

**Ljerka Sedlan-König**  
Josip Juraj Strossmayer  
University of Osijek  
Faculty of Economics in Osijek  
Trg Ljudevita Gaja 7,  
31000 Osijek, Croatia  
sedlan@efos.hr  
Phone: +385912244058

UDK: 658.1:378](497.5 Osijek)  
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# INTEGRATING ENTREPRENEURIAL SELF-EFFICACY INTO EDUCATION AT UNIVERSITIES

## ABSTRACT

Educational institutions are urged to provide more enterprising individuals who will either act as entrepreneurs, or will be able to manage their careers and lives in an entrepreneurial way.

The purpose of this study is to address the role of teaching at universities in maximizing entrepreneurial self-efficacy, and to examine the possibility to maximize the likelihood of entrepreneurial behavior by enhancing entrepreneurial self-efficacy with university students. The study investigates the impact that entrepreneurial self-efficacy has on the development of entrepreneurial motivation and behavior using a sample of 324 students of Josip Juraj Strossmayer University of Osijek in Croatia.

The results of the research indicate that students demonstrate a higher propensity for entrepreneurial behavior and a higher probability of starting their own business if they feel more self-efficient. The research has also highlighted that teaching at universities does not significantly improve the perception of entrepreneurial self-efficacy in students and that firsthand experience has a more important role in that.

An important conclusion to emerge from this research is that in order to influence entrepreneurial behavior, it is necessary to make better use of experience-based learning and supplement university courses with components of informal and/or non-formal education.

**Keywords:** Entrepreneurship education, entrepreneurial self-efficacy, university, communities of practice

## 1. Introduction

Entrepreneurship is important as an economic and social phenomenon because it increases economic efficiencies, brings innovation and creates jobs (Shane and Venkataraman, 2000). Policy makers are interested in factors that urge an individual to become an entrepreneur, in the ways of amplifying these influencing factors, and increasing the number of potential and actual entrepreneurs in order to provide more significant economic growth. As

entrepreneurial behavior has become a prerequisite of any economic development, 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. Graduates' interest in entrepreneurship is growing in Croatia, and the number of higher education institutions that offer a variety of entrepreneurship programs has multiplied. With the increasing resources allocated to these initiatives, and a lack of

research regarding the outcomes of entrepreneurship education, a deeper understanding is needed of how entrepreneurship education contributes to students' propensity for entrepreneurial behavior, and how effective education is in inspiring students for a career in entrepreneurship by developing entrepreneurial competences. In addition, there remains a lack of research about the generalizability of the intent-based models and entrepreneurship education impact coming from developing or entrepreneurially young contexts (Pfeifer et al., 2016). Croatia is a post-socialist, south-eastern European country in transition to an innovation-driven, knowledge-based society, and fostering entrepreneurship through entrepreneurship education programs has recently become a part of the national strategic agenda.

The purpose of this study is to address the role of teaching at entrepreneurial universities in maximizing entrepreneurial self-efficacy, and to examine the possibility of increasing the likelihood of entrepreneurial behavior by enhancing entrepreneurial self-efficacy with university students, in particular through communities of practice, which refer to groups of people who share a concern or a passion for something, and learn to do it better while interacting regularly. The paper consists of five parts. Drawing upon different conceptual frameworks from the literature on psychology and entrepreneurship, the research model is explained and research propositions are developed. Next, research methodology is presented, including sample description and the research instrument. Data analysis results and main research findings are provided in the fourth part. Finally, research results are discussed from both theoretical and practical standpoint, and directions for further research are outlined.

## **2. Theoretical framework**

Entrepreneurship has, due to its contribution to economic development and job creation, gained increased interest and research. Development agencies, government departments, and educational institutions are facing the challenge to create an enterprising culture which will foster further development. Understanding what compels individuals to become entrepreneurs, and what the antecedents of entrepreneurial behavior are, remains an important question in entrepreneurship research (Shane and Venkataraman, 2000). Nevertheless, despite dec-

ades of research, there is still only a limited understanding of the process that prompts an individual to become an entrepreneur.

