Impact Of Extracurricular Activities On The First Year School Results Of Students K61 Construction Management

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Abstract: According to statistics from NSW AMES (an international organization for skills training), soft skills account for 80% of success. Participation in activities organized by the university, activities of the Youth Union, the Student Union and thematic competitions and seminars for students on a large scale really plays a huge role. These are the main activities that help students practice soft skills such as communication, presentation, interviewing, leadership skills; Forming the confidence, dynamism needed when going to work, the experiences learned from successful people. In addition, it also supports a lot of in-depth knowledge, forms a way of working, effective time management, community activities in groups, independent work, stress management. However, participation in these activities will affect student learning results. This study uses a hierarchical logit model to evaluate the impact of extracurricular activities on the learning results of K61 students majoring in Construction Management. The research results are oriented to propose solutions for teachers' management and students' participation in extracurricular activities in the future.

Keyword: learning results, construction management.

1. Introduction

Extracurricular activities help students have the opportunity to exchange and learn and in addition to soft skills in life. Extracurricular activities for the community have soon become an indispensable part of student life. Students can participate in professional clubs, hobby clubs, talent clubs, volunteer clubs... University. In addition, many young people also participate in large and small projects with specific and practical goals, bringing direct benefits to the community.

When participating in these activities, whether as members, volunteers or collaborators, students can step out of the classroom, practice working in an organized system, and train themselves. acquire many soft skills such as interpersonal communication, group activities, leadership, etc., and gain a lot of professional and practical knowledge to support the job after graduation. It is undeniable that participating in projects and student groups helps the younger generation become more confident, more knowledgeable, score points in the eyes of employers and quickly integrate into the new environment.

First-year students are new students entering the university gate, still have many surprises with learning methods, learning environment, new relationships, new activities, this will have a significant impact on the results. children's learning.

2. Theoretical and practical basis of extracurricular activities in university

2.1. Theoretical basis

2.1.1. The basic concepts
a, Extracurricular activities
Extra-curricular activities, also known as extra-curricular activities, are activities that are outside the regular curriculum. Extracurricular activities involve all cultural - sports - recreational - social activities outside of classroom hours. This is one of the playgrounds for students to voluntarily participate according to their needs and abilities. For students, extracurricular activities play a huge role not only in the process of participating in studying at the university lecture hall but also after graduation.

b, Learning result
There are different definitions of learning result. In which learning result is a concept that is often understood according to two different concepts in practice as well as in science: (1) It is the level of achievement that a learning subject has achieved, considered in relationship with effort, time spent, with defined goals. According to the first concept, the learning result is the performance of the criterion. (2) It is also the level of achievement achieved by a student compared to other classmates. With the second concept, it's the standard level of performance.

2.1.2. Features of extracurricular activities in university
Extracurricular activities in the university have the following main characteristics:
(i) Are activities outside the student's training program
(ii) Extracurricular activities include two main types of academic and non-academic activities. Academic activities such as participation in professional and skill clubs or competitions on foreign languages, scientific research, etc. Extra-curricular activities of non-academic nature such as art, sports, dance and take pictures…

(iii) Extra-curricular activities for the comprehensive development of students' knowledge, awareness, consciousness, health and communication.
(iv) Extracurricular activities take place continuously, regularly, with repetition from time to time.

2.2. Practical basis

2.2.1. In the world
Some researchers claim that there is a positive effect, and there are some researchers that claim there is a negative effect. According to Eccles and Barber (2003), students participating in extra-curricular and extracurricular activities such as art, team sports, academic clubs and performing arts, skills will have a final score. academically higher than students who did not participate in the activities. That study surveyed 1259 students and more than 72% of those students had attended at least 1 club for more than 1 year.

Some researchers have also shown that participation in extracurricular activities has a positive impact on student achievement (Whitley, 1998) from the moment students enter university. Sports competitions help create experiences for students to maintain interest in the college environment, and indirectly improve academic performance.

