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COMMUNITIES OF PRACTICE AS A TEACHING TOOL IN THE DEVELOPMENT OF ENTREPRENEURIAL BEHAVIOR

ZAJEDNICE PRAKSE KAO OBLIK UČENJA U FUNKCIJI RAZVIJANJA PODUZETNIČKOG PONAŠANJA

ABSTARCT

Communities of practice (Lave i Wenger, 1991) are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly. In order to define the impact that communities of practice have on the development of entrepreneurial behavior, an empirical research by means of a questionnaire was carried out with a sample of 324 students of Josip Juraj Strossmayer University in Osijek. Apart from the descriptive, univariate statistics, a bivariate analysis was also used, as well as a multivariate data analysis. The results of the research show that students who take part in the activities of communities of practice, demonstrate higher propensity for entrepreneurial behavior and a higher probability of starting their own business than students who are not active in communities of practice. Therefore it seems that in entrepreneurial education, where the aim is to develop entrepreneurial competences and behavior, it is vital to encourage students to join communities of practice. It is also important to give all students of the university the experience of participating in some form of communities of practice. The research has also proven that university teaching does not contribute enough to the development of entrepreneurial competences. According to the results of this research communities of practice, and particularly firsthand experience, have a more significant role in that. The research suggests that in order to develop entrepreneurial behavior it is essential to include more practical activities into the traditional teaching at the university. It is also necessary to consider ways of using the potential of firsthand experience for the development of entrepreneurial behavior through supplementing university courses with some forms of communities of practice.

Key words: *communities of practice, entrepreneurial behavior, teaching, competences, university*

SAŽETAK

Zajednice prakse (Lave i Wenger, 1991) su društvene strukture koje čine pojedinci koji su uključeni u zajedničko učenje u nekom području, a koji dijele zainteresiranost i strast za ono što rade i uče kako to napraviti bolje/učinkovitije neprestano komunicirajući. U cilju utvrđivanja utjecaja koji zajednice prakse imaju na razvijanje poduzetničkog ponašanja provedeno je empirijsko istraživanje korištenjem strukturiranog upitnika na prigodnom uzorku 324 studenata Sveučilišta Josipa Jurja Strossmayera u Osijeku. Osim deskriptivne, univarijantne statističke obrade podataka korištena je bivarijantna analiza te multivarijantna statistička obrada podataka. Za testiranje značajnosti razlika između aritmetičkih sredina iz

više uzoraka korištena je jednosmjerna (*one-way*) analiza varijance (*ANOVA*) za nezavisne i zavisne uzorke, kao i složena analiza varijance (*MANOVA*) za ispitivanje utjecaja i interakcije većeg broja nezavisnih varijabli na veći broj zavisnih varijabli. Rezultati istraživanja potvrđuju da studenti koji su na neki način uključeni u oblik zajednica prakse pokazuju veću zainteresiranost za poduzetničko ponašanje i veću vjerojatnost započinjanja vlastitog posla od studenata koji nisu članovi zajednica prakse. Zbog toga je u poduzetničkom obrazovanju, kojemu je cilj razvijanje poduzetničkih kompetencija i poticanje poduzetničkog ponašanja, važno studente ohrabrivati na uključivanje u zajednice prakse i svim studentima omogućiti iskustvo sudjelovanja u zajednicama prakse. Također je utvrđeno da poslovne škole/fakulteti vrlo malo doprinose razvijanju poduzetničkih kompetencija. Prema rezultatima ovoga istraživanja na to puno veći utjecaj imaju zajednice prakse, a najveći utjecaj na razvijanje poduzetničkih kompetencija ima životno iskustvo. Na osnovi rezultata ovog istraživanja može se zaključiti da bi se u svrhu ostvarivanja većeg utjecaja na razvoj poduzetničkog ponašanja trebalo uvesti više praktične nastave u formalno obrazovanja na fakultetima. Također bi trebalo osmisliti načine za iskorištavanje potencijala koji iskustvo ima u razvijanju poduzetničkog ponašanja kroz nadopunjavanje fakultetskih programa oblicima zajednica prakse.

Gljučne riječi: zajednice prakse, poduzetničko ponašanje, poučavanje, kompetencije, sveučilište

1. Introduction

There is a growing interest in the field of entrepreneurship, especially since Drucker's prophetic insight that the Welfare state is past, and the Entrepreneurial Society seems like the most likely successor (Drucker, 1985). Entrepreneurial behavior has become a prerequisite of any economic development and educational institutions are increasingly called upon to provide better educated enterprising individuals who will either act as entrepreneurs, or will be able to manage their careers and lives in an entrepreneurial way.