### **2.1 Entrepreneurial self-efficacy**

Entrepreneurial behavior consists of individual's actions and reactions (Ajzen, 1991), and is influenced by the following elements: demographic factors and personal characteristics, attitudes and beliefs, intentions, environment, entrepreneurial competences and education (Sedlan-König, 2012). The outcomes that people expect largely depend on their judgments of what they can accomplish. This paper focuses on entrepreneurial self-efficacy, as one of the entrepreneurial beliefs.

There is a rich history of research on entrepreneurial behavior and self-efficacy. Previously, a theoretical model (Boyd and Vozikis, 1994) was developed in which self-efficacy was proposed as an antecedent of entrepreneurship intentions and behavior. The authors built on the model proposed earlier by Bird (1988), which suggests that intentions are a function of beliefs and provide a link between beliefs and subsequent behavior. Belief in itself does not lead to behavior, but requires the arising of intention to translate the belief into action. An individual who perceives that he/she has competences necessary for entrepreneurial success will be more likely to engage in the behavior in that field, and persist in those activities. It is important to have a belief in one's ability to succeed and be able to project this belief to the outside world. Individuals are motivated by perceived self-efficacy, rather than by objective ability (Markham et al., 2002). Self-efficacy influences individual's choice of activities, goal levels, persistence and performance (Zhao et al., 2005), opportunity recognition and risk taking (Krueger and Dickson, 1994), career choice (Bandura 1986), as well as the scope of carrier options considered, occupational interests, perseverance in difficulties and personal effectiveness (Markham et al., 2002). Pfeifer et al. (2016) found that in Croatia students from wealthy families, as well as those from urban areas have a higher perception of self-efficacy. In addition, self-efficacy presents a link between knowledge, understanding, skills, experience, personal attributes and employability. Higher levels of self-efficacy prompt individuals to be realistic about their achievements and committed to life-long learning. If self-efficacy is seen as a belief in

one's capabilities in a particular situation, then self-confidence could be seen as the way this is projected to the outside world. An increase in self-efficacy should be reflected in an increase in demonstrated self-confidence, and it is through the development of high general self-confidence that employability is achieved.

An important aspect of self-efficacy is that it is seen to be task and domain specific (Bandura, 1992). Boyd and Vozikis (1994) sought to identify which beliefs translate into entrepreneurial intentions and concluded that self-efficacy is the deciding factor which affects whether those with entrepreneurial intention proceed to perform entrepreneurial actions. Based on their research, McGree et al. (2009) suggest that Entrepreneurial self-efficacy (ESE) is best viewed as a multi-dimensional construct, especially for examining the behavior of nascent entrepreneurs. It can be defined as an individual's confidence in his/her ability to mobilize cognitive, motivational and behavioral facilities to successfully perform entrepreneurial tasks. Entrepreneurial self-efficacy is proposed as an important explanatory variable in determining both the strength of entrepreneurial intentions (Wang et al., 2002; Barbosa et al., 2007) and the likelihood that those intentions will result in entrepreneurial actions. Interestingly, it has been found (McGree et al., 2009) that nascent entrepreneurs consistently posted higher ratings on the ESE measures. The previous research by Pfeifer et al. (2016) has confirmed that the main predictors of entrepreneurial intentions in students in Croatia are strength of entrepreneurial identity aspiration and entrepreneurial self-efficacy.

## 2.2 Entrepreneurship education and entrepreneurial universities

Previous research (Cox et al., 2002; Wilson et al., 2007) indicates that targeted education can play an important role in developing higher levels of self-efficacy. Although the research on entrepreneurial education is now quite advanced, entrepreneurship education has only recently become an integral element of academic programs in Croatia. Entrepreneurship education program is usually defined as a 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). Professional skills and "how to" knowledge are essential for starting,

managing and growing a new business, yet 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 of 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.

The availability of entrepreneurship programs in higher education is important for a number of reasons. First of all, as entrepreneurship education has a significant impact on university culture and the local community (Gibb and Hannon, 2006), introduction of entrepreneurship programs can be seen as a first step in the shift towards knowledge-based society in which entrepreneurial university plays the central role. Furthermore, universities that have a strong focus on entrepreneurial activities often assume an active role in regional business development, by including the entrepreneurial objective as the third component to their mission, hand in hand with research and education. Finally, in this way, universities fulfill their role at the heart of the Triple Helix model (Etzkowitz et al., 2008), which encompasses their deep involvement in economic and social development, more intense commercialization of research results, patent and licensing activities, institutionalization of spin-off activities, and managerial and attitudinal changes among faculty members with respect to collaborative projects with industry and government. The key issue then is the effectiveness of the education in raising the levels of entrepreneurial self-efficacy in students.

