PHARMAPRENEUR EDUCATION AND ENTREPRENEUR INTEREST : A STUDY AMONG PHARMACY STUDENTS AT UIN MAULANA MALIK IBRAHIM MALANG

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ABSTRACT

Entrepreneurship is defined as the ability to create new, creative, and innovative things with the aim of adding value to goods or services to improve the economy. Good entrepreneurship education will foster interest and potential for creativity and innovation among students, including pharmacy students, towards becoming "pharmapreneurs." The objective of this research is to determine the influence of pharmapreneur education on the development of entrepreneurship interest among students in the Pharmacy program at UIN Maulana Malik Ibrahim Malang. The method used is quasi-experimental with one-group pre and post-test design, using active and participatory learning, and statistical analysis using the Wilcoxon signed-rank test. The results show the educational activities were attended by 183 new students in Pharmacy program at UIN Maulana Malik Ibrahim Malang, with the majority being female (70%) and aged 18 years (49%). There was an increase in participants' knowledge levels, with more than 80% of participants having a good understanding of the material they received, and increase pharmapreneurship interest, with a percentage of 80-90%. The results of the Wilcoxon Signed Rank Test showed that the p-value = 0.001 (<0.05), there was an increase in interest after education with the category of very interest increased from 30% to 55%, while the category of interest changed from 69% to 45%. The follow-up for this activity is the need for strengthening education in the classroom or during lectures and guidance by professors related to pharmapreneurship.
***Keyword**: Education; Interest; Knowledge; Pharmacy; Pharmapreneur*

Introduction

Entrepreneurship is an individual or group activity aimed at opening a new business to gain profit and being able to see opportunities to create business ideas (Supit et al., 2022). Apart from that, entrepreneurship can also be interpreted as the ability to create new things that are creative

and innovative with the aim of creating opportunities that can provide additional value to the goods or services that will be produced in order to improve the economy (Hamdani et al., 2022). In Indonesia itself, entrepreneurship makes a real contribution in helping to strengthen economic growth and reduce unemployment by creating various fields of employment (Rachmadwita & Hadi, 2018). However, the entrepreneurship ratio in Indonesia only reaches 3.47%, where this is relatively lower compared to other ASEAN countries such as Singapore which has reached 8.76%, Thailand 4.26% and Malaysia 4.74% (Kementerian Koperasi dan UMKM, 2020). This encourages the government to increase the number of entrepreneurs in Indonesia, one of which is by providing education about entrepreneurship from an early age starting from elementary school to university level.

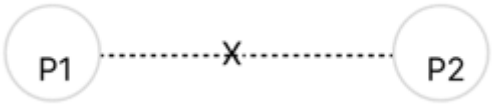
Entrepreneurship education is a form of concern from the world of education to create creative and innovative human resources. It is hoped that entrepreneurship education can increase the interest of the younger generation in the world of entrepreneurship. Entrepreneurship education, especially at the tertiary level, has been facilitated since 1997 by DIKTI by providing various entrepreneurship development programs including Entrepreneurship Lectures (KW) (Susilaningsih, 2015). Therefore, each university has a policy of providing education regarding entrepreneurship that is tailored to the faculty or study program of the university in all fields of science, one of which is the pharmacy study program or what is usually called pharmapreneur to increase pharmacy students' interest in entrepreneurship. Entrepreneurship has been identified as a key factor driving innovation in the practice of pharmacy. Pharmacy entrepreneurs / Pharmapreneur who achieve their career aspirations and address the nation’s health care, research, policy, and societal needs through leadership and innovation (Mattingly et al., 2019).

Entrepreneurship packaged through pharmapreneur education through the seminar method to new pharmacy students is expected to be able to open up new students' insights about job prospects and can activate the entrepreneurial spirit. Pharmacy students have opportunities in the field of entrepreneurship such as pharmacy, herbs, cosmetics and other pharmaceutical products. This is an opportunity for pharmacy students to create jobs. So education about pharmapreneurs needs to be done to open up the horizons of new students in the future.

An individual's interest in an object can begin with a person's attention to that object. Interest can basically be interpreted as an acceptance of a relationship between oneself and outside oneself. Someone who is interested in an activity will pay more attention to that activity with pleasure. An individual's interest can be seen from the individual's interest through active participation in the activity (Agusmiati & Wahyudin, 2019). Interest in entrepreneurship is not inborn, but must be developed from an early age. One effort that can be made to increase interest in entrepreneurship is by providing education in the field of entrepreneurship. This research focuses on new students in the pharmacy undergraduate study program of UIN Malang and is expected to open up the insights of new students so that they have opportunities in entrepreneurship.