Literature review indicates that education programs in entrepreneurship are quite homogeneous in terms of content (Katz, 2002; Hytti and O'Gorman, 2004), but dispersed in terms of teaching pedagogy. Furthermore, despite the consensus among researchers and practitioners that entrepreneurship is teachable, models of successful entrepreneurship education delivery are rather elusive.

This study complements the knowledge about entrepreneurship education aiming to support the supply of young enterprising individuals into the economy through the identification of a potential more efficient teaching method. It focuses on defining the impact that communities of practice have on the development of entrepreneurial behavior and proposes communities of practice as an innovative way of developing entrepreneurial behavior among university students.

3. Entrepreneurial behavior, entrepreneurship education and communities of practice

It can be accepted that, as any other kind of behavior, entrepreneurial behavior also consists of individual's actions and reactions, which present a response to the external and internal impulses. Based on the definition of entrepreneurship (Bygrave, 1991; Herron and Robinson, 1993; Gibb and Cotton, 1998), it can be concluded that in the case of entrepreneurial behavior, these particular actions and reactions are the ones needed for the creation and recognition of opportunities, introduction of changes and creation of organizations whose aim is to make use of these opportunities and manage the increasing levels of uncertainty and

complexity in the environment. Entrepreneurial behavior is influenced by following elements: demographic factors and personal characteristics, attitudes and beliefs, intentions, environment, entrepreneurial competences and education (Sedlan-König, 2012). Previous research (Bird, 1988; Krueger, 2003) indicates that education can contribute significantly to the development of entrepreneurial behavior, in particular through the acquisition of competences. The role of competences in the development of entrepreneurial behavior has unjustly been neglected.

“Entrepreneurship education program is usually defined as the process of providing individuals with the ability to recognize commercial opportunities and the knowledge, skills and attitudes to act on them.” (Jones and English, 2004, 416). This definition emphasizes the professional skills and “how to” knowledge that is essential for starting, managing and growing a new business. However, changing dynamics of environment and the way economies function today have created the imperative for a broader understanding of the role of entrepreneurship education. Besides professional skills and knowledge, entrepreneurship education should foster entrepreneurial competences in every individual, as well as awareness about the benefits of entrepreneurship in the society. Therefore, universities have been encouraged to provide more substantial impact on developing and stimulating entrepreneurial knowledge, skills, attitudes and values through their programs.

Literature review on the entrepreneurship education pedagogy reveals that entrepreneurship education should take the action-learning or experience oriented learning approach in order to increase the likelihood of effective entrepreneurship outcomes. Furthermore, the main challenge for entrepreneurship educators is to create appropriate learning environment which reflects the life world of entrepreneurs. Therefore, entrepreneurship education has increasingly adopted experiential approaches (Gibb, 1993, 1996). Learning through experience, which combines experience, perceptions, cognitions and behaviors, is seen as an innovative alternative to traditional teaching. It emphasizes the central role that experience plays in the learning process (Rae and Carswell, 2000). One way of achieving this objective is by introducing communities of practice into the university education programs.

Communities of practice (Lave i Wenger, 1991) are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly. There are three elements that are crucial in distinguishing a community of practice from other groups and communities. Community of practice has an identity defined by a shared domain of interest. Membership therefore implies a commitment to the domain, and therefore a shared competence that distinguishes members from other people. Secondly, in pursuing their interest in the domain, members engage in joint activities and discussions, help each other, and share information. They build relationships that enable them to learn from each other. Finally, members of a community of practice are practitioners. They develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems, in short a shared practice.

There are numerous differences in the way communities of practice and universities operate and they are presented in Table 1.

Table 1. Comparison of communities of practice and universities

COP emphasize	Universities emphasize
novelty	tried out things
facts	ideas
freedom	control
creativity	structure
community	individuals
authority	power
norms	rules

Source: Sedlan-König, 2012

3. Sample, instrument and data

The main objective of the empirical research that was conducted on the convenient sample of 324 students of Josip Juraj Strossmayer University in Osijek was to explore the impact that communities of practice have on the development of entrepreneurial behavior. The instrument used in this quantitative research was a questionnaire consisting of two parts. The first part includes eight closed questions related to the demographics of the respondents, their propensity for entrepreneurial behavior and the estimated probability of starting their own business. Likert scale was used for some answers. In the second part of the questionnaire, the General Enterprising Tendency (GET) test (Caird, 1991) was employed. In this test, respondents express their agreement or disagreement with the 54 statements that cover the following attributes: need for achievement, need for autonomy, creative ability, risk taking propensity, motivation and determination. The sample was grouped into three subsamples: students who regularly do sports (and were therefore observed as an example of community of practice), secondly, students who are members of students' associations (and were observed as an example of community of practice of a different kind¹⁰⁷), and finally, the control group, students who neither do sports nor are members of students' associations.