The author has also shown in his study the relationship between students who actively participate in sports and the student's GPA. The study divided respondents into 3 groups of subjects: actively participating, participating little and not participating based on the number of times they participated in sports activities. The results showed that there was a positive impact on student achievement when they participated in sports. Students who were placed in the actively engaged group had higher academic scores than those in the less engaged group.

In another study conducted in New York also showed a positive impact on the academic performance of students when participating in extracurricular activities. This study compared

the average scores of 123 students when participating in and not participating in cultural and sports activities in the school. (Silliker & Quirk, 1997). The results showed that the students had significantly higher average scores during the period of participation in the activity compared to the time period when they did not participate in the activity.

However, according to Din (2006), there is no significant difference between participation in extracurricular activities and academic achievement of students. This study surveyed 225 students in Kentucky in scores in foreign languages, math, natural sciences, and social sciences before and after the school year. After data analysis, the results indicated that no significant difference was found between the group of students participating in extracurricular activities and the group of students participating in extracurricular activities.

2.2.2.   In Viet Nam

Learning results are the extent to which a learner's knowledge, skill, or perception is achieved in a certain field. Or, according to Assoc. Tran Kieu (2005), in any sense, learning results are also reflected in the degree of achievement of teaching goals, which includes three major goals: perception, action, and emotion. For each subject, the above objectives are concretized into goals of knowledge, skills, and attitudes. In fact, there are many perspectives on assessing student learning results at colleges and universities. Learning results can be through CGPA cumulative points. Or study results can also be self-assessed by students after their studies and job search results. In this study, learning results were defined as students' own overall assessment of the knowledge and skills they have acquired while studying specific subjects at school.

In general, the above research points out the factors affecting the learning results of students. However, the object of the study is the general learning results of students and affects the results of extracurricular activities.

3.   Research Methods

3.1.   Hierarchical Logit Regression Model

Considering a regression model with a continuous dependent variable Y with a scale, this variable is classified in the order from $j = 1,2,3,....,J$ and X is denoted as a vector p in the direction of Independent variables. Suppose $\pi_j = Pr\ (Y = j)$ is the probabilistic outcome of the class j . Therefore, the cumulative probability function of Y can be expressed as:

$Pr(Y \leq j) = \pi_1 + \pi_2 + ... + \pi_j$, $j = 1,2,...,J$ (*)

Take the logarithm of the cumulative probability function (called the logit)

$Logit[\ Pr(Y \leq j)] = log[\ \frac{Pr(Y \leq j)}{1 - Pr(Y \leq j)}]$ (**)

$= \alpha_j + \beta X$, $j = 1,2,...,J-1$

where, α_j is the intercept coefficient (also known as the cutoff point) satisfying the condition $\alpha_1 \leq \alpha_2 \leq ..... \leq \alpha_{j-1}$. β is the coefficient vector of the independent variable, describing the effect of the independent variable on the odds ratio of the j or smaller class j (Long and Freese, 2006, 2014). The coefficients in equation (**) will not be consistent if the OLS estimates are used, so they must be replaced by the maximum reasonable estimate LM.

3.2.   Recommend model

The hierarchical logit model to evaluate the impact of extracurricular activities on the learning results of K61 students majoring in Construction Management is proposed as follows:

$Y_{kqhoctap} = a_0 + a_1 . x_{tansuat} + a_2 . x_{hdtthao} + a_3 . x_{hdvnghe} + a_4 . x_{hdnangkhieu} + a_5 . x_{nhanthuc1} + a_6 . x_{nhanthuc2} + a_7 . x_{nhanthuc3} + a_8 . x_{diemvao} + a_9 . x_{hocnhom} + a_{10} . x_{khoihoc} + a_{11} . x_{CVTH} + u_i$

The dependent variable is the learning outcome (denoted by $Y_{kqhoctap}$)

Independent variables of 11 variables were included in the model including frequency of participation, type of sport, type of art, type of

academic, perception 1, perception 2, perception 3, university entrance score, participation in group study, pre-university course and the counseling of academic staff.