The majority of previous research indicates that education can contribute significantly to the development of entrepreneurial behavior (Krueger, 2003), and that individual's ESE may be elevated through training and education (Florin et al., 2007), but on the other hand, Fayolle et al. (2006) found that entrepreneurship training programs, apart from having a direct positive impact, can have a counter effect on entrepreneurial intentions, as particular combination of personal, perceptual and situational factors can lead to entrepreneurship education actually decreasing the level of entrepreneurial intentions. Brockner et al. (2004) suggest that entrepreneurship education can prompt a person's sen-

sitivity to negative outcomes and force a person to apply a preventive orientation. Wilson et al. (2007), after establishing that entrepreneurship is still perceived as a male field and that young women may be limiting their career aspirations because they feel that they do not have the requisite skills and abilities, came to a conclusion that entrepreneurship education can possibly reduce the limiting effects of low self-efficacy and ultimately increase the chances for successful venture creation by women. It seems that more entrepreneurial education does not necessarily lead to more entrepreneurial self-efficacy, more favorable attitude towards entrepreneurship or more new ventures. One potential reason for low self-efficacy scores following an entrepreneurial program might be related to the fact that the course itself exposed students to the complexities of starting a business about which they had previously been unaware (Cox et al., 2002). Interestingly, self-efficacy is rarely used as an outcome measure, and a small number of studies have examined the effectiveness of entrepreneurship programs in enhancing self-efficacy (Cox et al., 2002). Moreover, the empirical evidence has not been tested in transitional economies or entrepreneurially young contexts. The recent research by Bilić, Prka and Vidović (2011) reports that only 29.8 percent of Croatian university students have entrepreneurial intentions. The same research also provides evidence of a low correlation between students' enrollment in entrepreneurship courses and their entrepreneurial intentions. Another Croatian study suggests that university-based entrepreneurship education has a significant direct impact on developing entrepreneurial capacity and mindset (Kružić and Pavić, 2010).

Literature review on entrepreneurship education pedagogy affirms that, in order to increase the likelihood of effective entrepreneurship outcomes, entrepreneurship education should take the experience-based learning approach. With the main challenge being the creation of appropriate learning environment which reflects the life world of entrepreneurs, entrepreneurship educators have increasingly adopted experiential learning approaches (Gibb, 2002) which are defined as processes in which knowledge is created through the transformation of experience (Kolb, 1984). 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 at entrepreneurial universities is by introducing communities of practice into education programs.

### 2.3 Communities of practice

Lave and Wenger (1991) first coined the term communities of practice. Three elements are crucial in distinguishing a community of practice from other groups and communities. A community of practice has an identity defined by a shared domain of interest. As a result of that, membership 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.

Communities of practice can be considered a form of experiential learning. They also present an opportunity for situated learning where learning occurs through certain forms of social co-participation, is contextual, and embedded within both social and physical environment. Bandura (1992) suggests that self-confidence in our abilities to successfully perform specific tasks comes from four key sources: mastery experiences, modeling, social persuasion and judgments of our own physiological states. Along these lines, opportunities for meaningful apprenticeships, developing business plans and participating in running a business that communities of practice provide in the form of "learning by doing" can potentially play an important role in developing entrepreneurial self-efficacy in students. At the same time, communities of practice boost chances for using role models that help students form judgments of their own capabilities through personal comparison (Cox et al., 2002). Furthermore, self-efficacy can also be enhanced through social persuasion, i.e. positive encouragement and feedback from co-participants in communities of practice.

Communities of practice are in regard to learning and teaching characterized by the following. Experiences in communities of practice allow social, as well as individual learning. Opportunities are created for students to learn from mistakes and

grow personally. Communities of practice ensure exposure to uncertainty and ambiguity and bring students closer to entrepreneurial way of life. In addition, projects are used proactively to encourage learning with the emphasis on problem solving, and reflection following experience occurs when learning happens. It has been found earlier (Rubin et al., 2002) that involvement in communities of practice is associated with enhanced performance in communication, initiative, decision making and teamwork.

