persistent, work is not easy to despair is a characteristic of the soul that is needed in any field. In an effort to grow the characteristics of superior soul specifically the entrepreneurial spirit is largely determined by the education of each faculty.

Mathematics is a science that has an important role in the world of education and life. One characteristic of mathematics is that it is applied or applied in other fields of science and in everyday life. The development of science and technology cannot be separated from the role of mathematics. One of the factors to foster entrepreneurship is the learning process, mathematics is a very interesting science and helps students to foster interest in entrepreneurship in one branch and method of mathematical sciences in the entrepreneurship of social arithmetic.

Social arithmetic can be defined as the application of arithmetic operations in trade or other social activities. Social arithmetic is a concept in learning mathematics which is generally used in daily life, especially in buying and selling activities.

The purpose of studying social arithmetic is generally to provide an understanding of simple mathematical functions consisting of, addition, subtraction, multiplication and division as well as combinations in daily life that are very well used in entrepreneurial activities such as the calculation of profits, sales of profits and losses.

II. METHOD

This study uses a quasi-experimental approach in which the student group that is sampled is the group that follows a mathematics course with a discussion of social arithmetic, amounting to 48 respondents.

Data collection is done by conducting tests before and after where the data collection uses a questionnaire instrument to measure entrepreneurial interest in the sample. Data analysis using the Wilcoxon test.

III. DISCUSSION RESULT

➤ *Research Result*

The variables of this study are the interests of students before and after attending social arithmetic lectures, while the results of the study that the majority of respondents have an interest in entrepreneurship before giving social

artistry courses that are classified as bad that is equal to 18.8%, 77% are classified as moderate and only 4.2% which is classified as good interest in entrepreneurship.

Based on the results it is known that the majority of respondents have an interest in entrepreneurship after giving social artistry courses that are classified as bad at 0%, moderate as much as 20.8% and 79.2% are classified as good interest in entrepreneurship.

This study uses a comparative analysis, in which the researcher wants to compare the interests of students before and after the provision of social arithmetic courses. Because the variables formed are categorical variables, the analysis uses Wilcoxon test. Wilcoxon test is used to compare the data of one group before and after treatment with a categorical scale (nominal or ordinal). The analysis results can be seen in the following table,

	N	Mean	Std. Deviation	Minimum	Maximum
Katminat	48	1,85	,461	1	3
KatPosminat	48	2,79	,410	2	3

Table 1:- Descriptive Statistics

The descriptive statistics table above shows the Mean, standard deviation, minimum and maximum values of each group of data (pretest and posttest). It appears that the mean or average posttest value of 2.79 which is greater than the

pretest value of 1.85 The magnitude of this difference does not appear to be statistically significant and will be answered by the Wilcoxon Signed Rank Test.

		N	Mean Rank	Sum of Ranks
KatPosminat - Katminat	Negative Ranks	0[a]	,00	,00
	Positive Ranks	40[b]	20,50	820,00
	Ties	8[c]		
	Total	48		

Table 2:- Ranks

Based on the calculation method performed in the Wilcoxon Signed rank Test formula, the values obtained are: the mean rank and sum of ranks of the negative group ranks, positive ranks and ties. Negative ranks means the sample with the second group value (posttest) is lower than the first group value (pretest).

Positive ranks are samples with the value of the second group (posttest) higher than the value of the first group (pretest). While ties are the value of the second group (posttest) as large as the value of the first group (pretest). The symbol N indicates the amount, Mean Rank is the average rank and sum of ranks is the sum of the ranks.

	KatPosminat - Katminat
Z	-6,019[a]
Asymp. Sig. (2-tailed)	,000
a. Based on negative ranks.	
b. Wilcoxon Signed Ranks Test	

Table 3:- Test Statistics[b]

Based on the results of the calculation of the Wilcoxon Signed Rank Test, the Z value obtained is -6,019 with a p value (Asymp. Sig 2 tailed) of 0,000 which is less than the critical limit of research 0.05 so that the hypothesis decision is to accept H1 or, which means there are differences meaningful between the pretest and posttest groups. It means that the social artistry taught in the course

has been proven to be able to increase the interest of FITK UINSU students for entrepreneurship

IV. DISCUSSION

The results of the analysis prove that the social arithmetic subjects taught are proven to be able to increase the entrepreneurial interest of UINSU FITK students. The social artistry that is taught uses a casuistic approach that is implementative, and is associated with aspects of entrepreneurship.

