

Co-Create the Knowledge Media of the Future

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Abstract: This paper describes Education21 (Onderwijs21), the Professional Development School Network in the Northern region of the Netherlands. The goal of the project 'Education21' is to develop in a co-creation context the education of the 21st century. We did choose for the Professional Development School Network approach. This network consists of primary schools, secondary schools, teacher education institutes and education professionals. Main goals of the network are improving the successful use of knowledge media in education, continuing professionalization and the school communication for instance with parents. Education21 is part of the EU Open Discovery Space and Transit project.

Keywords: learning organization, educational improvements, knowledge media, co-innovation

1 Introduction

There is a continuous focus worldwide on the quality of education and its alignment with technological and socio-economical changes (Merkt et al., 2007; Townsend & Avalos, 2007). It is not only significant to update educational paradigms and tools, enable technology based learning, but also to respond properly to the ever more demanding student, teacher and parent needs. An effective solution to incorporate student, teacher and parent needs into curriculum is by developing a community-oriented support service and environment. These environments allow users (i.e. teacher, student and parents) to have their own views over the content base and help to improve the knowledge media developed in these communities. This research takes place within the context of Education21 and is connected to the European Open Discovery Space (ODS) and the related Transit project where students, teachers and parents collaboratively work on the creation of new educational knowledge

media. The ODS-project is a result from 51 organizations in 21 European countries. The aim is to create a socially-powered, multilingual open learning infrastructure to boost the adaptation of eLearning Resources in Europe. This infrastructure triggers schools to collaboratively develop new or improved knowledge media, without cultural and linguistic barriers. The degree of involvement of the three stakeholder groups largely depends on the added value that can be offered (Zhao & Kuh, 2004). Students, teachers and parents will not participate if they have no motives to do this. The increasing knowledge needed to practise as a professional, and the accelerating rate of change within the discipline suggest that traditional learning models may not be address the requirements of learners (Armarego & Clarke, 2005). Professional Development School Networks (PDSN) are needed to meet the everchanging educational structure and content. We suppose that these Professional Development School Networks improve the educational structure and quality, by using a problem-based design approach. In this study, we will give an account of the value of PDSN in the context of educational knowledge platform 'Education21'.

Professional Development School Network

The concept of PDSN originates in the USA, and the analogy in the UK is "school based teacher education". PDSN refers to collaboration between a school and a higher educational institution wherein the professional development of teachers is supported by specific conditions (Bergen, 2006). We define a professional development school as a knowledge network between a higher educational institution ("preparing school") and primary, secondary or professional schools ("receiving school") with a common goal to educate students to become professional teachers and to develop new or improved knowledge media. This new structure requires regular communication between preparing and receiving schools and leads to shared responsibilities in teacher education. We limit ourselves to the case study Education21 (Dutch: Onderwijs21), which is the knowledge network between primary and secondary schools and higher educational institutions in the Northern region of The Netherlands.

Furthermore, PDSN is based on a work-learning integrated curriculum where practice is combined with theory and reflection. For example, portfolio assignments from the higher educational institution provide instructions about how to design and implement a lesson, which are immediately tested and then discussed with a mentor. Thus, practice and theory are more integrated. The basic assumption is that by incorporating an out-of-school curriculum, students should be better prepared for their professional life (Popeijus et al., 2006). On the other hand, the integrated curriculum should be more enjoyable and attract

more students (Roelofs, 2003; Bergen, 2006; Korthagen & Vasalos, 2007). A third assumption is the fact that it improves the collaboratively work on new or improved knowledge media. In such a way, both the quality of education and the educational demand-supply principle can be improved (Bergen, 2006).

Finally, the overall goal of PDSN is continuous educational quality improvement (Bergen, 2006). Continuous quality improvement is being enabled by the implementation of the learning organization concept (Harrisson & Kessels, 2004; Watkins & Marsick, 2004; 1993; Walton, 1999). Furthermore, it has long been recognized that educational institutions need to become more flexible and more open to new ideas. However, hierarchical structures and closed power cultures are the main obstacles (Harrison & Kessels, 2004). A strategy to decrease top-down decision making and ensure high quality education is the development of a learning organization (Harrison & Kessels, 2004; Bergen, 2006; Popeijus et al., 2006). There seems to be empirical evidence about the link between learning organization and school performance results (Hofman et al., 2008), Education21 (Image 1) is developed in order to empirically test the value of professional development school networks, also called as learning networks, on school performance results. Within the PDSN problem-based learning design approaches are other work-learning example used. Collaborative problem-based learning motivates students to learn thinking strategies, domain knowledge and to enhance critical thinking (Gokhale, 1995). The problem-based learning design approach is an instructional method in which students learn through facilitated problem solving. This approach gives students the possibility to work in student learning centers on a complex problem that does not have a single correct answer (Hmelo-Silver, 2004). Problem-based learning is a method that uses the involvement of students, teachers, parents and other stakeholders. One of the main characteristics of this problem-based solution approach is co-creation. According to Sanders & Stappers (2008) co-creation refers to any act of collective creativity, i.e. creativity that is shared by two or more people.