The analysis of the results included nonparametric and parametric descriptive statistics. Univariate statistics, bivariate analysis, as well as multivariate data analysis were used. A univariate analysis of variance (ANOVA) was used for the comparison of means of several groups for both dependent and independent variables. A multivariate analysis of variance (MANOVA), on the other hand, was employed for the testing of effects and interactions of several independent variables on more dependent variables.

For the purpose of this research the following hypotheses were tested:

H1: Students who are members of students' association or do sports demonstrate stronger propensity for entrepreneurial behavior than students who do not do sports.

H2: Students who are members of students' association or do sports demonstrate a higher probability of starting their own business than students who do not take part in such activities.

H3: University teaching does not contribute significantly to the development of entrepreneurial competences

H4: Doing sports and taking part in students' associations as well as firsthand experience contribute more to the development of entrepreneurial competences than university teaching.

4. Analysis and results

The results of the testing for the Hypotheses 1 and 2 are shown in Table 2.

¹⁰⁷ Sports clubs and students' associations were taken as suitable examples of communities of practice because they satisfy all three criteria: domain, community and practice.

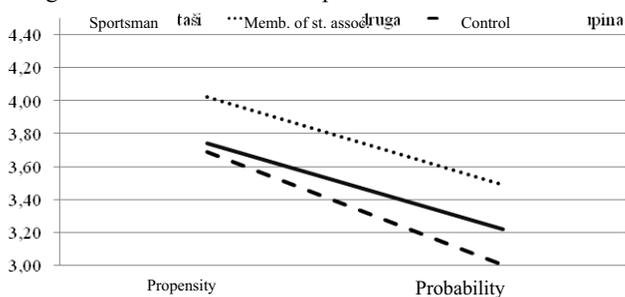
Table 2. Descriptive statistics for the variables: Propensity for entrepreneurial behavior and Probability of starting own business

Variable	Gender	Category	Mean	Std. dev.	N
Propensity for entrepreneurial behavior	Male	control	3,83	1,112	54
		sportsmen	3,81	1,090	90
		associations	4,30	,912	27
		Total	3,89	1,080	171
	Female	control	3,59	1,116	75
		sportsmen	3,57	1,152	40
		associations	3,82	1,227	38
		Total	3,64	1,151	153
	Total	control	3,69	1,117	129
		sportsmen	3,74	1,111	130
associations		4,02	1,125	65	
Total		3,77	1,119	324	
Probability of starting own business	Male	control	3,20	1,219	54
		sportsmen	3,32	,958	90
		associations	3,89	,847	27
		Total	3,37	1,052	171
	Female	control	2,85	1,049	75
		sportsmen	3,00	1,038	40
		associations	3,21	1,119	38
		Total	2,98	1,067	153
	Total	control	3,00	1,132	129
		sportsmen	3,22	,990	130
associations		3,49	1,062	65	
Total		3,19	1,075	324	

Source: Sedlan-König, 2012

Differences in means for propensity for entrepreneurial behavior and probability of starting own business can be observed although a statistically significant difference was observed only in propensity for entrepreneurial behavior. Thus, the Hypotheses 1 and 2 need to be further tested. The above results show that students who are not members of sports clubs or students' associations (the control group) demonstrate weaker propensity for entrepreneurial behavior (mean 3,69) and lower probability of starting own business (mean 3,00) than students active in communities of practice. On the other hand, no difference was observed between members of two types of communities of practice regarding this matter. Interestingly, members of students' associations on average, show the strongest propensity for entrepreneurial behavior. They also assess the probability of starting own business as the highest (Graph 1).

Graph 1. Means for variables: Propensity for entrepreneurial behavior and Probability of starting own business with subsamples



Source: Sedlan-König, 2012

These results suggest that a considerable pattern exists in the means for the observed variables. However, a difference between two examples of communities of practice regarding their influence on the development of entrepreneurial behavior can be observed.

