

Development of Entrepreneurial Competences

VALERIJ DERMOL

International School for Social and Business Studies, Celje, Slovenia

ENTREPRENEURIAL LEARNING seems to promote the emergence of entrepreneurship and enterprising undertakings among students and graduates of higher education institutions. The model of entrepreneurial learning which we describe in this paper consists of five constructs – entrepreneurial competences, self-efficacy, entrepreneurial intention, self-employment or enterprising behaviour and teaching methods. We assume that it is a combination of entrepreneurial competences and self-efficacy which encourages entrepreneurial intentions. On the other hand, a mix of appropriate teaching methods which act as moderating variables promotes the processes of learning and improves entrepreneurial competences respectively. The model assumes as well that more competent students and graduates usually possess stronger entrepreneurial intentions. In the paper, we propose a model of entrepreneurial learning on one hand, and suggest an approach for further research on the model, entrepreneurship and links between the constructs on the other.

INTRODUCTION

Most countries would like to encourage entrepreneurship among students and graduates of higher education institutions (HEI) or strengthen their willingness to undertake some kind of enterprising projects. It seems that in the higher education (HE) environment, entrepreneurial learning is an important mechanism for strengthening enterprising behaviour of students, or for encouraging them to enter into self-employment or entrepreneurship. It facilitates the acquisition of appropriate competences as well as strengthens the entrepreneurial intentions. Various studies note that only individuals who possess appropriate knowledge, skills and attitudes and who have sufficiently strong entrepreneurial intention enter into entrepreneurship or enterprising ventures – establish a firm, create and commercialise innova-

tions, establish coalitions or influence important decision makers in the organisation to undertake innovative or intrapreneurial projects, etc.

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In order to successfully implement entrepreneurial learning, it is necessary to choose the right methods of teaching and to adjust them to the objectives and competences that the individuals should achieve. There are some examples and case studies regarding these issues and links between them claiming that, for example, one approach to entrepreneurial learning is more effective than others but clear definitions and classifications are missing. A more systematic approach to entrepreneurial learning would encourage more educational organisations to further improve the quality of teaching and learning to promote entrepreneurial or enterprising behaviour.

In this paper we present a model for developing entrepreneurial competences and intentions and for encouraging entrepreneurial and enterprising activities among students and graduates of HEI. The model is based on some theories related to the cause-effect relationship between the constructs of entrepreneurial competences, self-efficacy, entrepreneurial intentions and entrepreneurial or enterprising action. The paper represents a starting point for further research on how to promote entrepreneurial knowledge, skills, attitudes and intentions. It also presents a short overview of teaching methods used to promote different kinds of entrepreneurial competences. Our purpose is to introduce some future guidelines on how to ensure that more students and graduates enter entrepreneurship or undertake enterprising ventures.

ENTERPRISING INDIVIDUALS

Antončič et al. (2002) define entrepreneurship as an independent process in which the entrepreneur creates something new and worthy, which requires some time and effort, and assumes the financial, psychological and social risk but also possible reward in the form of money or personal satisfaction and independence. This definition also applies to intrapreneurship or corporate entrepreneurship (Jong and Wennekers 2008), with the difference that intrapreneurs operate within the organizational boundaries and are therefore less autonomous, their



potential financial benefits are weaker and the risks are lower. Organizational context certainly places some restrictions, but on the other hand it offers the entrepreneurs greater security, especially in the case of failure – they usually don't suffer personally.

The concept of entrepreneurship includes professional and behavioural dimensions (Jong and Wennekers 2008). Professional refers to the functioning of individuals who either own and operate a business or are employees in firms owned by others, and the behavioural dimension which focuses on specific behaviours – whether entrepreneurial or managerial. In this way, it is possible to recognize three different entrepreneurial roles – business owners, independent entrepreneurs, and employees with entrepreneurial or enterprising behaviours – intrapreneurs. On the basis of this classification we can define so-called enterprising individuals, including independent entrepreneurs, managers who show an entrepreneurial and not merely managerial mode of behaviour, and enterprising employees. In this paper we focus on students and graduates who may appear later in their professional career in any of these three roles.

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ENTREPRENEURSHIP EDUCATION

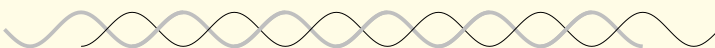
Research confirms the high importance of entrepreneurship education. It recognises influences on the emergence of entrepreneurial intentions, as well as on the quality of entrepreneurship – on the survival rate of new businesses and on their growth (Lans et al. 2008). The policies regarding education and training of most countries recognize the need for entrepreneurship education and for fostering the entrepreneurial mindsets of young people and for encouraging the emergence of new firms or other enterprises (European Commission 2008).