### 3. Methodology

The main purpose of the empirical research was to explore the effect that entrepreneurial self-efficacy has on the development of entrepreneurial behavior and to examine the factors that change the perception of entrepreneurial self-efficacy in university students. The research raised several questions. Apart from testing whether entrepreneurial self-efficacy influences probability and propensity towards entrepreneurial behavior, it explored whether teaching at a Croatian university significantly impacts entrepreneurial self-efficacy, and investigated the possibilities of integrating self-efficacy into entrepreneurship education at university.

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

- H1: Higher levels of entrepreneurial self-efficacy are positively correlated to a stronger propensity for entrepreneurial behavior and a higher probability of starting own business.
- H2: Perception of entrepreneurial self-efficacy is related to doing sport.
- H3: Perception of entrepreneurial self-efficacy is related to membership in students' associations.
- H4: University teaching is positively associated with the development of entrepreneurial self-efficacy.

The sample included students of Josip Juraj Strossmayer University of Osijek, equally distributed in three years of undergraduate programs, and at all faculties. After the elimination of incomplete questionnaires, the data set of 324 respondents was created. The sample was divided into three subgroups: students who regularly do sports (40.1% of the

sample), secondly, students who are members of students' associations (20.1%) and finally, the control group, students who neither do sports nor are members of students' associations (39.8%). In this research, membership in sports clubs and students' associations have been taken as examples of communities of practice because members are identified by a shared domain of interest and competence, and they engage in joint activities in which they learn from each other. There were 52.8% men and 47.2% women in the sample. Students were asked to fill in a paper-and-pen questionnaire in Croatian, which was made up of two parts. The first part included eight closed questions related to the demographics of the respondents, their propensity for entrepreneurial behavior and the estimated probability of starting their own business. In the second part of the questionnaire, respondents were asked to estimate their efficiency in the following competences that have by several authors been identified as fundamental for entrepreneurial success: market opportunity recognition, collecting, analysis and understanding of data, persuasion and negotiation, use of information technology, managing interpersonal relationships, managing finances, sales and marketing, managing stress, managing uncertainty, planning and dealing with changes in the environment. The students were also asked to evaluate the influence that university teaching, membership in sports clubs and students' associations, and first-hand experience have on the perception of entrepreneurial self-efficacy. Likert scale was used for the answers, which thus present students' self-report measures of entrepreneurial self-efficacy.

Nonparametric and parametric descriptive statistics was used in the analysis of the results. To test the differences, univariate statistics, bivariate analysis, as well as multivariate data analysis were employed. In order to compare the means of several groups for both dependent and independent variables univariate analysis of variance (ANOVA) was used. 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.

### 4. Results and discussion

Concerning the H1: Higher levels of entrepreneurial self-efficacy are positively correlated to a stronger propensity for entrepreneurial behavior and a high-

er probability of starting own business, the correlation of variables: General perception of self-efficacy, Probability of starting a business and Propensity for entrepreneurial behavior shows that there exists a moderate positive correlation between general perception of entrepreneurial self-efficacy and probability of starting a business ( $r=.390$ ,  $p<0.01$ ), as well as propensity for entrepreneurial behavior ( $r=.466$ ,  $p<0.01$ ). The results indicate that students show a higher propensity for entrepreneurial behavior and a higher probability of starting their own business if they feel more self-efficient, which means that the Hypothesis 1 is confirmed.

In order to test the H2 (Perception of entrepreneurial self-efficacy is related to doing sport) and H3 (Perception of entrepreneurial self-efficacy is related to membership in students' associations), the ANOVA procedure was used. On average, in all categories of entrepreneurial competence (market opportunity recognition, collecting, analysis and understanding of data, persuasion and negotiation, use of information technology, managing interpersonal relationships, managing finances, sales and marketing, managing stress, managing uncertainty, planning and dealing with changes in the environment) students who are members of students' associations or sports clubs feel more efficient than students in the control group. The respondents in general valued their self-efficacy in managing interpersonal relationships (4.02) the highest, and their self-efficacy in sales and marketing (3.20) the lowest. It is interesting that students who are members of students' associations valued their self-efficacy in all categories, except in managing stress, higher than students who do sports or students in the control group.

