Training Teachers for Better Innovation and Entrepreneurship Education

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Abstract. The entrepreneurship education implementation program in higher vocational colleges should create a cultural atmosphere conducive to innovation and personnel training based on campus culture, to establish an open course system of entrepreneurship education, to enrich the practice of entrepreneurship education system taking school-enterprise cooperation as a platform, and to build an entrepreneurship education teacher team with double quality relying on teacher training. Teachers plan instruction, select materials, and most powerfully affect what students learn. The paper presents the results of a quantitative survey aimed at identifying the attitudes of educators toward innovations. The results suggest enhancing the teacher’s core competence structure in the mode of innovation and entrepreneurship education by effective and practical training.

Introduction

As universities have become more market focused, they have changed dramatically. Scholars, policymakers, and practitioners now recognize that teachers are central to successfully improving student learning and innovation. Whatever curricula and materials are available, whatever policies are in place, whatever support the parents and community members offer, teachers are ultimately the ones who engage with students. The theory of educational change should be viewed as a concept and a source of supportive arguments that might help teachers get a better insight into their feelings related to the topics and issue. Innovations are a common and legitimate part of various systems. Time and growing experience creates new needs of individuals and teams. Contemporary society must face educational changes that are temporary or permanent, that aim to have long-term effects as well as short-term effects that are directed by the management at the level of school district, region or country. Meanwhile, there are more changes from the initiatives of individual teachers, pupils, parents, or entrepreneurs. Teachers should be viewed as the main factors, agents, and/or recipients of educational change.

Survey Analysis

At present, entrepreneurship is of fundamental importance for our society. Entrepreneurial companies contribute to economic welfare as they increase the innovative capacity of the economy. These enterprises also lead to more flexible markets and intensified competition. Moreover, through entrepreneurship, new businesses and jobs are created [1]. Teachers represent the main of factor of whether a kind of equilibrium and balance between the necessity of innovation and necessity continual development.

Sample Briefing

We opt for a quantitative research by on-line questionnaire. The questionnaire comprises 20 items in the form of self-evaluation scales of the Likert type. The answers are given on a five point scale. The obtained data is analyzed using the methods of descriptive and verification statistics in the application SPSS. The research sample comprise 44 pedagogues, 86.4% were women (N=38) and 13.6% were men (N=6). The average age is 41 years, the youngest pedagogue was aged 27 and the
eldest one 59 years. The length of their experience ranges from one year to 22 years. 24.4% (N=11) pedagogues have 1-3 years’ experience, 36.6% (N=15) pedagogues have 4-10 years’ experience, 17.1% (N=8) have 11-15 years’ experience and 22% (N=10) pedagogues have 16 years’ experience.

Results

The overview of the results of our research survey dealing with the attitudes of pedagogues towards innovation in the area of undergraduate practical training for teachers will be structured according to the specific objectives defined above. The pedagogues participating at the realization of undergraduate practical teacher training evaluated the training from several perspectives: clarity of principles and objectives, time and space management, staffing, communication with the people involved, respect and support of superiors, salary and the overall usefulness of the training for student teachers. It shows that it is the usefulness of the training for students which received the best score. The pedagogues believe that their work is meaningful and they consider it useful and beneficial. Similarly, they have a positive opinion of their colleagues and experts participating at the management of practical training. The evaluation of the clarity of objectives and principles is only slightly lower. The evaluation is less favorable in the area of communication with the people involved and still less so in the areas of time and space management and respect and support of superiors. It is the sphere of salary which the pedagogues perceive as the least satisfactory one.

51.5% teachers welcome a change in respect and support of their superiors and like to innovate in the area of communication with other people participating at the realization of practical training. 43.6% wish for changes in time and space management. 34.3% wish for innovations in the area of principles and objectives and 20.6% in the area of staffing. Their proposals of innovative changes are divided into four groups: changes in organization, concept, support and communication. The most frequent proposal is to reserve more time for practical training. The range of suggestions is very wide. They concern the use of video recordings, linking of practical training with the theoretical courses and changes of the whole concept of practical training. They require closer contact and space for regular meetings with the management of the faculty and sharing of needs and results. The engagement in further education is expressed as a summative variable. Interest in training courses comes third and active engagement in innovations comes last. 51.2% have the chance to influence the organization in case of disharmony. Pedagogues who feel greater support engage themselves more and give more positive evaluation of practical training. Contrarily, pedagogues who feel less support engage themselves less, evaluate the practical training more negatively and feel a greater need for innovative changes. The proposals prove that despite the lack of support, pedagogues focus on the efficiency of practical training and its usefulness for students.