Lans et al. (2008) divide entrepreneurship education into educational efforts in terms of changes in the state of mind, in terms of enhancing entrepreneurial behaviour and in terms of mastering some specific business situations. In the first case, the education should focus on the creation of appropriate values, beliefs and attitudes associated with successful entrepreneurship and intrapreneurship as well. In the second case, considering entrepreneurship as a matter of behaviour, education should encourage transfer of specific abilities re-

[30] lated to entrepreneurial behaviour (whether on the role of independent entrepreneur, entrepreneurial manager or enterprising employee). In the third case, in which entrepreneurship is aligned with mastering of specific situations, education should focus on handling functional expertise – such as, how to start a business, how to explore the market, etc. The latter situation relates especially to individuals who are considering establishing their own firm.

In entrepreneurship education literature, two names appear as synonyms for entrepreneurship education – entrepreneurship teaching and entrepreneurial learning. The former consists of two components (European Commission 2002) – the transfer of entrepreneurial attitudes and skills developing relevant personal characteristics which are not directly linked to the business context (e. g. creativity, risk-taking, responsibility), and specific training on how to create a new firm (e. g. technical and business skills). On the other hand, entrepreneurial learning is defined as all forms of education and training, both formal and informal, which contribute to the entrepreneurial spirit and learning with or without commercial objectives (Gribben 2010). Holcomb et al. (2009) define entrepreneurial learning as a process in which people absorb new knowledge from direct experience or from observation of other peoples' behaviour, actions and consequences, make intuitive conclusions or heuristics because of environmental uncertainty and inconsistent information, and organize acquired knowledge by linking it with pre-existing knowledge structures.

Studies identify many possible approaches to entrepreneurial learning in the HE environment. Most of them are consistent with definitions of entrepreneurial learning or entrepreneurship teaching. Jones-Evans, Williams and Deacon (2000) for instance indicate the action learning approach (Revans 1980). Hampden-Turner (2010) describes a similar approach integrating simulations and games of managing the business, and organising meetings with some of the world's leading entrepreneurs. Harkema and Schouten (2008) indicate examples of student-oriented learning of entrepreneurship based on psychological tests for selection of appropriate students, and on planning of learning by the student himself/herself, and using personal coaching. As Hanke, Kisenwether and Warren (2005) note, the introduction of



the problem-based learning and distance learning approach enhances students' self-efficacy and their capacity to manage uncertainty. An interesting approach involving works of fiction or film productions is indicated by Bumpus and Burton (2008). Such approaches can result, for example, in understanding of the ethical and economic concepts, understanding of concepts related to the human resource management, encouraging the use of different management styles, introduction of important strategic management principles, organizational culture analysis, and understanding of the organizational behaviour concepts.

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Obviously, many authors note that entrepreneurial learning methods should be interactive and action oriented. The teaching should involve students as much as possible, and the teacher should have some real life entrepreneurial experiences and build the learning content as much as possible on them. As motivation for the students to start their own firm, role playing and discussion of case-studies could be beneficial, while for recognition of business opportunities action learning approaches are appropriate and, for learning about the process of business idea commercialization, guests from practice and competitions involving business plans are best suited. Creativity, which seems to be very important for the entrepreneurial individual, could be encouraged by the use of group techniques for generation of new ideas and 'live' case studies, which stem from existing business cases and current business models. Within entrepreneurial learning business planning workshops, guests from practice and business simulations should be introduced as well. The Expert Group of the European Commission (European Commission 2008) also notes that the approaches (and contents) of entrepreneurial learning should differ in business and non-business HEI, and there should be a distinction between approaches at the first and the second level of study as well.

In table 1 we give a summary of possible teaching methods in entrepreneurship learning at HEI (European Commission 2008).

In relation to entrepreneurial learning, contents of sustainable development apply as well. Modern societies expect from educators to fully prepare the young people, including future entrepreneurs, for their professional life and/or for continuing education as well (Sleurs

TABLE 1 Overview of teaching methods for entrepreneurial learning

Learning through experience and experimentation	Learning by observation and examples
Action learning	Meetings with leading entrepreneurs
Simulation	Integration of works of fiction or film productions
Role playing	The integration of teachers' real life experience
Use of personal instruction	Case studies with discussions
Self-directed learning	Study of 'live' entrepreneurial cases
Problem-based learning	Guest speakers – entrepreneurs as lecturers
Distance Learning	
Business plan competition	
Group techniques to create new ideas	
Business planning workshops	

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2008). Educational systems largely assume the important role of socialization. They are in fact expected to prepare the young people to take responsibility for the society in which they live. Educational programs in many countries include the contents of sustainable development – such as environmental education, health education, citizenship education, education for peace, etc.