The ANOVA procedure has shown statistically significant differences especially for categories of self-efficacy in collecting, analysis and understanding of data ( $F=3,882$ ,  $p<0.05$ ), sales and marketing ( $F=7.874$ ,  $p<0.01$ ) and dealing with changes in the environment ( $F=5.064$ ,  $p<0.01$ ). Scheffe's post hoc analysis has shown that students who do sports, as well as students who are members of students' associations have significantly higher results in aspects of self-efficacy related to collecting, analysis and understanding of data compared to the control group. Interestingly, in aspects of sales and marketing and dealing with changes in the environment, students who are members of students' associations have the highest results. Therefore, the H2 (Perception of en-

trepreneurial self-efficacy is related to doing sport) is partly accepted, whereas H3 (Perception of entrepreneurial self-efficacy is related to membership in students' associations) is fully accepted.

Hypothesis 4: University teaching is positively associated with the development of entrepreneurial self-efficacy, was tested with the correlation analysis for particular segments, as well as general self-efficacy. The lowest correlation exists for the impact of university teaching on efficacy in persuasion and negotiation ( $r=.21$ ), and the highest for efficacy in sales and marketing ( $r=.54$ ). Values for other aspects of entrepreneurial self-efficacy are as follows: Managing interpersonal relations .25, Managing changes in the environment .27, Dealing with uncertainty .28, Market opportunities recognition .31, Planning .34, Use of IT .34, Work under stress .38, Collecting, analysis and understanding of data .42, and Financial resources management .44, whereas general perception of entrepreneurial self-efficacy scored  $r=.35$ . The results suggest that it is possible to influence the development of entrepreneurial competences at university, but a concern is voiced because the estimation of the general impact of university teaching on efficacy in entrepreneurial competence shows only a medium positive correlation.

Next, the contribution of doing sports, taking part in students' associations, and firsthand experience to the development of entrepreneurial self-efficacy is examined. The results show that the correlation between university teaching and general self-efficacy is lower (0.347) than the correlation between general self-efficacy and firsthand experience (0.603) on one hand, and membership in students' associations and sports clubs (0.398) on the other hand. Consequently, the perception of entrepreneurial self-efficacy is more strongly associated with firsthand experience and membership in students' associations and sports clubs than with teaching interventions at university.

It is also interesting to comment why two subsamples (members of sports clubs and students' associations, which were taken as examples of communities of practice) scored differently in the survey. The conclusion is that some activities may be more experiential and entrepreneurial in nature than others and may impact on students' self-efficacy in different ways.

In line with the previous research (Bird, 1988; Boyd and Vozikis, 1994), this research has shown that in

transitional and entrepreneurially young countries such as Croatia, self-efficacy also presents a strong antecedent of entrepreneurial behavior. This research suggests that students who perceive higher levels of entrepreneurial self-efficacy demonstrate a higher propensity for entrepreneurial behavior and a higher probability of starting their own business.

Concerning the purpose of this study, which was to address the role of teaching at universities in maximizing entrepreneurial self-efficacy, and to examine the possibility to maximize the likelihood of entrepreneurial behavior by enhancing self-efficacy with university students, it has been established that university teaching contributes moderately to the perception of entrepreneurial self-efficacy. In line with previous research (Gibb, 2002), it is implied that the contribution would be more significant if the experiential teaching approach, such as communities of practice, was accepted.

Based on the results presented, firsthand experience is identified as the most powerful factor to influence the perception of entrepreneurial self-efficacy. This implies the need for evaluation, improvement and changes in entrepreneurship education at universities. In order to exercise a stronger influence on the development of entrepreneurial behavior, entrepreneurship education should adopt the experiential teaching approach and include more practical activities during formal education at university. In order to maximize the development of entrepreneurial behavior, ways of using firsthand experience through supplementing university courses with some forms of practical work and extracurricular activities, i.e. communities of practice, is to be considered.

The research has demonstrated that students who do sports and especially students who engage in students' associations perceive higher levels of entrepreneurial self-efficacy than students who do not share such experience. As in this research doing sports and taking part in students' associations were taken as examples of communities of practice, it is suggested that during entrepreneurship education programs at university, students should be encouraged to engage in some form of communities of practice. Because of their characteristics, communities of practice can be seen as a way of integrating self-efficacy into entrepreneurial education at an entrepreneurial university.