Professional Development

Professional development is regarded as a capacity-building mechanism for teachers, and is widely accepted by governments and organizations as a means to leverage change. It tends to focus on profiling the competencies required to operate effectively in education systems related to changes. Programs have received significant funding over the years, supported hundreds of projects and have been viewed as key enablers of supporting professional development and change. They have motivated institutions of vocational education and training to improve the links or connectivity between learning in school and learning in the workplace. The competence-based education is developed for authenticity, self responsibility, and the role of the teacher as expert and coach. Professional development should be considered a process that includes both organized sessions and opportunities for self-exploration.

Change as the Theme

The reason why the educational practice is not one of the simple application of knowledge is that the world in which we live is ever-changing and ever-evolving. Every situation we encounter is in some respect unique. But it is up to educational practitioners to use the outcomes of research in their problem solving. Theories of change clearly and broadly agree on several features of change:
change is a process, not an event; change is made by individuals first, then by organizations; change is a personal experience and evokes emotional and behavioral responses based on individual thoughts and feelings; change takes time. In addition, there are three dimensions to change: possible use of new or revised materials, possible use of new teaching approaches, strategies or methodologies, possible change in beliefs. In the change process: Phase I--initiation (the process leading up to and the decision to proceed with change), Phase II--implementation (putting into practice new ideas and practices), Phase III--continuation (sustaining the program and its effects after implementation)[2]. Individuals may not experience all stages of the process and often will not be at the same stage in the process as their colleagues. Time phases are not clearly demarcated and are often re-negotiated. Each dimension of the framework has a corresponding set of methods specifically designed to measure individuals’ feelings, perceptions and behavior in response to change initiatives, including professional development. Not only does the Concerns Based Adoption Model provide a framework for guiding the design, construction and implementation of professional development programs across a diverse range of educational and training systems and settings, it also provides a set of researched valid and reliable measures that can be used to assess the impact of change initiatives. Change can take time and that effective staff development occurs when individuals work in teams, reflecting on progress and receiving constructive feedback and coaching[3]. Participants consider the potential impact and process of integrating innovations across different content domains with different cohorts of students. They return to their colleges to integrate the new instructional methods into their practice and reflect on their progress at regular team meetings. Change is a developmental process, that individuals move through defined levels of use and that they are unlikely to move at the same rate or in a linear fashion [4].

**Support and Training**

To be effective teachers requires appropriate support and training. These include the importance of attracting and retaining diverse student teachers, better articulating the links between initial and on-going teacher education, supporting lasting change in teacher beliefs and practices, and researching the preparation and practices increasing diversity in the classroom is taking place against the background of a changing role for teachers. Viewing students as active participants in the learning process and personalizing teaching and assessment to better suit individual student needs require time and space to engage in these practices, as well as the support and training to learn them. Teachers are prepared to offer the kinds of personalized instructional capacities that active learners require. There is much room for improvement both in terms of better targeting types of professional development that reflect teachers’ needs, and in terms of seeking ways to provide more flexible timing and delivery of training opportunities. Aiming to provide a holistic approach to career development, school leaders must pay close attention to elements of program planning and design, as well as the development of initial and in-service policy and funding. They need, harnessing their unique experiences and perspectives and for their role as mentors or role models. Further action is needed to consolidate their efforts and resources in order to provide sound evidence for further decision making for policy makers and educators alike. It offers suggestions that could be usefully used to help practitioners address challenges in their classrooms.

**Using Technology**

Modern computer-related technologies are dependent on many contextual factors to function. It is essential to understand the enabling conditions of certain technologies. Leaders select and integrate technology tools and resources into units of instruction in ways that add value to training, since the aim is to systematically make teaching for meaningful learning using technology the way of doing business. Face-to-face professional development is also useful. The prosperous development of wireless communication and sensor technologies has attracted the attention of researchers from both computer and education fields. Nowadays, ubiquitous learning has become a popular trend of training all over the world. It is to expand teachers’ understandings, beliefs, and skills in teaching, by creating and sustaining a culture of inquiry for professional learning. Teachers should develop skill with a small set of tools for meeting their teaching goals. In this way, experimentation can lead...
teachers to develop knowledge of the ways computers can be teaching solutions for them. Just-in-time assistance is most beneficial for learning during their experimentation. On-site help allows teachers to build social relationships with helpers. Having a trusted colleague help a teacher through a risk-taking process can help ease worries about failing. In accordance with these suggested principles, we recommend school leaders to organize teachers into problem-based design teams and to develop ways of teaching others how to implement the technology solutions they have devised. Professional development should not teach isolated technology skills, but rather solutions to teachers’ problems. It should cultivate social capital and develop communities. As a synthesis, effective technology professional development should draw on teachers’ own creativity, draw on school resources (expertise of other teachers), and be delivered in the local context (in the classroom or school lab) [5].