Schools should encourage individuals to reflect about their life styles and associate them with issues of sustainable development and their life (Scott 2002). European universities and some other partners (Sleurs 2008) note that the role of education is in promoting independent thinking as well, and therefore they strongly emphasize the importance of critical reflection about the vision of sustainable development. Education should encourage and teach individuals how to (1) think about their own situation and the situation of others recognising their interdependence, (2) critically assess situations, (3) self-reflect about the role, possibilities and limitations of personal and collective responsibility, and (4) make responsible decisions and take actions at both personal and societal level. It seems that the approaches to learning about sustainable development are consistent with the teaching methods mentioned in table 1, particularly in the case of self-directed learning, problem-learning, discussions and case-studies, etc. – methods that encourage reflection, self-reflection and transfer of views and values.



We believe that the choice of teaching methods is crucial for the effectiveness of entrepreneurial learning, and respectively, entrepreneurial education. Košir and Bezenšek (2009) and also Burke et al. (2006) and Arthur et al. (2003), in their meta-researches on organisational training effectiveness, note that the mix of implemented teaching methods significantly influences the quality of learning in the sense of students' satisfaction, possible changes in their knowledge structures and behaviour, and also in the sense of the individual and organisational performance. On the basis of such considerations' we state the following proposition:

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- P 1 *The mix of teaching methods used as a mean of HE entrepreneurship learning has an important moderating impact on the process of entrepreneurial learning and on the creation of entrepreneurial intentions.*

ENTREPRENEURIAL COMPETENCES

The Dictionary (www.answers.com) defines competence as the ability of implementation, especially of something physical, mental or financial, or as a legal power to achieve something. It is either a natural or an acquired skill or talent. Despite such a relatively clear definition, Lans et al. (2008) note that in practice the construct of competence is surrounded by a great deal of confusion.

Due to the differences between the components of competences – achievements, capabilities, tasks, and personal characteristics – competences are a 'fuzzy' concept (Le Deist and Winterton 2005).

As identified by Lans et al. (2008) competences are a mix of knowledge, skills and attitudes. They can also be defined as broader personal characteristics necessary for superior behaviour, but also as an outcome of a proper application of knowledge (Brown 1993). Le-Brasseur, Blanco and Dodge (2002) note that when considering competences 'the emphasis is on behaviour and performance.' They understand a competency as 'an effective performance of a task or activity in a job setting, due to the underlying characteristics of the individual: motives, traits, skills, self-image, social role, or knowledge and experience.' Obviously competences can be defined as professional standards as well. They can be therefore identified by conduct-

[34] ing a job analysis within different work or social contexts. Furthermore, Le Deist and Winteron (2005) also recognise so called meta-competences. They define them as a capacity to manage uncertainty, learning and reflection and are usually related to 'learning to learn' ability. As a kind of meta-competence, Gagne (Richey 2000) recognises so-called cognitive strategies. He defines them as intrinsically organised skills directing personal behaviour at learning, memorising and reflecting. They are related to self-management and self-control of learning and thinking, and not to the context in which the individual operates. To acquire them it takes a lot of practice and opportunities to reflect.

Competences are closely related to work contexts (Sandberg 2000). In many cases they can be considered as tacit knowledge (Polanyi 1966), which individuals automatically have at hand when they need it, but they are usually not aware of having such knowledge (Dermol 2010). Related to this, Cope and Watts (2000) recognize the developmental aspect of competence. When the competences are used in practice, even unconsciously, experiential learning takes place which on the other hand improves these competences – e. g. by reflection on critical incidents, by testing the learning or by observation. We can conclude that entrepreneurial competences are not fully given to individuals at birth, but are created through the processes of education, training and experience (Lans et al. 2008)

Personal history is also very closely linked to the concept of the competences. It is actually the outcome of experiential learning, which is considered by many authors to be the most important method of adult learning (Jarvis, Holford and Griffin 2006). It takes place anywhere and at any time and includes the acquisition of all types of knowledge, skills and experience (Trunk Širca and Gomezelj Omerzel 2006). Experiences in the sense of trial and error processes and observation of other people are the basis for learning, but they are also a very important learning stimulus (Jarvis, Holford, and Griffin 2006). Boyd and Vozikis (1994), for example, highlight the findings of various studies showing that very often the parents of entrepreneurs are self-employed, which seems to affect the future entrepreneurs' inspirations and desires for training and education.



Cognitive Competences

Cognitive competences are primarily related to 'knowing that' and 'knowing why' knowledge. Le Deist and Winterton (2005) for example define cognitive competences as conceptual or theoretical knowledge on one hand and understanding on the other. Gagne in his studies about learning domains recognises so called verbal information and intellectual skills which are both tightly related to cognitive competences (Richey 2000). Verbal information consists of facts, principles and generalizations presented and organized in a meaningful context and represents the basis for learning. It is usually called 'the knowledge'. Intellectual skills can be defined as skills that allow better understanding of different rules and concepts, differentiation between the latter and also as skills enabling action and decision making. Gagne states that they don't offer the answers to the question 'What do individuals know?' but to the question 'What are individuals capable of doing?' (Dermol 2010). Cognitive competences seem to be learned formally within an organised learning environment, but they can be gained informally by experience as well (Le Deist and Winterton 2005).

