FACTORS INFLUENCING LIBRARIANSHIP STUDENTS' PARTICIPATION IN SCIENTIFIC RESEARCH

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ABSTRACT

Abstract. *This paper focuses on analyzing the factors affecting the librarianship students' participation in scientific research in Can Tho University. The research is based on the conceptual framewwork and the State's regulations related to scientific research among students. Data collected in this study was a survey of 137 current librarianship students. The findings show that passion, external motivation and self-interest were the factors influencing students' participation in scientific research. In particular, the benefits of scientific research were found to be the most powerful factors that motivate students to conduct research. However, low awareness of self-study was reported as the factor hindering students from participating in scientific research activities. These findings provide insights into the true value of research activities among students for the Department of Information and Library Management, the Faculty of Social Sciences and Humanities, and other training units in a university in the Mekong Delta.*

Keywords: *Write the keywords which used in the paper maximum of 5 words*

I. INTRODUCTION

Nowadays, much attention has been paid to scientific research in almost all tertiary institutions in Vietnam and this trend contributes to the needs of recruiting high quality workforce or qualified human resources by agencies and businesses. To reach this objective, the Department of Library and Information Management at a university in the Mekong Delta offers two modules on Scientific Research Methods and Research-based Projects that are integrated into the undergraduate training program. These two modules are designed to provide students with an opportunity to have an interest in or participate in doing research and writing scholarly articles to serve their acadedmic requirements of particular fields of study or publications. However, the number of librarianship students participating in scientific research is still limited. So, what can be the reason for such issue? What factors influence student interest or engagement in scientific research? What solutions can answer the questions of student inertia in research? To seek the answers to these burning questions, a study on "Factors influencing librarianship students' participation in scientific research at Can Tho University" was conducted. The study is aimed at examining the reality of student participation in scientific research; identifying influencing factors, and then proposing practical solutions to attract more students to

involve in research activities. Furthermore, this study is expected to raise awareness of librarianship students of the role of scientific research, improve their motivation in self-discipline to take part in research during their academic journeys. The findings from this study can be an opportunity for students to accumulate valuable experiences for future work and for working agencies' requirements.

II. METHODOLOGY AND LITERATURE REVIEW

1. Scientific Research

There are many definitions of scientific research. The Law on Science and Technology No. 29/2013/QH13 promulgated by the National Assembly in 2013 defines scientific research as the activity of discovering and understanding the nature and laws of science, things, natural, social and thinking phenomena and creating solutions to apply into the community. Nguyen (1997) said that scientific research is the process of using scientific methods, thinking methods to find the answer for a certain matter, to improve level of understanding in order to solve the theoretical or practical tasks set forth by the research requirements. Specifically in the book "Scientific research methods", Vu (2005) stated that scientific research is the search for things that science does not know: discovering the nature of things, developing scientific awareness about the world; or creating new methods and new technical ways to transform things for the purpose of human activities. Similar to Vu (2005), Nguyen (2015) believed that scientific research is a human activity aimed at expanding knowledge through scientific methods.

Therefore, scientific research is defined as the process conducted for the purpose of contributing towards science by the systematic collection, interpretation and evaluation of data (Özhan Çaparlar and Donmez 2016).

2. Types of Scientific Research

Determining the subject and research type are two important points that need to be done at the very first stages in scientific research. Selecting the right research type will help the researcher get good performance and achieve high results. However, the definition of research types is not clearly stated in literature except Dang's one. Dang (2003) defined 4 research types at the university as Doctoral thesis, Master thesis, Bachelor thesis, and research assignment.

3. Types of Scientific Research for Students

According to the Decision of the Minister of Education and Training No. 08/2000/QD-BGD&DT dated on March 30, 2000 about the promulgation of regulations on scientific research for students at universities and colleges including: Participating in the application of scientific and technological advances to production, business, life and national security; participating in conferences, scientific seminars, youth science and technology innovation contests, science and technology information, student science clubs.