Variable frequency of participation ($x_{tansuat}$) assess students' participation in extra-curricular activities. The variable takes the values 0,1,2,3 corresponding to the levels of never, up to 1-2 times, 3-4 times and from 4 times or more.

Type of sport ($x_{hdtthao}$) indicates the level of student participation in sports, receiving the value 1,2,3 corresponding to the levels from infrequent to regular

Type of the art form ($x_{hdvnghe}$) indicates the level of student participation in cultural activities receiving the value 1,2,3, corresponding to the levels from infrequent to frequent

Type of the academic type ($x_{hdnangkhieu}$) indicates the level of students' participation in gifted activities receiving the value 1,2,3, corresponding to the levels from infrequent to frequent

Type of the entrance score to University ($x_{diemvao}$) indicates the university entrance scores of the students.

School groups participation ($x_{hocnhom}$) indicates the level of student participation in group study activities, receiving the value 1,2,3, corresponding to the levels from infrequent to frequent

Type of the block of study before entering university ($x_{khoihoc}$) shows that the influence of the student's pre-university course before the university entrance exam received the value 1,2,3 corresponding to the levels from zero to influence.

In addition, the research model using 03 dummy variables to analyze the influence of extracurricular activities on students' learning results is:

Cognitive Variable 1 (nhanthuc1) was built by multiplying the variable "Number of participations in activities" with the variable "Interest in extracurricular activities". Assess students' willingness to participate.

Cognitive Variables 2 (nhanthuc2) was built by multiplying the variable "Number of participations in activities" with the variable "Effect of activities on learning". Express the views of students who have participated in extracurricular activities when assessing the impact of participation in activities on learning results.

Cognitive Variable 3 (nhanthuc3) was built by multiplying the variable "Number of times participating in activities" with the variable "Satisfaction with learning results". Assess students' self-satisfaction with the degree of participation in extracurricular activities.

4. Research status and results

4.1. Reality

K61 students majoring in Construction Management have relatively low overall first-year academic results compared to other majors in the Faculty of Economics and Management. In the academic year 2019-2020, students of K61 majoring in Construction Management took an average of 31.2 credits and the average number of credits failing in both classes of Construction Management 1 and Construction Management 2 was 6.9 credits.

For the average academic score of the first year, the average cumulative GPA of 96 K61 students majoring in Construction Management is 2.0 points, about (1.5 - 2) and (2 - 2.5)) has the most students, with 38 students for each level. There are 3 students with cumulative GPA above 3.0.
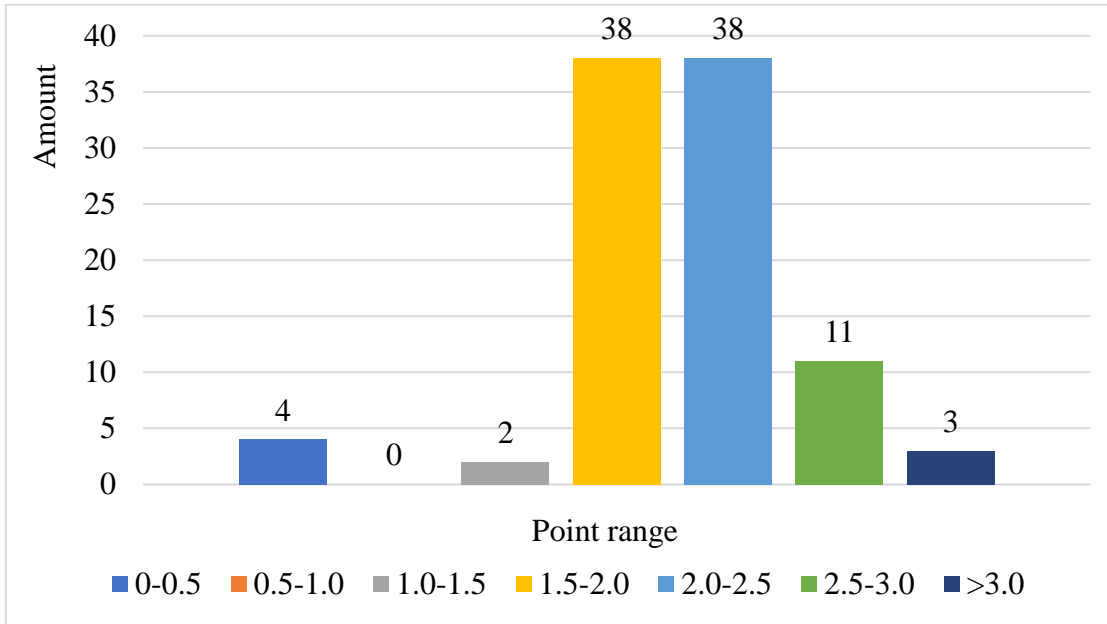
Figure 4.1. Accumulated average score converted