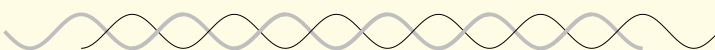
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There are various social, cultural, political and economic factors which influence the realisation of entrepreneurial intentions and the formation of new businesses. Boyd and Vozikis (1994), who summarize the findings of various authors, highlight factors such as: change in employment, previous work experience, the quality of urban life, membership in certain ethnic groups, etc., as well as the availability of venture capital, governmental impacts, availability of buyers, suppliers and transportation options, educated labour force, land and equipment and other support services. Relevant information availability and perception of environmental factors may play an important role in the construction of individuals' expectations and their views on the feasibility of possible entrepreneurial ideas. The knowledge and understanding about these issues seems to be an important entrepreneurial competence and an important learning outcome of entrepreneurial learning at HEI as well.

In the last 30 years many scientists have been trying to identify the characteristics that distinguish entrepreneurs and nascent entrepreneurs from all other people (Boyd and Vozikis 1994). As Carter

[36] and Jones-Evans (2006) note, psychologists highlight the importance of entrepreneurial personal traits – the need for achievement, locus of control, propensity to take risks, tolerance for uncertainty, etc. Attempts to develop the personal profile of a typical entrepreneur, based solely on psychological constructs have been proven largely unsuccessful. These psychological constructs may be part of entrepreneurial (cognitive) competences, but empirical studies show that only a very small part of differences in entrepreneurship (e.g. measured performance of new businesses) could be explained by them (Lans et al. 2008). Bloom (Richey 2000) classifies cognitive learning objectives and consequently cognitive competences hierarchically as (1) *knowing* of terminology, concepts, rules, procedures and theories, (2) *understanding the knowledge* with capabilities of self-change, foresight, integration and forecasting, (3) *using the knowledge* in terms of operation, problem solving, and knowledge transfer, (4) *analysis* with capabilities of information interpreting, (5) *synthesis* with capability of new conceptual links creation and experimentation, and (6) *evaluation* with the capabilities of value judgments about the use of different methods, technical solutions and products (Dermol 2010). According to that, Pagon, Banutai and Bizjak (2008) define the following types of cognitive competences: divergent thinking, critical thinking, problem solving, strategic thinking, analytical skills, and numerical abilities.

The European Commission (2008) notes that in the context of entrepreneurial education and HEI it is necessary to impart the knowledge and understanding on how to establish a new business and how to encourage its growth – at the first study level especially through the promotion of self-employment concept; at the second level, however, through the knowledge and understanding of business planning processes and in the environment available entrepreneurial support mechanisms. Also, at non-business HEI the entrepreneurial learning should provide some practical basics about: economics, marketing, management techniques, protection of intellectual property, commercialization of innovation, and venture capital availability. Humanities and arts students should be aware of the problems concerning self-management issues, social entrepreneurship, options for partial self-employment and also of the innovation issues, especially the ones based on user's needs.



Functional Competences

In this case the competences are associated with *practising* the profession and with *mastering* various entrepreneurial situations (Le Deist and Winterton 2005). Functional competences are practical intellectual skills related to the understanding of entrepreneurial concepts and relationships between them, mastering different rules connected with these concepts and entrepreneurial decision making as well (Richey 2000). They are actually 'know-how' knowledge, which a person operating in a particular occupational or entrepreneurial field should be able to perform or exhibit.

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Entrepreneurial learning related to the transfer of so-called functional competences needed to carry out certain tasks or to implement some innovative work or business approaches, should focus on actual business situations, on innovation, on intrapreneurial initiatives, or on creation of new firms, and on finding the ways to enter new markets, etc. It is especially worth mentioning that such competences should enable the learner to identify entrepreneurial opportunities (acquisition of information and its interpretation), to create new business concepts (products, services, markets, customers), to conduct market research or acquisition of assets (funding, human resources, etc.) and to organise the business (to enter into arrangements, to establish working routines and organisational structures) (Jong de and Wennekers 2008). Zinger et al. (2001) identify ten areas of managerial competences, which are related to entrepreneurial situations as well: customer service, business image, pricing, operations, supply management (purchasing, inventory control), ability to develop new products and services, financial management (monitoring receivables, developing financial projections), general management (monitoring business trends, delegating), using computer technology, advertising and promotion, and financial control (using budgets for setting targets and evaluating results).

Behavioural Competences

Behavioural competences are personal, learnable competences related to entrepreneurial or enterprising behaviour. They represent the answer to the question – how to behave in certain entrepreneurial situations (Jong and Wennekers 2008). Within the concept of behavioural

competences we can distinguish between social competences and meta-competences.