It seems that students who do sports and engage in students' associations (these have been taken as examples of communities of practice) gain more confidence and self-efficacy in their actions by learning from experience, which empowers them to become more entrepreneurial. This conclusion has important implications for teaching at universities as teaching interventions at entrepreneurial universities should bring into focus increasing entrepreneurial self-efficacy in students.

Based on the presented results, the following recommendations can be made. In order to increase entrepreneurial self-efficacy, experience based approach, in which students engage actively in the process of learning and teachers take the role of facilitators, should be employed whenever possible. Learning facts, models and techniques is necessary, but students also need to be confident that they will be able to manage entrepreneurial tasks independently once they have completed their studies. Therefore, for developing entrepreneurial behavior, instruction based purely on lectures is insufficient. Only experience-based learning can provide exposure to solving problems and issues, and thus ensure a more holistic approach focused on students' interests and needs, as well as self-expression. This is intended to build confidence and enable students to practice, in addition to learning.

If we accept the fact that university is not the only place where entrepreneurial behavior can be acquired, and acknowledge the important role of informal learning, the most comfortable way to boost entrepreneurial self-efficacy in university students, and thus increase the number of enterprising individuals among students, is to supplement university teaching with various forms of communities of practice. The types of communities of practice that could be used in entrepreneurial education at entrepreneurial universities (apart from the above mentioned) are students' interests groups, learning clubs, creative workshops, clubs that organize competitions, workshops with guest speakers and practitioners, visits to companies, participation in centers for learning, taking part in activities in Centers for entrepreneurship and Business incubators, spin-offs, engagement in community service projects, etc. In any case, a comprehensive system of monitoring, evaluation and assessment of informal learning activities has to be developed.

The findings of the study should be interpreted while keeping in mind its limitations. First, as with

all self-report constructs, there might be problems with the response bias. Students might have been tempted to inflate their responses, avoiding admitting low levels of competence. Secondly, because of underlying interacting relationships between variables, the relationships presented in this paper may need to be verified with more sophisticated research techniques. Also, the research surveyed the situation at one Croatian university, which may prove insufficient for making any generalizations. It might prove interesting to conduct a similar research at other universities in Croatia and compare the results. In addition, the research method captured data at one point in time. For the improvement in current research it is recommended that future studies undertake a longitudinal approach. More research is needed to explore how different types of communities of practice impact student learning. Further research is also needed to investigate students' career performance measures after graduation, which might shed light on whether communities of practice really improve skills that can be deployed in the job market.

## **5. Conclusion**

The presented research explored the role of teaching at universities in maximizing entrepreneurial self-efficacy, and examined the possibilities of influencing the likelihood of entrepreneurial behavior by enhancing self-efficacy with university students. It also analyzed the impact that entrepreneurial self-efficacy has on propensity and probability of entrepreneurial behavior. Furthermore, it looked into the factors that influence the perception of entrepreneurial self-efficacy in university students. Additionally, empirical evidence of the interaction between entrepreneurial self-efficacy and university teaching interventions, the importance of firsthand experience in the development of self-efficacy was presented.

Universities in Croatia are very traditional and change-resistant institutions that have to realize the opportunities of influencing and developing entrepreneurial 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 entrepreneurial universities apply a number of different strategies to stimulate the development of entrepreneurial potential, acknowledge informal learning as an important area for development of entrepreneurial behavior and employ communities of practice as a supplement to traditional teaching practices.

There are three most salient points for integrating entrepreneurial self-efficacy into education at entrepreneurial universities: the acknowledgement of the role of firsthand experience, the employment of experience-based learning, and the introduction of communities of practice as a supplement for traditional teaching methods. In conclusion, education in specific entrepreneurial competences is important, but it may not be sufficient as students need to perceive that those competences have been mastered. It seems that entrepreneurial universities have to invest additional efforts to design programs that not only give students a realistic sense of what it takes to run a successful business, but also teach necessary skills and thus develop entrepreneurial self-efficacy.

The implications of this study are important for entrepreneurship educators and scholars as they offer a suggestion of how traditional teaching can be improved while maintaining its focus on transferring knowledge and direct instruction. Most teachers at university have realized that preparing students to become more entrepreneurial is crucial, but difficult. Supplementing traditional teaching with communities of practice offers an improvement over learning from textbooks, lectures and individually written assignments, as well as an insight into how more effective university teaching can be provided. Obviously, it is the teachers at entrepreneurial universities who should take the opportunity to embrace new teaching processes that would lead to better outcomes.