4.2. Research results

4.2.1. Describe the characteristics of the model

a, Frequency of participation

Frequency of participation is the degree of participation in extracurricular activities of students during their study at Thuy Loi University. Frequency of participation indicates how intensely a student participates in extracurricular activities and thus shows individual student results.
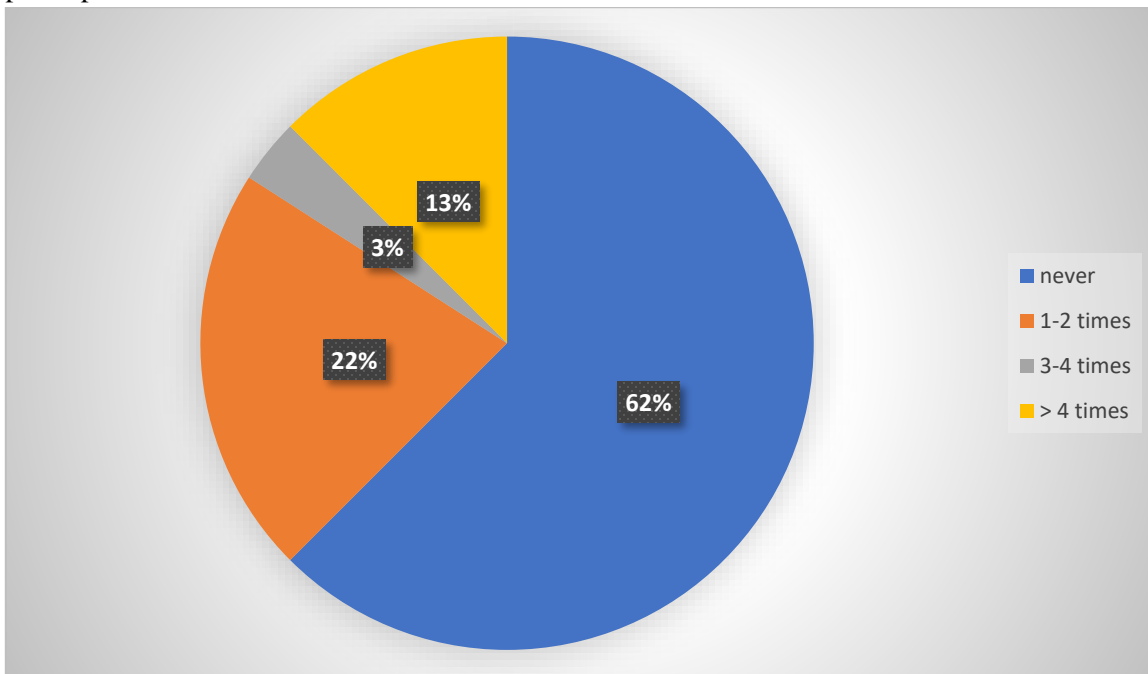

Figure 4.2. Participation times in extracurricular activities

b, Join a study group

Participating in group study is the practice of students studying together during their studies and during exam preparation. Participating in group study will support students to review their knowledge, practice exercises together and remember knowledge for a longer time. Thanks to group study, students' learning results will be higher.