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Social competences are the skills related to successful functioning in a society. They are outward orientated. Meta-competences on the other hand are inward orientated. They are conceptual skills of learning and reflecting. They encourage the acquisition of other competences as well (Le Deist and Winterton 2005). Gagne identified them as cognitive strategies because they direct the behaviour of individuals in the moments of learning, memorising and reflecting (Richey 2000). According to him, learning of these skills requires a lot of practice – especially in terms of allowing the opportunity to challenge thinking.

Among the social competences we can also place the ethical competences with ‘the possession of appropriate personal and professional values and the ability to make sound judgements based upon these in work-related situations’ (Le Deist and Winterton 2005, 35). In addition, Elmoose and Roth (2005) recognized three kinds of competences of sustainable development: understanding and being able to change a person’s own life conditions, participating in collective decision making and showing solidarity with those who are unable to control their living conditions. Sustainable development is seen as a core value for every citizen, to be always present in their minds.

Among the behavioural competences associated with entrepreneurial behaviour we should highlight in particular competences related to: researching and realisation of entrepreneurial opportunities, production of creative ideas, taking responsibility for the execution of such ideas or other activities, handling the uncertainties and risks, creating favourable coalitions within an organisation, selling skills, initiative taking, problem solving and overcoming potential barriers (Jong and Wennekers 2008). Miller and Friesen (1982) and Miller (1983) identified three entrepreneurial orientations defining different kinds of entrepreneurial behaviour: product-market innovation, risk-taking for large benefits, and proactivity in the market. Entrepreneurial orientation is a firm-level concept, but it can be easily translated to the individual level of entrepreneurial behaviour as well. Quinn et al. (1996) on the other hand proposes eight managerial roles: mentor, facilitator, monitor, coordinator, director, producer, broker, and innovator. Each



role demands some specific competences – in most cases related to communication skills – for example, entrepreneurs as mentors should be able to communicate effectively with their subordinates and to develop them as well. LeBrasseur, Blanco and Dodge (2002) in their study of entrepreneurial competences identify the top five competences required during the survival stage of a small firm: perseverance, effective communication, judgement, individual productivity, and creative thinking. In the fast growth stage of a small firm less importance is attributed to innovating in products/services and planning and monitoring cash flows competences, on the other hand, more importance is attributed to developing subordinates and effectively delegating competences.

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ENTREPRENEURIAL SELF-EFFICACY

Self-efficacy can be defined as person's belief about his or her ability and capacity to accomplish a task or to deal with the challenges of life (Bandura 1993; 1997). It seems that self-efficacy affects the individuals' beliefs about possibilities to realise the objectives, as well as their personal choices, desires, efforts and perseverance – even in case of setbacks or obstacles (Boyd and Vozikis 1994). On the other hand, if individuals perceive that a given behaviour exceeds their capacity, they do not react – even in cases when society encourages such behaviour. Bird (1988), who focuses his study on enterprising individuals linking individual self-efficacy with entrepreneurial intention, also believes that only individuals who believe that they are capable of implementing certain activities actually realise their enterprising or entrepreneurial desires. Because of such considerations we state the following proposition:

- P 2 *Students and graduates with a strong sense of self-efficacy are more likely to challenge themselves with difficult tasks, be intrinsically motivated and are therefore more likely to form firm entrepreneurial intentions.*

Lans et al. (2008) believe that the motivational concept of self-efficacy relates to the concept of competences, but it is not a part of it. Empirical studies show that self-efficacy has a reciprocal effect on entrepreneurial competences. Absorption of competences and past

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performance enhances self-efficacy and helps to strengthen the desire and improve future performance. This applies vice versa as well – self-efficacy affects the acquisition of competences and individual performance. Boyd and Vozikis (1994) note that self-efficacy is obtained through life stages, it is developed in line with experience since it enables the development of complex cognitive, social, linguistic and/or motor skills.

Individuals create and strengthen their beliefs about their self-efficacy in four ways (Boyd and Vozikis 1994; Erikson 2003): (1) through experience (experiential learning), (2) by observing others or by vicarious learning (e.g. influence of parents, mentors, etc.), (3) by the means of social persuasion (e.g. providing feedback, existence of social norms and conduct of discussions), and (4) through an assessment of their own psychological state. Namely, empirical studies suggest a negative correlation between the degree of anxiety and self-efficacy. In order to enhance the self-efficacy, it is necessary to improve the individual's emotional and physical condition and reduce stress. The individual's estimates of availability of assets and possible personal or situational limitations also affect the beliefs about self-efficacy (Fishbein and Ajzen 1997). In accordance with the described findings we state the following propositions:

- P3 *Teachers at HEI can use various strategies to build students' and graduates' entrepreneurial self-efficacy, but all of the strategies are based on the processes of enhancing the entrepreneurial competences.*
- P4 *Enhanced entrepreneurial self-efficacy positively influences the construction of entrepreneurial competences.*

THE MODEL OF ENTREPRENEURIAL LEARNING

The emergence and development of the entrepreneurial intention is influenced by the individual's beliefs and potential reactions to environmental impulses (Fishbein and Ajzen 1997). Each individual develops a repertoire of beliefs and his or her potential reactions to environmental impulses. Beliefs are formed on the basis of personal variables and variables related to the context in which the individuals operate. They are the products of the individual's personal history (experiential learning,



vicarious learning, action learning, problem learning, trial and error learning, etc.) and changes in his or her social context. They are obviously based on different kinds of learning and, respectively, on the mix of the individual's competences. As Boyd and Vozikis (1994) state, these beliefs and potential reactions are some kind of 'saved information' which directs personal behaviour and are a function of personal (personal history, personality and abilities) and contextual variables (social, political, economic context). On the bases of 'saved information', individuals construct their expectations and attitudes which subsequently affect the individual and his or her intentions.