This is in line with Rachmiazasi's research (2017) which proves that learning mathematics-based entrepreneurship can be a solution in instilling entrepreneurial character to students through mathematics learning. Learning mathematics indirectly has entrepreneurial values, for example arithmetic material that can introduce students to the principles of buying and selling, profit and loss.

Course learning turns out to affect a person's entrepreneurial characteristics that are closely related to entrepreneurial interests. Modifications in teaching become a self-contained model that principally influences student interest in entrepreneurship. Including related subjects in social arithmetic. According to Irianto and Kamil (2005), social arithmetic is one of the sciences in mathematics that studies financial calculations in trading in daily life along with social aspects of the community. Social arithmetic utilizes the field of algebra studies in mathematics.

According to the National Council of teachers of mathematics (NCTM, 2000), that the opportunities given to students to learn mathematics are related to social aspects in a context that is very important for students. This statement is also in line with the demands of the education unit level curriculum (KTSP) that the process of learning mathematics must begin by giving contextual problems. (Mulyasa, 2010).

Contextualisation done at the student level will be more meaningful if it is associated with entrepreneurship aspects. Therefore the entrepreneurial links that are included as examples in social arithmetic courses can be stimulants to increase student interest in entrepreneurship while achieving arithmetic learning that is the target of teaching. Contextualization in learning mathematics will make students able to develop mathematical concepts to be more meaningful for themselves socially. Therefore, to realize mathematical learning that starts from contextual problems, a method or model is needed, one of which can be by using a game model, according to Rahmana (in Muslimin 2012) which states that Indonesian traditional games can be used as a source of learning mathematics to support student activities.

Based on in-depth interviews with the description of the results of the study it was found that one indicator of entrepreneurial interest that was very significant was an increase in the indicator associated with the statement that "By entrepreneurship I will get a blessing from Allah SWT", when after the intervention it was found that the majority of respondents 66.7% answered very well for this aspect, where before treatment it was only 31.3%.

In addition, as much as 60.4% stated strongly agree if the respondent was motivated to become an entrepreneur because of the large number of young entrepreneurs. This result is also quite significant improvement, based on in-depth interviews this happens because the development of internet media and social media is very fast causing the information obtained is also more and more close to be confirmed.

The profiles of young entrepreneurs through start-ups that are widely circulated in the internet media become their own motivating factors that strengthen the interest of entrepreneurial students.

According to Rahmah (2016) that the role of the entrepreneurial figure model has begun to be taken into account in the entrepreneurial business process since many entrepreneurs have stated that their business starts and can achieve success because it is influenced and inspired by others. Other people who are meant here can be Prominent Entrepreneurs on a World, National and Local scale or from close people who are successful entrepreneurs such as, parents, family, friends.

According to (Bosma, 2011) that the Role Model is a general benchmark owned by individuals who provide examples that can be replicated and which can also stimulate or inspire to make decisions in achieving goals. tips on running a business, hard work done and success that can be achieved that can influence others to be motivated to run an independent business.

V. CONCLUSION

The Wilcoxon Signed Rank Test calculation results, the Z value obtained is -6,019 with p value (Asymp. Sig 2 tailed) of 0,000 which is less than the critical limit of research 0.05 so that the hypothesis decision is to accept H1 or which means there is a significant difference between pretest and posttest groups. It means that the social artistry taught in the course has been proven to be able to increase the interest of FITK UINSU students for entrepreneurship.

The study program should create an entrepreneurial competition for students so students are motivated to develop entrepreneurial interest in the campus environment. The study program also needs to develop special methods such as public lectures that present local and national entrepreneurial figures who can become role models for students in developing entrepreneurship at university environments

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