Besides, Tran (2006) said that students can participate in various research types such as conferences, scientific seminars, Olympic competitions, scientific research contests, Science Research Student Clubs, participating in faculty research projects. Cam Hang (2015) also offered a number of scientific research activities that students can perform such as writing essays, internship reports, and doing theses or conduct scientific research with the teachers at university level... In general, students have a lot of choices about research types they can afford to participate in the university. In this study, the research types for students are: scientific research clubs, seminars, scientific reports, research-based projects, scientific conferences and workshops, short training courses on scientific research, transforming science and technology activities, start-ups, theses, essays, science competitions, Olympics, compiling textbooks and books with lecturers, and article publication.

4. Benefits of Scientific Research for Students

Scientific research conducted by students brings lots of benefits for the nation, the university, the individuals, beneficiaries of the research, and for students themselves. In particular, Luc (2017) said that students' scientific research has four great benefits: improving and consolidating knowledge, deepening thinking; developing and practicing soft skills; having the opportunity to receive bonus points from the Faculty and the University; and building social relationships.

Similarly, The Hung (2018) stated that students participating in scientific research activities will have chances to practice critical thinking skills as well as analytical and synthetic thinking capacities. Scientific research also helps students expand their knowledge to newer and deeper topics, outside the boundary of the class. In addition, students can be trained problem-solving skills through this activity. Above all, participating in scientific research will build students the spirit of integrity and honesty from academic to life.

In addition, Nguyen (2018) stated that scientific research activities help students practice creative thinking, the ability to criticize, refute or scientifically prove certain points of view, forge analytical skills, knowledge synthesis, logical thinking ability, building a spirit of cooperation, and helping each other.

5. Factors Influencing to Students' Participation Into Scientific Research

There are many factors affecting students' participation in scientific research. In the research paper 'The reality of students' awareness of scientific research activities at Saigon University', Tran (2018) concluded that students' less participation in scientific research is mainly due to their awareness. Meanwhile, Nguyen (2018) thought that students do not participate in scientific research because students are not interested and not really passionate about scientific research. When students are interested in scientific research, it will give them a pleasant, comfortable, passionate emotional state and motivate them to actively work to get high results.

Duc Tri (2018) also cited Nguyen (2018)'s opinion that students' own initiative in learning and scientific research is not high, still passive learning. In addition, only junior and senior students are often involved in scientific research activities. However, the training program always requires much effort and time from those students in the final years. So, those students are confused if they should take part into scientific research. They need to focus and spend time for studying, doing theses and internships. In addition, Nguyen pointed out that if school assessment is still mainly based on the results of the midterm and the final exams, students have to spend most of their time to get the best learning results rather than conducting scientific research.

Meanwhile, Nguyen (2014) identified students' difficulties in scientific research concluding passive mindset and being uncared for scientific research movement in the university. In addition, with the current form of credit-based learning, a part of students are passive and do not understand the direction of study and training during their university years. In terms of students' skills and abilities of scientific research, Nguyen (2016) said that the students' scientific research skills are not high and the research quality is not good. Lecturers think that only 15% of students perform good scientific research skills, 40% are good, 40% are average and 5% are weak.

III. METHODS

1. Objectives

- Examining the librarianship students' awareness of the role of scientific research at the university.
- Analysing the factors influencing the students' participation into scientific research.
- Suggesting some solutions to increase the students' participations into scientific research.

2. Research Questions

- How is the librarianship students' awareness of the role of scientific research at the university?
- What are the factors influencing the students' participation into scientific research?
- What are the possible solutions to increasee the students' participations into scientific research?

3. Samples and Sampling

Samples of this study are sophomore and senior librarianship students at Cantho University. The study did not invite freshman students because they had enrolled only one semester, so it is still confusing and difficult for them to exploit the necessary information for the topic. The total number of current sophomore and senior librarianship students is 189. According to Krejcie and Morgan (1970), the minimum number of samples needed to ensure representativeness and reliability for the study is 127.