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It seems that entrepreneurial competences are closely linked with behaviour and performance and are considered to be a predictor of entrepreneurial intentions. On the basis of entrepreneurial competences, individuals' beliefs and expectations are formed about the tasks and expected performance. We therefore state the following proposition:

- P 5 *Entrepreneurial competences which are actually learnable and measurable knowledge, skills and attitudes are the base for construction of individuals' beliefs, potential reactions, expectations, and attitudes about their potential performance and of their views on the feasibility of possible entrepreneurial ideas and as such they positively affect entrepreneurial intentions.*

As an important construct which is involved in the process of creating intentions, Boyd and Vozikis (1994) include self-efficacy (Bandura 1993; 1997) as well. Entrepreneurial intention seems to be crucial for the realization of the ideas that emerge in the minds of enterprising individuals (Bird 1988; Boyd and Vozikis 1994). The intention has a significant influence on the critical strategic thinking of enterprising individuals. It is a state of mind, which directs the actions of individuals and leads them towards the development and realization of their ideas and/or business concepts. Individuals with the intention are more able to focus their attention, experience and knowledge in a specific subject or a method of behaviour. Based on such considerations, we state the following proposition:

- P 6 *Entrepreneurial intention positively influences the emergence of entrepreneurial or enterprising behavioural and cognitive change.*

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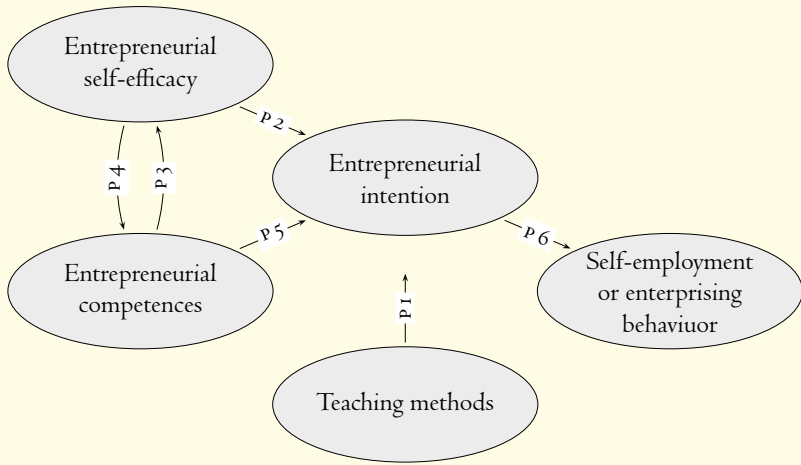


FIGURE 1 Model of entrepreneurial learning

Figure 1 illustrates the final model of the entrepreneurial learning consisting of all the described constructs and links between them.

DISCUSSION AND GUIDELINES FOR FURTHER RESEARCH

In this paper we recognize the factors – competences and self-efficacy – which promote and enable the decisions of individuals, students and graduates, about the possible realization of their entrepreneurial or enterprising ideas or their potential entry into self-employment. We are of course interested primarily in students and graduates of HEI. In the paper there is a short review of the competences which in the entrepreneurship literature are usually attributed to the independent entrepreneurs, business owners – managers and enterprising employees (intrapreneurs). These are the competences that enable individuals to absorb or use the entrepreneurial knowledge, skills and attitudes (competences), but also reinforce their beliefs in being able to successfully implement entrepreneurial intentions (self-efficacy). The proper combination of competences and self-efficacy may enhance individuals’ entrepreneurial intentions and serve as an action guide when performing their intentions.

Based on these considerations, we propose empirical verification of



the model, illustrated in figure 1 within the HE environment. The study we propose could be based on the findings in some already existing studies. Jong and Wennekers (2008) in their study, for example, state indicators which they found in entrepreneurial and management literature and which allow for the measurement of entrepreneurial competences. Liñán and Chen (2006), in their study based on the theory of planned behaviour (Ajzen 2002), define indicators of entrepreneurial intentions. The study, which is tightly connected with the model presented in figure 1, confirms the theory of planned behaviour within HEI. Indicators of the construct of general self-efficacy are developed by Schwarzer and Jerusalem (1995), and could be used in the proposed research as well. To conclude, the model presented in this paper, and the proposed indicators measuring dependent and independent variables in the model, may be a sound starting point for a detailed study of entrepreneurial learning in the context of HEI. As a possible approach to analysing the data and to obtaining some theoretical and practical guidelines we propose structural equation modelling, which is probably the best way to simultaneously test all cause-effect relationships in the model and to explore possible moderator effects of using different kinds of teaching methods.