Method

This research was carried out on September 17 2023 with the target of 183 undergraduate pharmacy study program students class of 2023 at the Faculty of Medicine and Health Sciences who previously did not have specific knowledge about pharmapreneurs. This research is a quantitative research with a quasi experimental design with one group pre and post test design with active and participatory learning methods and statistical tests using the Wilcoxon sign rank test (Hamzah & Rafsanjani, 2022). The pre-test and post-test were used to measure the level of knowledge as well as the participants' activeness and participation during the activity regarding the two variables of knowledge and interest of pharmapreneurs in developing entrepreneurial behavior, where the respondents were pharmacy students class of 2023. In simple terms it can be described as follows:



P1 : Initial Test (Pre-Test)
P2 : Final Test (Post-Test)
X : Education (Explanation of phamapreneur)

Results and discussion

a. Educational Activities

Developing entrepreneurial interest and knowledge in students needs to start with developing entrepreneurial knowledge in students, because with this knowledge they will get clear information about the concept of entrepreneurship and can raise entrepreneurial awareness (Yuliana et al., 2022). Education is delivered in the form of a 3 hour Power Point presentation. The education provided about pharmapreneurship consists of the urgency or importance of pharmapreneurship, definition, principles, capital, types and classifications, obstacles, stages, advantages and disadvantages, as well as tips on becoming an entrepreneur, especially in the pharmaceutical sector. As per Slahanti, Pharmapreneur is entrepreneurship related to pharmaceutical activities, where the pharmaceutical activities in question have been included in the educational substance delivered (Slahanti et al., 2023).

Educational activities were carried out directly or offline for 183 new students of the Pharmacy Study Program at UIN Maulana Malik Ibrahim Malang at the Primary Pharmaceutical Leadership Forum (PPLF) 2023. The following are the characteristics of the activity participants:

Table 1. Characteristics of respondents.

Variable	Gender	N(Number)	%
Gender	Man	54	30%
	Woman	129	70%
Age	17 years	20	11%
	18 years	89	49%
	19 years	43	23%
	20 years	31	17%
Education	Vocational school graduate	85	46%
	High school graduate	55	30%
	MA graduate	43	24%
TOTAL		183/variable	100/variable

Based on table 1, the distribution of participant characteristics is that the number of female participants is greater than male with a ratio of 7:3, then the age of the participants is 17-20 years, where this age is included in the productive age (15-64 years). Productive age is part of the intrinsic factors that encourage each individual to provide an understanding response to information, in other words a person's age determines the level of knowledge (Hamzah & Rafsanjani, 2022). Participants also came from different educational backgrounds, namely 85 Pharmacy Vocational School graduates (46%), 55 SMA graduates (30%), and 43 MA graduates (24%).


Figure 1. Documentation of Activity Implementation

The level of speed in absorbing material for each student has a different level, this can be influenced by a person's level of education. Educational attainment has a strong relationship with a person's understanding. Initial knowledge also helps students practice thinking skills and learning independence. The higher the initial level of knowledge of the students, the higher the relationship. So that this relationship, students who have high initial knowledge have more abilities (Idris Hasanuddin, 2020). Education has an impact on participants' understanding in responding to the information received. As according to Mushalifah et. al., (2020) that education has a dignifying influence on the understanding and use of information.

b. Knowledge Level

In measuring the level of knowledge, a pre-test is needed to build initial knowledge and a post-test is needed to measure education or learning. Apart from that, the advantage of this method is that it provides a comparison of values before and after treatment for the same participant using the same measuring instrument (Musdalifah S et al., 2021). There were 10 questions given with the results as follows in table 2.

Table 2. Participants' level of knowledge before and after education

PHARMAPRENEUR Knowledge Level Category	Results Of Respondent Knowledge			
	PRETEST		POSTTEST	
	N	%	N	%
Good (76-100%)	127	69.39%	153	83.61
Fair (56-75%)	55	30.05%	30	16.39
Less (0-55%)	0	0	0	0
TOTAL	183	100	183	100

Based on table 2, it presents the distribution of participants' knowledge levels before and after pharmapreneur education. Based on this table, it is known that there is an increase in the percentage of participants' knowledge seen from the post test results from 30.05% to 16.39% for the sufficient category and the good category from 69.39% to 83.61%, which means more than 80% of

participants have understanding. good results from the material received. Increasing participants' knowledge is influenced by the method of delivering material, namely the lecture method combined with questions and answers. As Putri et al. (2019) stated that the lecture and question and answer method was very efficient in reaching many participants even though the information provided was quite large. Therefore, presenters are required to master the concepts that will be presented before delivering the material. So, the presenter can provide explanations that are easy for participants to understand, especially in synchronous learning.

c. Level of Entrepreneurial Interest

Interest is a human awareness that can lead to desire. Interest will not suddenly appear on its own from within the individual. Interest can arise in a person through a process. With attention and interaction with the environment, the interest can develop (Al Amrie, 2022). An interest in entrepreneurship will emerge from within students after being given education that entrepreneurship can influence knowledge and creativity in creating their own jobs. Pharmapreneur interest was measured using a questionnaire to participants which was filled out before and after the education implementation. There are several factors that influence entrepreneurial interest, both internally and externally. An individual's entrepreneurial interest is also influenced by desire, feelings of pleasure, attention, environment, and experience (Nengseh & Kurniawan, 2021).There were 10 questions given to measure interest with the following results in table 3.