**Passion for Innovation**

Our understanding of innovation processes has dramatically changed over the past years. Interactive models of innovation, differing significantly from the linear approach, now emphasize the centrality of knowledge spillovers which lie at the root of the formation of networks. Knowledge creation, knowledge diffusion and spillovers are central to systems of innovation. A system of innovation may be thought as a set of actors that interact in the generation, diffusion and use of knowledge in the production process. The approach is influenced by interactive learning theories and evolutionary theories. Taking advantage of knowledge spillovers, these sources provide the know-why and know-how for entrepreneurial success. Network arrangements of different kinds assist teachers to provide meaningful guidelines for potential student entrepreneurs.

**Passion as the Core**

Teaching is a complex and demanding profession. Three relevant themes emerged: choosing teaching as a profession; growing the passion for teaching and sustaining passion for teaching. Sustaining a passion needs professional development, cluster meeting support and stability of the curriculum. Initial passion may diminish, either as result of circumstances such as school culture, age factor of teachers and the process itself. However, passion remains at the core of teaching[6]. A quality education is the cornerstone to a successful career. Education is effective when it is ongoing. Education is effective when it returns all of us to the basic skills of selling, listening, management, team building and accountability and requires us to practice what we learn with consistency. Passionate teachers are characterized by enthusiasm, intellectual emotion, emotional energy and commitment. In working with learners, they have a sense of identity, and believe they can make a difference to the learning and achievement of learners. As a result, passion for teaching makes a contribution to understanding and improving the teaching profession and brings new insight into the work and lives of teachers. Growing and sustaining such passion is intimately connected with teachers’ commitment and sense of professional emotional identity. It is this combination of the emotional and intellectual capacities which results best in teaching practices.

**Tough Choices**

There are tough choices that must be made with limited resources; traditional methods that must be questioned and technology that must be incorporated. There are time restraints and external forces that raise the stakes. Our confidence to succeed in providing a consistent flow of quality education offerings to a greater proportion of our members comes not from the ease of the task nor our track record. A system for developing e-training courses has been implemented based on the novel approach. Experimental results showed that the novel approach can significantly shorten the time needed for developing e-training courses, such that engineers can receive up-to-date technologies in time. One of the most powerful ways of changing our thinking about how we teach and learn is to experience for ourselves the power of collaborative project-based experiential learning. Few teachers have had the opportunity to learn in this way, and this creates barriers for those who want to change their pedagogy. By collaborating with their peers, tutors and mentors, teachers are able to
model the projects, environment and experiences they want for their classes through a blended learning experience. The professional development continues its impact on schools, pedagogies and professional philosophies.

**Innovation Spirit**

The innovation spirit belonging to scientific spirit and scientific thought is an essential individual psychological characteristic to engage in the innovation and entrepreneurship. The essence and core of entrepreneurship is innovation, the innovation sustains the entrepreneurship. The primary task of innovation and entrepreneurship education is training teachers before training students' exploring and pioneering spirit. The entrepreneurship consciousness is the personal psychological bias which plays driving motivation role on entrepreneur in the innovation and entrepreneurship practice activities. Training good entrepreneurship consciousness among teachers is the basis for colleges developing innovation and entrepreneurship education. Thereafter, teachers transfer knowledge of entrepreneurship so as to lay the foundation for students’ successful entrepreneurship in the future. Colleges should fully mobilize students' enthusiasm of participating in the social practice, so as to upgrade their knowledge, to increase their talents and to improve their ideological realm and will quality by the social practice activities with rich connotations and diverse forms. Transforming ability of their acquired knowledge and skills, is an important content to upgrade their innovation spirit and entrepreneurship ability. The quality and accomplishments achieved in this education depend largely on the teachers' comprehensive qualities. For these reasons, colleges should explore the effective ways to construct a good teaching staff with entrepreneurship consciousness and practical ability, should establish the teachers’ training mechanism and incentive mechanism. On the one hand, colleges should select a group of double-qualified backbone teachers. Meanwhile, colleges should support teachers to leave off campus for getting exercise, encourage teachers to take part in the innovation and entrepreneurship practice activities of industries, enterprises and scientific research institutes. Full-time and part-time teachers engage in innovation and entrepreneurship education together. So there will be a large number of experts with rich career experience of innovation, acting as students' mentors.

**Summary**

Education is a cornerstone of every model of economic growth: if the youth are not well educated, innovation and productivity will wither away. In other words, our long-term collective quality of life depends on the quality of our schools. Administrators develop and exercise management and leadership skills, become more interactive and collaborate with teachers in order to plan and monitor school-level progress. It is widely expected that educational research should generate knowledge that is relevant for the day-to-day practice of educators. They want knowledge that can inform their actions and activities. The same is true for educational policymakers and politicians. All links of the practical teaching of innovation and entrepreneurship education have to be put into the teaching plan, penetrating the whole process of talents cultivating. By these ways, the randomness of some practical teaching links can be contained in the process of teaching.

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