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Modelling of Knowledge Sharing for the Provision of Sustainable Cooperation between Adult Educational Institutions and Enterprises

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Abstract

Information technologies in today's world function as support net for sharing knowledge and information coming more important as well as promoter of mutual cooperation when it comes to development of further education of adults. Because of a passive cooperation between educational institutions and enterprises, society is still in search of approaches and methods, new information systems and technology to improve service of knowledge, skills, abilities and attitudes. The research aims to justify and develop the knowledge sharing imitation model and prototype for trilateral cooperation. The goal involves innovative methods and web-based automated cooperation system. The main study question is what kind of modelling tools and technological solutions can be applied to improve and automate knowledge sharing efficiency and cooperation indicators? The results of this research are intended to be used in practice as promotional technology of cooperation development between potential interns/working individuals, adult educational institutions and enterprises.

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1. Introduction

Access to education and the opportunity to gain practical experience is important for every individual for their personal growth, as well as for companies to create and develop new, advanced products and services through high-quality work. Knowledge sharing is an endless process, where all parties involved need to be motivated constantly ensuring it remains sufficiently intense. Because of a passive cooperation between educational institutions and enterprises, society is still in search of approaches and methods, new information systems and technology to improve service of knowledge, skills, abilities and attitudes. In order to ensure sustainable success, emphasis should be put on building and strengthening cooperation between educational institutions and enterprises, and potential trainees and working individuals should be involved. The research aims to justify and develop the knowledge sharing imitation model and prototype for trilateral cooperation. The goal involves innovative methods and web-based automated cooperation system. The results of this research are intended to be used in practice as promotional technology of cooperation development between potential interns/working individuals, adult educational institutions and enterprises. Changes and developments in available methods and technologies increasingly affect development of sustainable information society and determine educational tendencies thus affecting specificity of adult education as well.

2. Knowledge sharing model development

First of all, knowledge transfer that is based on knowledge demand is linked with the cooperation, which depends on having the knowledge necessary and, secondly, knowledge can be formed when knowledge "suppliers" and "beneficiaries" meet. When providing and developing the prototype of cooperation system, functionality knowledge sharing is promoted which leads to educational institutions gaining experience in communicating directly with enterprises and creating personalized training courses on the particular case and actual topics. In turn, companies, showing initiative and cooperating with educational institutions, will gain the knowledge required for more effective work in industry and first-hand information on how to acquire young professionals and their knowledge. This trilateral knowledge sharing model is unthinkable without the young professionals as its main users, since they would be the ones getting actively and creatively involved in promoting electronic cooperation, while ensuring sustainable competitiveness of the system with their enthusiasm.

For imitation modelling of knowledge sharing processes, the process management tool[1] QPR ProcessDesigner was selected, which is a solution for rationalising different operations. Knowledge sharing and cooperation process is revaluated and modelled using business process[2] management tool QPR ProcessDesigner on purpose, since by modifying the flow of knowledge model it would be possible to analyze and predict user behaviour and knowledge sharing activities and business purposes in the long term. Modelling of the knowledge sharing allows to plan, develop and monitor the cooperation process as a whole, as well as the separate steps of each activity, the actors involved and to describe in a detailed manner the knowledge streams in the system. It is also possible to analyse how the changing factors change the shared environment of the system. Modelling and simulation has generally proved to be useful when addressing issues in complicated information systems' analysis, project drafting[3] and optimisation[4,5,6]. Analysing results of the imitation model allows arriving at well grounded conclusions about ensuring sustainable cooperation and the necessary support mechanisms so as to achieve more precise and higher quality results for knowledge sharing between stakeholders.

3. Criteria for evaluating changes in knowledge sharing activity and cooperation level

It is important to assess the factors affecting knowledge sharing activity and choose the criteria of changes regarding the level of cooperation. Public opinion states that the main reason slowing down cooperation between educational institutions and enterprises is by general lack of trust or an existence of large proportion of small and medium entrepreneurs with limited resources.

In order to identify all the possible options, factors affecting involvement in knowledge sharing and cooperation are characterized. Knowledge sharing activity is measured by how often stakeholders share actual needs and desires. The level of cooperation is measured by request and offer units complying with the requirements of the side

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