The total number of questionnaires distributed and collected was 137, exceeding the minimum number of samples according to Krejcie and Morgan (1970). In particular, samples were randomly selected from sophomore to senior students, regardless of gender and age to increase objectivity in research. In which, the number of senior students was 54 (39.4%), junior students were 42 (30.7 %) and sophomore students were 41 (29.9%). Of the total 137 students participating in the survey, there are 104 females (75.9%) and 33 males (24.1%). These numbers are acceptable because librarianship females are 3 times as much as males.

4. Data Collection Technique

This study was conducted based on quantitative research method. The purpose of choosing a quantitative research method is to help the research process be carried out objectively, quickly, accurately and unbiasedly. With this method, data were collected for analysis through a questionnaire. In order to help minimize the disadvantage of quantitative research that is no in-depth information, the survey has some open-ended questions, asking students to give their own opinions (if any) on related issues. Questionnaires are distributed in the librarianship students' classes. The data of the survey was statistically and analyzed to determine the students' attitudes and perceptions about participating in scientific research, the factors affecting their participation in this activity. Findings will be based to propose solutions of how to attract and motivate more students to participate in scientific research.

Cronbach's Alpha of the survey questionnaire is 0.910 (> 0.6). This proves that the questionnaire used for the survey has very high reliability and is completely suitable for conducting research. Besides, there is not any item with reliability below 0.6.

5. Data analysis Technique

Quantitative data were analysed by SPSS software. The SPSS functions such as Cronbach's Alpha, frequency, exploratory factor analysis and correlation were used to answer the research questions . In addition, qualitative data from open-ended questions and students' comments will be collected by using Microsoft word and analysed by subjects to find the best solutions proposed to the Department of Library and Information Management to attract students being involved in scientific research.

III. FINDINGS

1. Librarianship Students' Awareness on the Benefits of the Scientific Research

In order to assess the students' perception about the benefits of scientific research, the study used Five-Likert scale with 1 – Completely disagree, 2 – Disagree, 3 – Normal, 4 – Agree, 5 – Strongly agree and Mean based on the suggestion by Hoang and Chu (2008):

1.00 – 1.80: Completely disagree
1.81 – 2.60: Disagree
2.61 – 3.40: Normal
3.41 – 4.20: Agree
4.21 – 5.00: Strongly agree

Data from Table 1 shows that out of 12 given benefits, up to 9 benefits are assessed by students with Mean greater than 4 (75%; n = 9/12), 2 benefits are assessed as average scores with 16.7% (n = 2/12) and majority of students disagreed with the idea that scientific research is meaningless (Mean = 2.18). In general, students give different opinions about the benefits that scientific research brings to them. Majority of them have a high awareness and appreciation of the scientific research benefits.

Scientific research that will help students make a good impression on employers is the point of view that students consider to be the most beneficial with a very high average score (Mean = 4.42), of which 45.3% (n = 62/137) students agree and 48.9% (n = 67/137) students strongly agree. This finding further confirms the views given by Luc (2017), The Hung (2018) and Nguyen (2018) that scientific research helps students improve professional knowledge, develop skills, soft skills, problem solving, critical thinking, creativity, forging integrity from academic to life, building social relationships. These are the qualities that employers need for its employees. Therefore, scientific research will help students create a good impression in the eyes of employers.

Scientific research helps students get problem-solving skills. They also have to present and defend his research. Therefore, it is not too difficult to understand when the benefits such as: developing soft skills, training critical thinking skills, training creative thinking skills, training problem-solving skills, improving knowledge, affirming themselves are the benefits highly appreciated by students (Mean: 4.23 - 4.36).