Hypothesis 3: University teaching does not contribute significantly to the development of entrepreneurial competences was tested with the correlation analysis for particular segments, as well as general self-efficacy. As can be seen in Table 3, the lowest correlation exists for the impact of university teaching on efficacy in persuasion and negotiation, and the highest for efficacy in sales and marketing. In general, the estimation of the impact of university teaching on efficacy is a medium positive correlation. This means that Hypothesis 3 is confirmed.

Table 3. Pearson's coefficients of correlation between different aspects of self-efficacy and estimation of influence of university teaching

General perception of efficacy in	
a) detection of market opportunities	,31
b) collection of, analysis and understanding of data	,42
c) persuasion and negotiation	,21
d) usage of IT	,34
e) development of interpersonal relations	,25
f) management of financial resources	,44
g) sales and marketing	,54
h) work under stress	,38
i) dealing with uncertainty	,28
j) planning	,34
k) managing changes in the environment	,27

Source: Sedlan-König, 2012

The results of the testing for the Hypothesis 4: Doing sports and taking part in students' associations, as well as firsthand experience contribute more to the development of entrepreneurial competences than university teaching are shown in Table 4.

Table 4. Pearson's coefficients of correlation between general self-efficacy and estimation of influence of university teaching

	1	2	3	4
1. General self-efficacy	1,000	,398**	,603**	,347**
2. General estimation of sports clubs'/associations' influence	,398**	1,000	,381**	,421**
3. General estimation of influence of firsthand experience	,603**	,381**	1,000	,314**
4. General estimation of university's influence	,347**	,421**	,314**	1,000

** positive correlation, $p < 0,01$

Source: Sedlan-König, 2012

It is evident that the correlation between general impact of university with the general self-efficacy is lower (0.347) than general impact of firsthand experience (0.603) and membership in students' associations and sports clubs (0.398). Hence, they contribute stronger to self-efficacy. Therefore, the hypothesis 4 is also confirmed.

In order to discuss the H1: Students who are members of students' association or do sports demonstrate stronger propensity for entrepreneurial behavior than students who do not do sports and H2: Students who are members of students' association or do sports demonstrate a

higher probability of starting their own business than students who do not take part in such activities in more detail, a further analysis of the results of GET test was performed (Table 5).

Table 5: Descriptive statistics of the results of GET test according to subsample

		N	Mean	Std. deviation	Maximum
GET total	control	129	28,8605	6,16789	43,00
	sportsmen	130	32,0000	5,49418	44,00
	associations	65	34,2000	6,27047	50,00
	Total	324	31,1914	6,25914	50,00

Source: Sedlan-König, 2012

A detailed analysis confirms that both, students members of sports clubs, as well as members of students' associations display a stronger propensity for entrepreneurial behavior than students non-members. Almost in all aspects, students who are members of students' associations display the highest results of all. Therefore, both Hypothesis 1 and 2 are confirmed.

5. Discussion and implications

The research results prove that students who do sports as well as those who are members of students' associations, in other words students who are active in communities of practice, demonstrate a stronger propensity for entrepreneurial behavior and a higher probability of starting their own business than students who lack the experience of participating in communities of practice. Hence, it can be concluded that communities of practice have a positive influence on propensity for entrepreneurial behavior and probability of starting own business. In entrepreneurial education where the expected outcome is the development of entrepreneurial competences and consequently behavior, it is essential to encourage students to participate in some sort of communities of practice.

Furthermore, university teaching contributes only slightly to the development of entrepreneurial competences. According to the results of this research, communities of practice have a more significant function in that. As it was elaborated earlier, firsthand experience has the most powerful influence on the development of entrepreneurial behavior. Therefore it is desirable to initiate more practical activities into the formal education at the university with the aim of exercising a stronger influence on the development of entrepreneurial behavior. It is also necessary to consider ways of using the potential of firsthand experience for the development of entrepreneurial behavior through supplementing university courses with some forms of communities of practice.

6. Conclusion

Universities are very traditional and change-resistant institutions that have to realize the opportunities of influencing and developing entrepreneurial competencies and behavior. The findings of the study provide evidence that the university environment gives weak encouragement and support to that goal. University programs in general are traditionally un-entrepreneurial, and oriented toward supplying knowledge about entrepreneurship, not for entrepreneurship. Therefore, it is important that universities apply a number of different strategies to stimulate the development of entrepreneurial potential. One of the ways is by employing communities of practice as a supplement to traditional teaching practices.

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