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In this paper, when referring to the typology of entrepreneurial competences (Le Deist and Winterton 2005) we also recognize the knowledge, skills and attitudes to be possessed by enterprising individuals, in order to be successful. At the same time we try to recognize the contribution of some teaching methods that have been successfully used in entrepreneurial education practice (European Commission 2008) to develop or improve the entrepreneurial competences. In the literature there are, for example, several studies examining the influences of using different teaching methods or a mix of them on Kirkpatrick's levels (1998) of training outcomes (participants' satisfaction, individual's learning, individual's behaviour and organisational results). On the other hand, there is a lack of studies examining the causal links or correlations between the components of entrepreneurial competences and teaching methods in the literature. There can be found only some sporadic reflections and reasoning about that issue (see Gibb 2002). Therefore, further research related to entrepreneurial learning

[44] should be conducted in this direction, because the findings may have a significant impact on the strategies to promote entrepreneurial learning and to improve entrepreneurial competences and intentions of students and graduates, as well as the quality of their entrepreneurial and enterprising activities.

REFERENCES

- Ajzen, I. 2002. Residual effects of past on later behavior: Habituation and reasoned action perspectives. *Personality and Social Psychology Review* 6 (2): 107–22.
- Antončič, B., R. D. Hisrich, T. Petrin, and A. Vahčič. 2002. *Podjetništvo*. Ljubljana: GV založba.
- Arthur, W. J., W. Bennett, P. S. Edens, and S. T. Bell. 2003. Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *Journal of Applied Psychology* 83 (2): 234–45.
- Bandura, A. 1993. Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist* 28 (2): 117–48.
- . 1997. Self-efficacy. *Harvard Mental Health Letter* 13 (9): 5–23.
- Bird, B. 1988. Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review* 13 (3): 442–53.
- Boyd, N. G., and G. S. Vozikis. 1994. The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship: Theory & Practice* 18 (4): 63–77.
- Brown, R. B. 1993. Meta-competence: A recipe for reframing the competence debate. *Personnel Review* 22 (6): 25–36.
- Bumpus, M. A., and G. Burton. 2008. Chapters in the life of an entrepreneur: A case study. *Journal of Education for Business* 83 (5): 302–8.
- Burke, M. J., S. A. Sarpy, K. Smith-Crowe, S. Chan-Serafin, R. O. Salvador, and G. Islam. 2006. Relative effectiveness of worker safety and health training methods. *American Journal of Public Health* 96 (2): 315–24.
- Carter, S., and D. Jones-Evans. 2006. *Enterprise and small business: Principles, practice and policy*. 2nd ed. Harlow: Pearson Education.
- Cope, J., and G. Watts. 2000. Learning by doing: An exploration of experience, critical incidents and reflection in entrepreneurial learning. *International Journal of Entrepreneurial Behaviour and Research* 6 (3): 104–24.
- Dermol, V. 2010. *Usposabljanja zaposlenih in njihov vpliv na organizacijsko učenje in uspešnost v slovenskih storitvenih podjetjih*. PhD diss., University of Ljubljana.



- Elmose, S., and W. M. Roth. 2005. Allgemeinbildung: readiness for living in risk society. *Journal of Curriculum Studies* 37 (1): 11–34.
- Erikson, T. 2003. Towards a taxonomy of entrepreneurial learning experience among potential entrepreneurs. *Journal of Small Business and Enterprise Development* 10 (1): 106–12.
- European Commission. 2002. Final report of expert group ‘Best Procedure’ project on education and training for entrepreneurship. European Commission, Enterprise Directorate-General.
- . 2008. Entrepreneurship in higher education, especially in non-business studies: Final Report of the expert group. European Commission, Enterprise and Industry Directorate-General.
- Fishbein, M., and I. Ajzen 1997. Attitudes and opinions. *Annual Review of Psychology* 23 (1): 487–544.
- Gibb, A. 2002. Towards the entrepreneurial university: Entrepreneurship education as a lever for change. [Http://www.ncge.com/publication/towards_the_entrepreneurial_university.pdf](http://www.ncge.com/publication/towards_the_entrepreneurial_university.pdf).
- Gribben, A. 2010. ETF pilot project. [Http://www.etf.europa.eu/.../1_Welcome%20Anthony%20Gribben%20%20270510%20QUB.PPT](http://www.etf.europa.eu/.../1_Welcome%20Anthony%20Gribben%20%20270510%20QUB.PPT).
- Hampden-Turner, C. 2010. Teaching innovation and entrepreneurship. *ReVision* 30 (3–4): 69–78.
- Hanke, R., E. Kisenwether, and A. Warren. 2005. A Scalable problem-based learning system for entrepreneurship education. Paper presented at the 2005 Academy of Management Meeting, Honolulu.
- Harkema, S. J. M., and H. Schout. 2008. Incorporating student-centred learning in innovation and entrepreneurship education. *European Journal of Education* 43 (4): 513–26.
- Holcomb, T. R., R. D. Ireland, R. M. Holmes Jr., and M. A. Hitt. 2009. Architecture of entrepreneurial learning: Exploring the link among heuristics, knowledge, and action. *Entrepreneurship: Theory & Practice* 33 (1): 167–92.
- Jarvis, P., J. Holford, and C. Griffin. 2006. *The theory and practice of learning*. Oxon: RoutledgeFalmer.
- Jones-Evans, D., W. Williams, and J. Deacon. 2000. Developing entrepreneurial graduates: An action-learning approach. *Education + Training* 42 (4–5): 282–8.
- Jong de, J., and S. Wennekers. 2008. *Intrapreneurship: Conceptualizing entrepreneurial employee behaviour*. Zoetermee: SCALES.
- Kirkpatrick, D. L. 1998. *Evaluating training programs: The four levels*. San Francisco: Berrett-Koehler.