This finding was similar to Luc's conclusion (2017) that scientific research brings to students four great benefits: improving and consolidating knowledge, deepening thinking; developing and practicing soft skills; having the opportunity to receive bonus points from the Faculty and the University; and building social relationships. Similarly, The Hung (2018) also stated that students participating in scientific research activities will practice critical thinking and analytical and synthetic thinking skills. Scientific research also helps students to expand their knowledge to newer and deeper topics, outside of the boundary of their classes. Problem-solving skills are also a very positive point that students participating in scientific research will experience. In particular, students will be more integrity and honesty in life. In addition, Nguyen (2018) affirmed that scientific research activities help students practice creative thinking, critical thinking, refuting or scientifically proving certain points of view, forging analytical skills, knowledge synthesis, logical thinking ability, building a spirit of cooperation, and helping each other.

It is worth noting that majority of students disagreed with the meaningless viewpoint of scientific research with Mean 2.18 – disagree and 33.6% of them (n = 46/137) strongly disagreed; 29.2% students (n = 40/137) disagreed and 26.3% of them (n = 36/137) rated it as average. This finding shows that students have a high awareness of the benefits that scientific research.

Table 1: Benefits of scientific research for students

Five-Likert / Scale / Benefits	1		2		3		4		5		Mean	Ranking
	n	%	n	%	n	%	n	%	n	%		
Good impression for employers	1	0.7	0	0	7	5.1	62	45.3	67	48.9	**4.42**	**1**
Soft skills development	0	0	0	0	13	9.5	62	45.3	62	45.3	**4.36**	**2**

Critical thinking	1	0.7	3	2.2	10	7.3	65	47.4	58	42.3	**4.28**	**3**
Creative thinking	0	0	2	1.5	11	8	70	51.1	54	39.4	**4.28**	**4**
Problem solving skills	2	1.5	2	1.5	7	5.1	72	52.6	54	39.4	**4.27**	**5**
Knowledge and personal development	1	0.7	1	0.7	15	10.9	68	49.6	52	38.1	**4.23**	**6**
Changing awareness	1	0.7	1	0.7	23	16.8	70	51.1	42	30.7	4.10	7
Relationship building	0	0	4	2.9	29	21.2	60	43.8	44	32.1	4.05	8
Honesty training	0	0	2	1.5	30	21.9	66	48.2	39	28.5	4.04	9
Passion satisfaction	1	0.7	5	3.6	38	27.7	58	42.3	35	25.5	3.88	10
Bonus ponts from the School	4	2.9	5	3.6	43	31.4	55	40.1	30	21.9	3.74	11
Meaningless	46	33.6	40	29.2	36	26.3	10	7.3	5	3.6	**2.18**	**12**

(Source: Survey data in 2019)

2. Factors Influencing on Librarianship Students' Participation in Scientific Research

To determine the factors influencing the students' participation in scientific research, the Exploratory Factor Analysis (EFA) function of SPSS was used. Twelve observed variables (Table 2) from 3 groups of motivating factors (Figure 1) were included in the survey to find out the groups of factors that influence as well as the level of influence on the students' participation in scientific research.

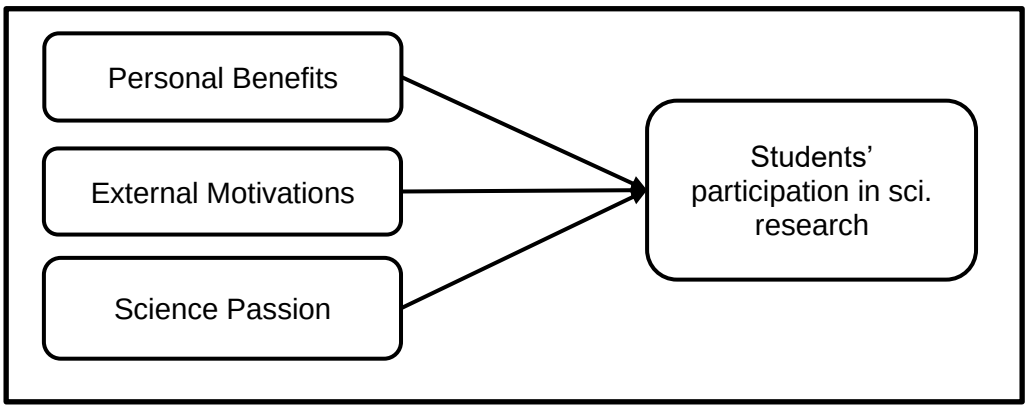

Figure 1: Model of impacting factors

Groups of observed factors were coded with the minimum number of 3 variables and the maximum of 5 ones (Table 2).