Finally, this study can assist in developing an appropriate curriculum and pedagogy to support students in becoming more entrepreneurial, which may ultimately ensure the creation of sustainable solutions for the economy. Communities of practice have always been there, the teachers have just failed to acknowledge them, and the hope is that in the future they will no longer remain hidden.



## REFERENCES

1. Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50, No. 2, pp. 179-211.
2. Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. New York: Prentice-Hall.
3. Bandura, A. (1992), "Exercise of personal agency through the self-efficacy mechanism", in Schwartzer, R. (Ed.), *Self-efficacy: Through control of action*, Hemisphere, Washington, DC.
4. Barbosa, S., Gerhardt, M., Kickul, J. (2007), "The role of cognitive style and risk preference on entrepreneurial self-efficacy and entrepreneurial intentions", *Journal of Leadership & Organizational studies*, Vol. 13, No. 4, pp. 86-104.
5. Bilić, I., Prka, A., Vidović, G. (2011). "How does education influence entrepreneurship orientation? A case study of Croatia," *Management*, Vol. 16, No. 1, pp. 115-128.
6. Bird, B. J. (1988), "Implementing entrepreneurial ideas: The case for intention", *Academy of Management Review*, Vol. 13, No. 3, pp. 442-453.
7. Boyd, N. G., Vozikis, G. S. (1994), "The influence of self-efficacy on the development of entrepreneurial intentions and actions", *Entrepreneurship Theory and Practice*, Vol. 18, No. 4, pp. 63-77.
8. Brockner, J., Higgins, E. T., Low, M. B. (2004), "Regulatory focus theory and the entrepreneurial process", *Journal of Business Venturing*, Vol. 19, No. 2, pp. 203-220.
9. Bygrave, H. (1991), "Theorizing about entrepreneurship", *Entrepreneurship Theory and Practice*, Vol. 16, No. 2, pp. 13-22.
10. Cox, L., Mueller, S., Moss, S. (2002), "The impact of entrepreneurial education on entrepreneurial self-efficacy", *International Journal of Entrepreneurship Education*, Vol. 1, No. 2, pp. 229-245.
11. Etzkowitz, H., Ranga, M., Benner, M., Guarany, L., Macuan, A. M., Kneller, R. (2008), "Pathways to the entrepreneurial university: towards a global convergence", *Science and Public Policy*, Vol. 35, No. 9, pp. 681-695.
12. Fayolle, A., Gailly, B., Lassas-Clerc, N. (2006), "Effect and counter-effect of entrepreneurship education and social context on student's intentions", *Estudios de Economia Aplicada*, Vol. 24, No. 2, pp. 509-523.
13. Florin, J., Karri, R., Rossiter, N. (2007), "Fostering entrepreneurial drive in business education: An attitudinal approach", *Journal of Management Education*, Vol. 31, No. 1, pp. 17-42.
14. Gibb, A. A., Hannon, P. (2006), "Towards the entrepreneurial university", *International Journal of Entrepreneurship Education*, Vol. 4, No. 1, pp. 73-110.
15. Gibb, A. A. (2002), "In pursuit of a new enterprise and entrepreneurship paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge", *International Journal of Management Reviews*, Vol. 4, No. 3, pp. 233-269.
16. Jones, C., English, J. (2004), "A contemporary approach to entrepreneurship education", *Education and Training*, Vol. 46, No. 8/9, pp. 416-423.
17. Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.
18. Krueger, N. F. (2003), "The cognitive psychology of entrepreneurship", in Acs, Z. J., Audretsch, D. B. (Eds.), *Handbook of Entrepreneurship Research*, Springer, New York.
19. Krueger, N. F., Dickson, P. R. (1994), "How believing in ourselves increases risk taking: perceived self-efficacy and opportunity recognition", *Decision Sciences*, Vol. 25, No. 3, pp. 385-400.
20. Kružić, D., Pavić I. (2010). "Students' entrepreneurial characteristics: empirical evidence from Croatia," *The Business Review*, Vol. 14, No. 2, pp. 216-221.
21. Lave, J., Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