[45]

- Košir, S., and V. A. Bezenšek. 2009. Higher education institutions and their innovative approach to communication. *Economy & Business* 3 (1): 414–21.
- Lans, T. W., H., Hulsink, H., Baert, and M. Mulder. 2008. Entrepreneurship education and training in the small business context: Insights from the competence-based approach. *Journal of Enterprising Culture* 16 (4): 363–83.
- LeBrasseur, R., H. Blanco, and J. Dodge. 2002. *Competences of CEOs in technology-oriented SME: An exploratory study of skills for survival & initial growth*. Halifax: Laurentian University.
- Le Deist, F. D., and J. Winterton. 2005. What is competence? *Human Resource Development International* 8 (1): 27–46.
- Liñán, F., and Y. Chen. 2006. Testing the entrepreneurial intention model on a two-country sample. [Http://webs2002.uab.es/dep-economia-empresa/documents/06-7.pdf](http://webs2002.uab.es/dep-economia-empresa/documents/06-7.pdf).
- Miller, D., 1983. The correlates of entrepreneurship in three types of firms. *Management Science* 29 (7): 770–91.
- Miller, D., and P. Friesen. 1982. Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal* 3 (1): 1–25.
- Pagon, M., E. Banutai, and U. Bizjak. 2008. Leadership competencies for successful change management. Study report, University of Maribor.
- Polany, M. 1966. *The tacit dimension*. Chicago: University of Chicago Press.
- Quinn, R., S. Faerman, M. Thompson, and M. McGrath. 1996. *Becoming a master manager: A competency framework*. 2nd ed. New York: Wiley.
- Revans, R. W. 1980. *Action learning*. London: Blond & Briggs.
- Richey, R. 2000. The legacy of Robert M. Gagne. In *The legacy of Robert M. Gagne*, 295–336. Syracuse, NY: ERIC Clearinghouse on Information and Technology.
- Sandberg, J. 2000. Understanding human competence at work: An interpretative approach. *Academy of Management Journal* 43 (1): 9–25.
- Scott, W. 2002. Education and sustainable development: Challenges, responsibilities, and frames of mind. *The Trumpeter* 18 (1). [Http://trumpeter.athabascau.ca/content/v18.1/scott.html](http://trumpeter.athabascau.ca/content/v18.1/scott.html).
- Slurs, W. 2008. Competencies for ESD (Education for Sustainable Development) teachers, A framework to integrate ESD in the curriculum of teacher training institutes (Comenius 2.1 project 118277-



C P-1-2004-B E-Comenius-C 2.1). [Http://www.unece.org/env/esd/inf.meeting.docs/EgonInd/8mtg/CSC1%20Handbook_Extract.pdf](http://www.unece.org/env/esd/inf.meeting.docs/EgonInd/8mtg/CSC1%20Handbook_Extract.pdf).

Schwarzer, R., and M. Jerusalem. 1995. Generalized self-efficacy scale.

In *Measures in health psychology: A user's portfolio; Causal and control beliefs*, ed. J. Weinman, S. Wright, and M. Johnston, 35–7. Windsor:

NFER-NELSON.

Trunk Širca, N., and D. Gomezelj Omerzel. 2006. Implementacija sistema priznavanja neformalnega in priložnostnega učenja v slovenski visokošolski prostor. Research report, Faculty of Management Koper.

Zinger, T., R. LeBrasseur, and T. Zanibbi. 2001. Factors influencing early stage performance in Canadian microenterprises. *Journal of Developmental Entrepreneurship* 6 (2): 129–50.

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