Table 2: Groups of observed factors

No	Groups of factors	Observe variables	Code	Count
1	Personal Benefits	Bonus points from the School	PB1	5
		Higher education	PB2	
		Personal capacity identified by awards	PB3	
		CV polishment	PB4	

		Award chasing	PB5	
2	Science Passion	National and international conference participation	SP1	3
		Applying Science and technology theory	SP2	
		Passion pursuit	SP3	
3	External Motivations	Teacher's suggestion	EM1	4
		Family's motivation	EM2	
		Friends' influence	EM3	
		Requirement of assignment	EM4	
Total				**12**

(Source: Survey data in 2019)

The performance of EFA exploratory factor analysis must satisfy 4 conditions: Cronbach's Alpha reliability test, number of measurement variables, number of samples, and Bartlett and KMO (Kaiser - Meyer - Olkin measure of sampling) test. Regarding the Cronbach's Alpha reliability test (Table 3), all groups of factors have Cronbach's Alpha values > 0.6, satisfying the first condition.

Table 3: Cronbach's Alpha test

No	Groups of Impacting Factors	Observed Variables	Cronbach's Alpha
1	Personal benefits	5	0.743
2	Science Passion	3	0.662
3	External motivations	4	0.741

The number of observed variables in the three groups of factors (Table 2) are ≥ 3, which should satisfy the requirements by Stevens (2002, cited by Habing 2003). In particular, the number of samples is 137, which is higher than expected by the minimum requirement of 50 and ideally 100 observations by Hair et al (2009). Regarding the Bartlett and KMO test: The results of exploratory factor analysis EFA (Principal components with Varimax rotation) show that KMO = 0.767 meets the condition 0.5 ≤ KMO ≤ 1 to perform EFA (Table 4); and factor analysis suitable with the research data. Furthermore, according to Kaiser (1974) if:

KMO ≥ 0.90 : Very good
0.80 ≤ KMO < 0.90 : Good
0.70 ≤ KMO < 0.80 : Well
0.60 ≤ KMO < 0.70 : so so
0.50 ≤ KMO < 0.60 : Bad
KMO < 0.50 : Unacceptable

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.649
Bartlett's Test of Sphericity	Approx. Chi-Square	225.456
	Df	21
	Sig.	.000

The results of KMO and Bartlet testing (Table 4) show that KMO = 0.649 > 0.60 should be at a level that allows the performance of EFA analysis. The result of Bartlett's test is 225,456 with the observed variables in the population being correlated with each other at the significance level = 0.000 < 0.05. This proves that the data used for factor analysis is completely appropriate. Three factors were extracted at the eigenvalues breakpoint of 1,082 and the extracted variance was 73.471% > 50% (Table 5). Load coefficients of all variables are > 0.7 and the study reaches above the minimum sample size > 50 (Hair, Black et al. 2009).

Table 5: **Total Variance Explained**

Component	Initial Eigenvalues	Extraction Sums of Squared Loadings	Rotation Sums of Squared Loadings

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.465	35.220	35.220	2.465	35.220	35.220	2.084	29.773	29.773
2	1.596	22.794	58.014	1.596	22.794	58.014	1.701	24.294	54.067
3	1.082	15.457	73.471	1.082	15.457	73.471	1.358	19.405	73.471
4	.595	8.494	81.965						
5	.475	6.792	88.757						
6	.444	6.350	95.106						
7	.343	4.894	100.000						

Extraction Method: Principal Component Analysis.