Through the survey, there are 30 students who do not meet in groups in the first year and 48 students regularly study in groups in the library during their studies and especially when studying for exams.

Figure 4.3. Join a study group

c, Type of extracurricular activities

Types of extracurricular activities include physical training, sports or other activities. It reflects on the students' self-esteem when participating in such activities.

There are 43 students who are not gifted or strong, while there are 16 students who are passionate about sports, 12 students who are interested in arts and 9 students who have other talents and strengths.
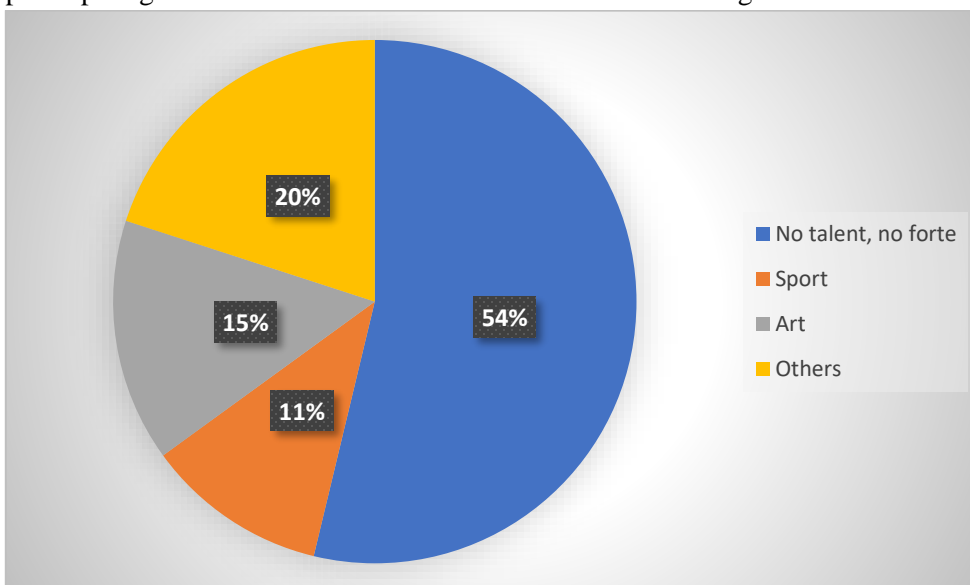
Figure 4.4. Type of participation in extracurricular activities

d, Counseling from the teacher

Teachers have an important role in the learning process of students at the University. Teacher has the role of advising, orienting, and helping students in studying, practicing and living, so teacher who orients students well from the first year will help students avoid confusion surprised when changing the learning environment, soon adapt to the active learning method and take measures to improve and improve learning results.

4.2.2. The impact of participation in extracurricular activities on academic performance

To evaluate the impact of participation in extracurricular activities on the learning results of first-year students in Construction Management, the study used a hierarchical logit regression model for analysis: $chi^2(8) = 12.63$, Prob>chi^2 = 0.1253 and R^2=0.3111 of the test can conclude that the regression model is appropriate.

Table 4.1 below summarizes the estimation results of the hierarchical logit regression model, assessing the impact of 11 independent variables such as frequency of participation in extracurricular activities, types of sports activities, and types of cultural activities, type of academic activity, cognitive variable 1, cognitive variable 2, cognitive variable 3, entry point, group study participation, pre-university course and the advice of teachers to 1st year study results of K61 students majoring in Construction Management.