22. McGee, J. E., Peterson, M., Stephen L. Mueller, S. L., Sequeira, J. M. (2009), "Entrepreneurial Self-Efficacy: Refining the Measure", *Entrepreneurship Theory and Practice*, Vol. 33, No. 4, pp. 965-988.
23. Markham, G. D., Balkin, D. B., Baron, R. A. (2002), "Inventors and new venture formation: The effects of general self-efficacy and regretful thinking", *Entrepreneurship Theory and Practice*, Vol. 27, No. 2, pp. 149-165.
24. Pfeifer, S., Šarlija, N., Zekić Sušac, M. (2016), "Shaping the entrepreneurial mindset: Entrepreneurial intentions of business students in Croatia", *Journal of Small Business Management*, Vol. 54, No. 1, pp. 102-117.
25. Rae, D., Carswell, M. (2000), "Using a life-story approach in researching entrepreneurial learning: The development of a conceptual model and its implications in the design of learning experiences", *Education and Training*, Vol. 42, No. 4/5, pp. 220-228.
26. Rubin, R. S., Bommer, W. H., Baldwin, T. T. (2002), "Using extracurricular activity as an indicator of interpersonal skill: Prudent evaluation or recruiting malpractice?", *Human Resource Management*, Vol. 41, No. 4, pp. 441-454.
27. Sedlan-König, Lj. (2012). Higher education pedagogy in the development of entrepreneurial behavior. Doctoral thesis, Josip Juraj Strossmayer University of Osijek, Faculty of Economics in Osijek.
28. Shane, S., Venkataraman, S. (2000), "The promise of entrepreneurship as a field of research", *Academy of Management Review*, Vol. 25, No. 1, pp. 217-226.
29. Wang, C., Wong, P., Lu, Q. (2002), "Tertiary education and entrepreneurial intentions", in P. Phan (Ed.), *Technological entrepreneurship*, Information Age Publishing, Greenwich, CT.
30. Wilson, F, Kickul, J., Marlino, D. (2007), "Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education", *Entrepreneurship Theory and Practice*, Vol. 31, No. 3, pp. 387-406.
31. Zhao, H., Seibert, S. E., Hills, G. E. (2005), "The mediating role of self-efficacy in the development of entrepreneurial intentions", *Journal of Applied Psychology*, Vol. 90, No. 6, pp. 1265-1272.

Ljerka Sedlan-König

## PODUZETNIČKA SAMOUČINKOVITOST KAO ISHOD UČENJA NA SVEUČILIŠTIMA

### SAŽETAK

Očekuje se da iz visokoobrazovnih institucija izlaze poduzetni pojedinci koji će ili postati poduzetnici ili će moći upravljati svojom karijerom i životom na poduzetnički način. Ovo istraživanje bavi se ulogom poučavanja na sveučilištu sa svrhom povećanja poduzetničke samoučinkovitosti. Također se bavi i istraživanjem postojanja mogućnosti za povećanje vjerojatnosti poduzetničkoga ponašanja povećanjem poduzetničke samoučinkovitosti kod studenata. Ovaj je rad ispitao učinak koji poduzetnička samoučinkovitost ima na razvoj motivacije za poduzetništvo i poduzetničko ponašanje na uzorku od 324 studenta sa Sveučilišta Josipa Jurja Strossmayera u Osijeku.

Rezultati istraživanja ukazuju da studenti pokazuju veću sklonost poduzetničkom ponašanju i veću vjerojatnost za pokretanje poduzetničkoga pothvata ukoliko osjećaju veći stupanj poduzetničke samoučinkovitosti. Istraživanjem je također utvrđeno da poučavanja na fakultetima ne pridonose znatno poboljšanju percepcije poduzetničke samoučinkovitosti kod studenata te da osobno iskustvo ima puno značajniju ulogu u tome.

Važan zaključak ovoga istraživanja jest da je u cilju poticanja poduzetničkoga ponašanja neophodno razmotriti načine iskorištavanja potencijala osobnoga iskustva kroz nadopunjavanje kolegija na fakultetima programima neformalnog i/ili informalnog učenja kao što su Zajednice prakse.

**Ključne riječi:** samoučinkovitost, poduzetničko ponašanje, poduzetničko obrazovanje, sveučilište, Zajednice prakse