Exploratory factor analysis EFA with the rotation matrix (2 times) indicates that all three groups of factors influence on students' participation in scientific research (Table 6). However, out of 12 observed variables, there are 7 influential variables (Table 7). Among the 3 groups of factors, the first factor - 'Personal Benefits' has 2 influencing variables. They are ‘to get bonus points from the School’ and ‘Personal capacity identified by awards’. Besides, the second factor - 'Science passion' also has 2 influencing variables: ‘participation in national and international conferences’ and ‘applying science and technology theory’. Finally, the third factor - 'External motivation' has 3 influencing variables: teacher’s suggestion, family’s motivation and friends’ influence.

Table 6: Rotated Component Matrix[a] (second time)

	Component		
	1	2	3
EM2	.848		
EM3	.817		
EM1	.774		
SP2		.864	
SP1		.863	
PB1			.835
PB3			.779

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Table 7: Factors influencing the students’ participation in scientific research

No	Groups of Factors	Observed variables	Code	Count
1	Personal Benefits (F1)	Bonus points from the School	PB1	1
		Personal capacity identified by awards	PB3	1
2	Science Passion (F2)	National and International Conferences participation	SP1	1
		Applying science and technology theory	SP2	1
3	External Motivations (F3)	Teacher’s suggestion	EM1	1
		Family’s motivation	EM2	1
		Friends’ influence	EM3	1
Total				7

To identify the strong or weak impact of each group of factors, in the same direction or in the opposite direction for each factor from F1 to F3, the scores of factors are calculated according to the equation:
Fi = Wi1X1 + Wi2X2 + … + WikXk (1). In which:

- Wik is the factor coefficient presented in the factor coefficient matrix “Component Score Coefficient” (Table 8)

- Xk is observed variables for i factor group (Table 2).

From equation (1) we have:

F1 = PB1*5 + PB3*5
F2 = SP1*3 + SP2*3
F3 = EM1*4 + EM2*4 + EM3*4

Analyzing the influence of each observed variable of each factor group (from F1 to F3) shows that all the coefficients are greater than 0. This means that the variables have a positive effect on each factor group. Therefore, any positive effect on any observed variable increases the value of each factor. The results calculated from the above equations show that the order of influence level of factors from strong to weak is F1, F3 and F2, respectively. Notably, factor F1 – Personal Benefits - is the group of factors that have the strongest influence on the students' participation in scientific research. In which, 'bonus points from the School' and 'personal capacity identified by awards' are the two factors that students consider to bring the most benefits to themselves. Besides the academic score, the community work score is an extremely important factor to evaluate the student's academic performance. According to Circular No. 16/2015/TT-BGDĐT on promulgating regulations on assessment of training outputs at the university, community work scores are considered to conduct project-based thesis and graduation exams. Besides, community work scores are used to offer scholarships for two students with the same academic scores. For example, if two students with the same academic scores apply for the same scholarship, then whoever has the higher community work score will be given priority. To accommulate community work scores, students must participate in social and community activities. However, if students participate in scientific research, they have to spend a lot of time, effort and may miss some activities to gain community work scores. Therefore, School should offer the additional community work scores to scientific research students. This will make them more secure and have more advantages when applying for scholarships. This is a benefit that students participating in scientific research should have. In addition, high prizes should be saved in the student's graduate record. This aims to polish the student's vitae compared to other students in the same major and especially makes a good impression on employers.

External motivation is the second group of factors influencing the students' scientific research . In particular, the influence of lecturers, family and friends is also one of the motivations to help students become more confident to be involve in scientific research. In particular, the lecturer is one of the important links, imparting knowledge, giving examples and practical problems that make students more interested and learn more information when doing research. This is completely consistent with the conclusion by Nguyen (2018) that teachers can invite capable students to participate in the role of assistants and supporters in scientific research. This will increase students' awareness of scientific research and effectiveness of a research project.