Table 4.1 Estimation results of hierarchical logit regression model

TT	Research variable	Regression coefficient	Odds
1	Participation (tansuat)	1,107*	3,03*
		(0,59)	(1,78)
2	Type of sport (hdtthao)	-1,138**	0,32**
		(0,57)	(0,18)
3	Type of art (hdvnghe)	-0,978*	0,37*
		(0,4)	(0,20)
4	Academic type (hdknkhieu)	1,145	3,14
		(2,16)	(6,8)
5	Cognitive variable 1(nhanthuc1)	0,613	1,86
		(0,65)	(0,12)
6	Cognitive variable 2(nhanthuc2)	-1,383***	0,25***
		(0,48)	(1,22)
7	Cognitive variable 3(nhanthuc3)	1,271**	3,56**
		(0,57)	(2,06)
8	Type of the entrance score to University (diemvao)	1,646**	5,18**
		(0,67)	(3,47)
9	School groups participation (hocnhom)	0,477	1,61
		(0,52)	(0,84)
10	Type of the block of study before entering university (khoihoc)	1,411**	4,09**
		(0,65)	(2,65)
11	Counseling from the teacher (CVHT)	0,221	1,25

TT	Research variable	Regression coefficient	Odds
		(0,29)	(0,35)
12	Constant cut1	1,077	1,078
		(1,24)	(1,08)
13	Constant cut2	4,756	4,755
		(1,08)	(1,24)
Number of observations		74	

*p<0.1; **p<0.05; ***p<0.01

Source: Stata 14 . regression results

The estimation results show that the model has 2 cut-off points because the dependent variable is divided into three hierarchical intervals. The sign and the statistical significance level of the hierarchical logit model estimation coefficient shows that the direction of the impact of the independent variable on the dependent variable is the learning outcome of K61 students majoring in construction management. Specifically, the variable frequency of participating in extra-curricular activities (tansuat) and the variable type of activities are arts and crafts (hdvnghe) have statistical significance at 10% significance level;

The variable type of activity is sport (hdtthao), cognitive variable 3 (nhanthuc3), university entrance score (diemvao), pre-university course (khoihoc) has statistical significance at 5%; cognitive variable 2 (nhanthuc2) is significant at the 1% level; Separately, 04 variables of academic activity (hdknkhieu), perception 1 (nhanthuc1), group study participation (hocnhom) and Counseling from the teacher (CVHT) have no statistical significance with this study sample.

Combining the results collected from Table 4.1 and Table 4.2 shows the detailed impact of the independent variables on each classification group of the dependent variable.

Table 4.2 Marginal impact coefficients of the hierarchical logit model

TT	Variable	Group 1 (GPA>=4 &GPA<=5,4)	Group 2 (GPA>=5,5&GPA<7)	Group 3 (GPA>=7 & GPA<=8,4)
1	Participation (tansuat)	-0,180*	0,087	0,093*
2	Type of sport (hdtthao)	0,185**	-0,089*	-0,096**
3	Type of art (hdvnghe)	0,159*	-0,077	-0,082*
4	Academic type (hdknkhieu)	-0,186	0,090	0,097
5	Cognitive variable 1(nhanthuc1)	-0,100	0,048	0,052
6	Cognitive variable 2(nhanthuc2)	0,225***	-0,109**	-0,117***
7	Cognitive variable 3(nhanthuc3)	-0,207**	0,100**	-0,107**
8	Type of the entrance score to University (diemvao)	-0,268***	0,129**	0,139**
9	School groups participation (hocnhom)	-0,078	0,037	0,040

TT	Variable	Group 1 (GPA>=4 &GPA<=5,4)	Group 2 (GPA>=5,5&GPA<7)	Group 3 (GPA>=7 & GPA<=8,4)
10	Type of the block of study before entering university (khoihoc)	-0,230**	0,111**	0,119**
11	Counseling from the teacher (CVHT)	-0,036	0,017	0,019