Table 3. Participants' level of entrepreneurial interest before and after education

Value Interval	Category	Before Education	After Education
32.5-40	Strongly agree	55	101
25-32.5	Agree	126	82
17.5-25	Don't agree	2	0
10-17.5	Strongly Disagree	0	0
TOTAL		183	183

Based on table 3. statistical tests using the Wilcoxon sign rank test where the p value = 0.001 ≤ α (0.05) is obtained. The distribution of student interest in pharmapreneurs before and after education is presented. The results obtained showed an increase in student interest from the percentage of scores according to the intervention, where the number of students who strongly agreed or were very interested increased from 55 people (30%) to 101 people (55%), the agree or interest category from 126 people (69%) decreased to 82 people (45%), while those who disagreed or were not interested went from 2 people (1%) to none (0%). So, from these results it can also be seen that 55% of participants were very interested and 45% of participants chose the interest option, with an average percentage of 80-90% increasing pharmapreneur interest.

Interest is a strong impulse that comes from the heart that over time will get stronger so that later it will cause a motivation in him to do something and try his best to achieve it (Zahra et al., 2023). Entrepreneurial interest is influenced by many elements, including entrepreneurial knowledge. Entrepreneurial acts require an understanding of entrepreneurship. Knowledge of the business to be entered or started and the current business climate, as well as knowledge of the roles and duties, management, and organization of the associated business. The higher a student's knowledge or understanding of entrepreneurship, the greater their interest in entrepreneurship (Johanis M, 2022).

Conclusion

Based on the results of pharmapreneur education activities for the UIN Maulana Malik Ibrahim Malang pharmacy study program, it can be concluded that the level of knowledge of participants

has increased with more than 80% of participants having a good understanding of the material received and the development of interest in pharmapreneur has also increased by a percentage of 80-90%. The follow-up to this activity is through the integration of pharmapreneur materials in learning and conducting training and workshops on the development of pharmaceutical products such as herbs, cosmetics or other pharmaceutical products and can collaborate with related pharmaceutical business actors.

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Reference

Agusmiati, D., & Wahyudin, A. (2019). Pengaruh Lingkungan Keluarga, Pengetahuan Kewirausahaan, Kepribadian, Dan Motivasi, Terhadap Minat Berwirausaha Dengan Self Efficacy Sebagai Variabel Moderating. *Economic Education Analysis Journal*, *7*(3), 878–893. Https://Doi.Org/10.15294/Eeaj.V7i3.28317

Al Amrie, M. (2022). Strategi Peningkatan Minat Wirausaha Mahasiswa Melalui Program Kreativitas Mahasiswa-Kewirausahaan (Pkm-K). *Jurnal Inovasi Pengabdian Masyarakat*, *1*(2), 11–26.

Banuwa, A. K., & Susanti, A. N. (2021). Evaluasi Skor Pre-Test Dan Post-Test Peserta Pelatihan Teknis New Siga Di Perwakilan Bkkbn Provinsi Lampung. *Jurnal Ilmiah Widyaiswara*, *1*(2), 77–85. Https://Doi.Org/10.35912/Jiw.V1i2.1266

Cahyaningsih, D. T., & Muwahhid, S. L. (2021). Kkn Uns Covid-19: Upaya Pencegahan Covid-19 Di Dukuh Wirocanan Rt 3/4, Kertonatan, Kartasura, Sukoharjo. *Proceedings National Conference Pkm Center*, *1*(1).

Hamdani, Pratama, R., Pangesti, R. D. D., Kawareng, A. T., Aqiilah, D., & Audina, N. (2022). Membangun Kemandirian Masyarakat Di Kelurahan Sengkotek Kota Samarinda Melalui Program Wirausaha Berbasis Pangan Fungsional Puding Kelor. *Jurnal Pengabdian Dan Pengembangan Masyarakat Indonesia*, *1*(2), 58–65. Https://Doi.Org/10.56303/Jppmi.V1i2.45

Hamzah, D. F., & Rafsanjani, T. M. (2022). Pengaruh Pemberian Edukasi Dan Simulasi Dagusibu Terhadap Pengetahuan Masyarakat Tentang Pengelolaan Obat Rasional Di Tingkat Keluarga. *Jumantik (Jurnal Ilmiah Penelitian Kesehatan)*, *7*(3), 247.