In addition, science passion has the lowest influence among the three groups of factors, but this is an extremely important motivation. If students do not have a passion for research, but only participate in the form of coping, participating for free, the quality of the research will certainly not be high. Especially, for students who have science passion, attending domestic and foreign scientific conferences and seminars to be able to learn, share, and introduce their own research to everyone with the same interests. Passion is a very meaningful motivator. Besides, the implementation and application of theory on science and technology will also stimulate students to participate in scientific research to apply theoretical knowledge into practice.

Table 8: **Component Score Coefficient Matrix**

	Component		
	1	2	3
PB1	.000	-.202	**.660**
PB3	-.139	.135	**.590**

SP1	-.082	**.515**	.023
SP2	.063	.**527**	-.155
EM2	**.422**	-.006	-.065
EM3	**.412**	-.095	-.043
EM1	**.378**	.071	-.068

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

3. Solutions to Attract More Students Participating in Scientific Research

The most important solution to attract students' participation in scientific research is from the students themselves. They must really love, be passionate and awared of scientific research benefits. Then, they will have more self-discipline in learning; actively monitor relevant information about scientific research; and training necessary skills such as information search skills, foreign language skills, etc. Preparing to be involved in scientific research will help to increase quality and quantity of scientific research at the university. Besides, it is necessary not to ignore rewards and encouragements such as sending emails to congratulate students for good scientific research achievements to other classes. Creating opportunities for students to achieve scientific research achievements, having international academic exchanges are also good solutions to encourage students to pursue their scientific research passions. In addition, allowing students to replace an elective subject by scientific research. If scientific research achievement is replaced with any elective subject, it will help students save tuition and shorten the training program period. This is an extremely attractive solution for students. In addition, bonus the community points is an extremely effective solution because students spend time for doing research, they have no time for community work. Rewards and certificates are also necessary solutions. Other activities such as seminar, conference, and scientific research clubs are all necessary solutions. However, organizing and maintaining these activities are very important to keep students' involvements.

CONCLUSION

Student scientific research is one of the key factors to help universities develop their scientific research movements. In addition, scientific research also helps students develop creative thinking, improve professional knowledge and develop skills. This is one of the extremely useful activities and playgrounds for students at universities. However, the current situation of students' participations in scientific research is not as much as expected.

Research findings show that most students have high awareness of scientific research. All forms of scientific research are known by students. They can involve in theses, start-up, writing textbooks, writing books, etc. Besides, students all believe that their scientific research is important for the university. Specifically, scientific research is a key and important factor for the development of the university. Moreover, the students' viewpoint of scientific research is clear because they believe lecturers' research is not enough. Scientific research brings many benefits to students such as making a good impression on employers, developing soft skills, practicing critical thinking skills, training creative thinking skills, problem solving skills, and improving knowledge. This finding indicates that librarianship students have a high awareness of the benefits of scientific research. In particular, most students think that they have a better sense of scientific research.

Based on the research findings, to increase the number of students' participations in scientific esearch, the university policy should be changed. For instance, students with high achievements in scientific research should be considered to be involved in exchange programs with other universities in the country and in Southeast Asia. It is necessary to expand the university criteria for the potential students to participate in short-term study tours in Thailand and Korea. Besides the current criteria to be in this program, university

should use students' scientific research achievements as selection criteria so that students have more motivation to participate in scientific research, contribute to improving the quality of the university training.

Teachers play an important role in instilling students' passion for scientific research. Teachers should help students realize the role of participating in scientific research. Scientific research helps students to accumulate a lot of valuable knowledge and experience to apply in real work in the future. Scientific research also helps students practice writing skills, presentation skills, social relationships and more confident, more dynamic in communication. Students are willing to participate in in-depth research activities, gradually asserting themselves about their scientific research ability. In addition, students should share each other their experiences of scientific research to gain more confidence and motivation.

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