*p<0.1; **p<0.05; ***p<0.01

Source: Stata 14 . regression results

The regression coefficient of the tansuat variable is 1.107, which has a positive sign. This means that if the level of participation in extracurricular activities increases, the academic performance of students increases. Specifically, the degree of participation in extracurricular activities is statistically significant on all 3 groups, of which group 3 is most affected (0.093), that is, if students in group 3 increase their participation in Extracurricular activities increased by 1 unit, the ability to maintain academic results of this group increased by 9.3%. As for the students in group 1 (the group least affected by the tansuat variable), when increasing the level of participation in extracurricular activities by 1 unit, the probability of that student moving from group 1 to group 2 increases by 18. % (with all other factors constant). This result is reasonable because when participating more actively in extracurricular activities, the initiative to arrange time to balance between activities will increase, in addition, the relationships in the school of students will also increase. . This affects the morale as well as the interest in learning, thereby helping to improve students' learning results.

The regression coefficient of the variable hdtthao is -1.138, which has a negative sign. This means that if the level of sports participation increases, the student's academic performance will decrease. Specifically, participation in sports activities is statistically significant for all 3 groups, of which the group that is most affected is group 1 (0.185), that is, if students in group 1 increase their participation in sports, Sports activities increased by 1 unit, the ability to maintain academic results

of the group increased by 18.5%. As for the students in group 3 (the group that is least affected by the hdtthao variable) when increasing the level of participation in sports activities by 1 unit, the probability of that student moving from group 1 to group 2 is 9, 6% (all other factors held constant).

The regression coefficient of the variable hdvnghe is -0.978, bearing a negative sign. This means that if the level of cultural participation increases, the student's academic performance will decrease. Specifically, participation in sports activities is statistically significant for all 3 groups, in which the most affected group is group 1 (0,159), that is, if students in group 1 increase their participation in sports, Cultural activities increased by 1 unit, the group's ability to maintain learning results increased by 15.9%. As for the students in group 3 (the group that is least affected by the hdvnghe variable), when increasing the level of participation in cultural activities by 1 unit, the probability of that student moving from group 1 to group 2 is 8, 2% (all other things held constant).

The regression coefficient of the variable nhathuc2 is -1.383, which has a negative sign. The variable nhathuc2 refers to a group of students who have the perception that participating in extracurricular activities will affect learning outcomes. The results show that the more extracurricular activities this group participates in, the lower the learning outcomes will be. Specifically, the fact that students think that participating in extracurricular activities will affect learning results is statistically significant for all 3 groups, in which the group that is most affected is group 1 (0.225), that is, if students in

group 1, when increasing by 1 unit, the ability to maintain learning results of the group increased by 22.5%. As for the students in group 3 (the group that is least affected by the variable Nhanthuc2), when it is increased by 1 unit, the probability of that student moving from group 3 to group 2 is 11.7% (in terms of other factors other unchanged).

The regression coefficient of the variable nhathuc3 is 1,271, bearing a positive sign. This means that if satisfaction with extracurricular activities increases, students' academic performance will also increase. Specifically, student satisfaction with extracurricular activities is statistically significant with all 3 groups, in which the most affected group is group 2 (0,100), that is, if the satisfaction of students in the group 2 when increased by 1 unit, the ability to maintain learning results of the group increases by 10%. As for the students in group 1 (the group that is least affected by the variable Nhanthuc3), when the satisfaction level is increased by 1 unit, the probability of that student switching from group 1 to group 2 is 20.7% (in the other factors unchanged).

The regression coefficient of the variable diemvao is 1.646, which has a positive sign. This means that if a student's entry score increases, the student's academic performance will also increase. Specifically, the input score is statistically significant with all 3 groups, in which the group that is most affected is group 3 (0,139), that is, if the students in group 3 when their input score increases by 1 unit, the group's ability to maintain learning results increased by 13.9%. As for the students in group 1 (the group that is least affected by the variable diemvao), when the input score increases by 1 unit, the probability of that student moving from group 1 to group 2 is 26.8% (in the other factors remain unchanged).