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Het expertisecentrum voor onderwijskwaliteit

Onderwijs21.nl is opgericht vanuit een aantal onderwijsverbeterprojecten in Friesland. Onderwijs heeft een eigen expertisecentrum nodig waarin we samen werken aan het continu verbeteren van ons onderwijs. Onderwijs21 is van de onderwijsprofessionals zelf. Hierin kun je samen met anderen je eigen onderwijs monitoren. Wat vinden je leerlingen van sociale media? Wat betekent dit voor jou? Met Onderwijs21 willen we het

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Zoek op : kennisgebied, project, nieuws, documenten, etc...

Image 1: Expertise Center Onderwijs21

Co-Creation

Education21 is a small part of the European project Open Discovery Space (ODS). It is the Dutch education learning network of the bigger European ODS-network. ODS addresses various challenges that face the eLearning environment in the European context. The interface has been co-created with students, teachers, parents and policy makers in both preparing schools and receiving schools. But within the project the knowledge media will also be co-created with educational stakeholders. ODS will fulfil three principal objectives. Firstly, it will empower stakeholders through a single, integrated access point for eLearning resources from dispersed educational repositories. Secondly, it engages stakeholders in the production of meaningful educational activities by using a social-network style multilingual portal, offering eLearning resources as well as services for the production of educational activities. Thirdly, it will assess the impact of the new educational activities, which could serve as a prototype to be adopted by stakeholders in school education. As the Dutch part of ODS we created a professional development school network with educational institutions in the northern region of The Netherlands in order to collaboratively produce and share new or improved knowledge media.

Within PDSN we also use the work-learning integrated principle in combination with the problem-based learning design approach; this design approach is mainly based on current problematic media literacy issues in education like social media behavior of students and the use of tablets for educational purposes. Many

schools in The Netherlands experience problems with handling tablet-computers for educational purposes. The schools have problems with adding value to education, using the tablet computers, by co-creating with educational stakeholders they can come with solutions for the 'tablet problems'. Another problem the schools perceive is the question: how to protect students from the dangers that arise within the social media? There is no single solution for this problem; each problematic situation requires another solution. But in collaboration with other stakeholders in a network, schools can co-create a solution that has shared acceptance (Lorenzo et al, 2006) of all involved individuals and often has practical evidence of the value at other schools. The knowledge media arising from these co-creation initiatives are reported within the Education21 platform.

Based on these common problems and the way co-creation can solve these problems, an educational learning network can be created in order to collaboratively find answers to the problems. One of the main goals of ODS is "stimulating demand for innovative eLearning resources, by delivering a European-wide, socially-powered multilingual Web portal that allow teachers, students and parents to intuitively discover, acquire, share, discuss, reuse and revise digital educational resources that are available through this virtual pan-European infrastructure". This infrastructure can facilitate as a platform for students, teachers and parents to collaboratively develop an adequate answers to existing problems and to test if knowledge media in other countries also work in The Netherlands. Within this platform parents and teachers can for example interact in order to find a solution for the problems they perceive with their children on social media. Solutions with a broad support can then be shared through the platform with other educational institutions where – possibly – the same problems occur.

Summary

The development of professional development school networks largely depends of the way it is constructed. We expect that a work-learning integrated curriculum in combination with a problem-based learning design can be the basis for expanding education learning networks and improve the quality of knowledge media. Solutions to common problems are often of great importance for many people, for that reason we created a large educational online e-learning network (Education21) where all educational stakeholders can collaboratively co-create to find solutions for existing problems and share these solutions with others. One example of a theme that is important for many educational institutions is media literacy. In recent years, schools are increasingly being overtaken by new

technologies and behavioural changes resulting therefrom. Collaborative innovation in educational learning networks can be the basis for finding a context-specific answer to these media literacy problems and should be the main method to develop future knowledge media. Future research should be focused on empirical testing the educational value of Education21, the professional development school network in The Netherlands.

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