Idris Hasanuddin, M. (2020). Pengetahuan Awal (Prior Knowledge) : Konsep Dan Implikasi Dalam Pembelajaran. *Edisi : Jurnal Edukasi Dan Sains*, *2*(2), 217–232. Https://Ejournal.Stitpn.Ac.Id/Index.Php/Edisi

Johanis M, A. R. (2022). Minat Berwirausaha Yang Dipengaruhi Oleh Pengetahuan Tentang Kewirausahaan, Lingkungan Sosial, Dan Motivasi. *Paradoks : Jurnal Ilmu Ekonomi*, *5*(3), 146–154.

Kementerian Koperasi Dan Umkm. (2020). *Bertumbuh Bersama Umkm*. Jakarta: Media Informasi Dan Komunikasi.

Kurnia, K. A., Harimurti, S., Yung, H. K., Baraheng, A., Sham Alimin, M. A., Dagang, N. S. M., Fadhilah, A., Rosyadi, R., Nisa Yahya, W. Z., & Bustam, M. A. (2019). Understanding The Effect Of Ph On The Solubility Of Gamavuton-0 In The Aqueous Solution: Experimental And Cosmo-Rs Modelling. *Journal Of Molecular Liquids*, *296*, 111845. Https://Doi.Org/10.1016/J.Molliq.2019.111845

Mattingly, T. J., Mullins, D., Melendez, D. R., Boyden, K., & Eddington, N. D. (2019). A Systematic Review Of Entrepreneurship In Pharmacy Practice And Education. In *American*

Journal Of Pharmaceutical Education (Vol. 83, Number 3, Pp. 273–280). American Association Of Colleges Of Pharmacy. Https://Doi.Org/10.5688/Ajpe7233

Musdalifah S., Mintarsih, S.R., & Sudaryanto. (2020) Pengaruh Skala Usaha, Umur Usaha, Pendıdıkan dan Pelatıhan Akuntansı Terhadap Penggunaan Informası Akuntansı Pada Usaha Mıkro Kecıl dan Menengah (Umkm) di Kecamatan Tegalrejo Kota Yogyakarta. *Prima Ekonomika*, vol. 11, no. 2, pp. 42-59, 2020.

Nengseh, R. R., & Kurniawan, R. Y. (2021). Efikasi Diri Sebagai Mediasi Pengaruh Pendidikan Kewirausahaan Dan Motivasi Berwirausaha Terhadap Minat Berwirausaha Mahasiswa. *Edunomic Jurnal Pendidikan Ekonomi*, *9*(2), 156. Https://Doi.Org/10.33603/Ejpe.V9i2.5157

Rachmadwita, T., & Hadi, C. (2018). Hubungan Motivasi Kewirausahaan Dengan Intensi Berwirausaha Pada Mahasiswa. *Jurnal Psikologi Industri Dan Organisasi*, *7*(3), 68–77.

Slahanti, M., Graciafernandy, M. A., & Dwiantari, S. (2023). Pkm Farmasipreneur Bagi Mahasiswa Sekolah Tinggi Farmasi Nusa Putera Semarang Tinggi Farmasi Nusa Putera Semarang'. *Jurnal Pengabdian Pada Masyarakat*, *3*(1), 370–373.

Supit, N. F. S., Lasut, J., & Kandowangko, N. (2022). Wirausaha Mahasiswa Universitas Sam Ratulangi Manado Pada Masa Pandemi Covid 19. *Journal Ilmiah Society*, *2*(3), 1–6.

Susilaningsih, S. (2015). Pendidikan Kewirausahaan Di Perguruan Tinggi: Pentingkah Untuk Semua Profesi? *Jurnal Economia*, *11*(1), 1. Https://Doi.Org/10.21831/Economia.V11i1.7748

Yuliana, Firmansyah, Amrina, D. E., & Pratita, D. (2022). Peningkatan Minat Berwirausaha Mahasiswa Melalui Webinar Dan Coaching Program Mahasiswa Wirausaha. *Jmm (Jurnal Masyarakat Mandiri)*, *6*(6), 4631. Https://Doi.Org/10.31764/Jmm.V6i6.11013

Zahra, A., Syachruroji, A., & Rokmanah, S. (2023). Meningkatkan Minat Belajar Peserta Didik Melalui Media Pembelajaran. *Jurnal Pendidikan Tambusai*, *7*(3), 22649–22657.