The regression coefficient of the Khoihoc variable is 1.411, bearing a positive sign. This shows that when students in block D participate in extracurricular activities, their academic results will increase compared to students in block A participating in extracurricular activities. Specifically, the pre-university course is statistically significant for all 3 groups, in which the most affected group is group 3(0.119), that is, if the students in group 3 increase by 1 unit the ability to maintain learning results of the group increased by 11.9%. As for the students in group 1 (the group that is least affected by the scientific variable), when it is increased by 1 unit, the probability of that student moving from group 1 to group 2 is 23%% (in terms of other factors unchanged).

The variables hdnangkhieu, nhathuc1, hocnhom and teacher have no statistical significance on learning outcomes for all 3 groups.

5.   Suggestions and recommendations

From the research results, the authors recommend that the School, Faculty of Economics and Management and Department of Construction Management pay more attention to, orient and accompany the Youth Union work and youth movement in the school to aim at the topic. Actively building a useful and healthy playground that attracts a large number of union members; thereby helping the youth union members discover and fully promote their own strengths and enhance soft skills to be ready for integration and creativity. To achieve this goal, extracurricular activities in students should vary in content and implementation method. One of the changes that the Union of the Faculty of Economics and Management has been making is boldly empowering students to be more proactive in planning and implementing a number of extra-curricular activities. courses from faculty to branch level and spontaneous activities between branches such as organizing tutoring classes, actively practicing cultural performances and sports training before planning from the superior Union. This has allowed students to unleash their creativity in deploying and dividing group activities.

In addition, through the above research results, the authors focus on providing solutions for the following factors:

5.1. The way to mobilize students to participate in activities

Schools need to announce early on plans to organize activities and mobilize students to participate so that classes have time to choose and send students to participate in meeting the quality and quantity. Many activities are announced late, so the time for classes to register students is small, leading to insufficient numbers, people who do not want to participate are taken away, those who want to participate cannot arrange a time to go. In addition, during the school year, there are periods of time when a lot of activities are packed together, so it also affects students' learning, such as the first phase of the new school year, the welcome period on November 20, March 26. Therefore, the group recommends that the School, Faculty and the upper-level Union extend the time for organizing activities to avoid rushing and have an early announcement so that students can understand the information.

5.2. Promote the organization of activities related to academics and professional knowledge

Through the survey and analysis results, participating in academic competitions, participating in seminars, seminars related to the field of study, meeting and interacting with recruitment enterprises will help students improve their understanding, knowledge and have a positive impact on learning outcomes. For construction management students, with most students studying in block D in high school, when entering the first year, most of the subjects are engineering and calculation, so they face a lot of difficulties, many students have problems. signs of depression, anxiety about studying construction management. Therefore, the Department organized a meeting between recruitment enterprises and students to help students visualize their future jobs and job

positions, incomes, working agencies... Motivating and motivating students. The authors find that this activity is extremely useful to students of construction management and should continue, regularly held once each term, can be incorporated into class activities.

5.3. Orienting and supporting male students of construction management in sports activities

The feature of the construction management industry is that it combines 3 knowledge blocks of management - technique - economics, so the number of male students enrolled is quite high (the ratio of male students to the highest number of classes in the Faculty of Economics and Management) and the majority of male students. proficient, passionate about sports activities, so male students majoring in construction management are the main core of the faculty's sports teams such as football, basketball, badminton and swimming teams. However, being passionate about this sport makes many male students majoring in construction management who are key members of sports teams encounter many difficulties in learning. Therefore, in order to balance the student's learning results and the Faculty's sports achievements, the authors propose that the Study Advisors in the Construction Management classes encourage, closely, and give timely advice to the students. such male students. Regularly meet, talk and discuss the learning situation, assign the assistant class to tutor students during the learning process, especially when studying for exams.

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