

SOCIAL DIMENSION OF WEB 2.0 IN STUDENT TEACHER PROFESSIONAL DEVELOPMENT

WEB 2.0 SOCIĀLĀ DIMENSIJA TOPOŠO SKOLOTĀJU PROFESIONĀLAJĀ ATTĪSTĪBĀ

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Abstract

The modern issues of global developmental trends emphasize “a prime importance in sustainable development that is to meet the needs of the present without compromising the ability of future generations to meet their own needs” (Zimmermann, 2003, p. 9). Thus, the life necessity to develop the system of two perspectives, namely, external and internal, reveals student teacher professional development to promote the sustainable development of innovation-friendly societies to transform social capital into economic growth (Lifelong Learning for Creativity and Innovation, 2008, p. 5). Contemporary teachers need to become more cognizant and more responsive to the emerging needs of the market for educational services. Social dimension of Web 2.0 which penetrates our society more thoroughly with the availability of broadband services has the potential to contribute decisively to the sustainable student teacher professional development. However, the success of social dimension of Web 2.0 in student teacher professional development requires needs analysis to be considered. Aim of the following paper is to analyze the student teachers’ needs in social dimension of Web 2.0 within student teacher professional development on the pedagogical discourse. The meaning of the key concepts of *social dimension of Web 2.0* and *needs analysis* is studied. The results of the empirical study within a multicultural environment emphasize that needs analysis of social dimension of Web 2.0 contributes to the use of social dimension of Web 2.0 by student teachers within student teacher professional development. The conclusion reveals that the social dimension of Web 2.0 in student teacher professional development is an opportunity for enhancing student teacher experience as a condition for creation of new knowledge. The recommendation here is an outlook on the social dimension of Web 2.0 within student teacher professional development as a basis for providing the system of external and internal perspectives.

Keywords: Social Dimension of Web 2.0 - Web 2.0 sociālā dimensija,
Teacher Professional Development – skolotāju profesionālā izglītība,
Needs Analysis – vajadzību analīze

1. INTRODUCTION

Web 2.0 is jointly formed by four dimensions, namely, the infrastructure dimension, the functionality dimension, the data dimension, and the social (or socialization)

dimension. Socialization, described as taking software or even user-generated content and sharing or jointly using it with others, covers the aspect of user-generated content as it occurs in blogs or wikis, in tagging as well as in social bookmarking (Vossen, 2009, p. 38). Skype, Classroom Management Systems, the eBay seller evaluation, the Amazon recommendation service, or Wikipedia (Vossen, 2009, p. 38), where the increased data exchange within the system is no longer a limiting parameter with the current developments in the infrastructure, are classical examples and have found widespread acceptance in the community.

Aim of the following paper is to analyze the student teachers' needs in social dimension of Web 2.0 within student teacher professional development on the pedagogical discourse. The meaning of the key concepts of *social dimension of Web 2.0* and *needs analysis* is studied. The study shows a potential model for development, indicating how the steps of the process are related following a logical chain: determining social dimension of Web 2.0 → revealing social dimension of Web 2.0 within student teacher professional development → defining needs analysis → empirical study within a multicultural environment.

The paper is organized as follows: The introductory state-of-the-art section demonstrates the authors' position on the topic of the research. Section 3 introduces social dimension of Web 2.0. Social dimension of Web 2.0 within student teacher professional development is studied in Section 4. The associated empirical results are presented and interpreted in Section 5. Finally, some concluding remarks are provided in Section 6.

2. State-of-the-Art

The modern issues of global developmental trends emphasize “a prime importance in sustainable development that is to meet the needs of the present without compromising the ability of future generations to meet their own needs” (Zimmermann, 2003, p. 9). Thus, sustainable personality, and, consequently, user of social dimension of Web 2.0, is “a person who sees relationships and inter-relationships between nature, society and the economy” (Rohweder, 2007, p. 24). In other words, this is a person who is able to develop the system of external and internal perspectives, and in turn the system of external and internal perspectives becomes a main condition for the sustainable user of social dimension of Web 2.0 to develop. For instance, the concern of the European Union, namely, to become “the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion” (European Commission, 2004, p. 2), demonstrates the significance of developing the system of external and internal perspectives for the development of humans, institutions and society. Thus, the life necessity to develop the system of two perspectives, namely, external and internal, determines the research methodology of needs analysis in social dimension of Web 2.0 within student teacher professional development on the pedagogical discourse, as highlighted in Figure 1.

However, in real life sustainable user of social dimension of Web 2.0 is often realized from one of the perspectives: from the internal perspective accentuating cognition (Vossen, 2009), from the external perspective accentuating social interaction (Tapscott, Williams, 2006) and finding a balance between the external and internal perspectives (Surikova, 2007).

The methodological foundation of the present research on the student teachers' needs in social dimension of Web 2.0 within student teacher professional development is formed by the System-Constructivist Theory based on Parson's

system theory (Parson, 1976) where any activity is considered as a system, Luhmann's theory (Luhmann, 1988) which emphasizes communication as a system, the theory of symbolic interactionism (Mead, 1973; Goffman, 2008) and the theory of subjectivism (Groeben, 1986). The system-constructivist approach to learning emphasizes that human being's point of view depends on

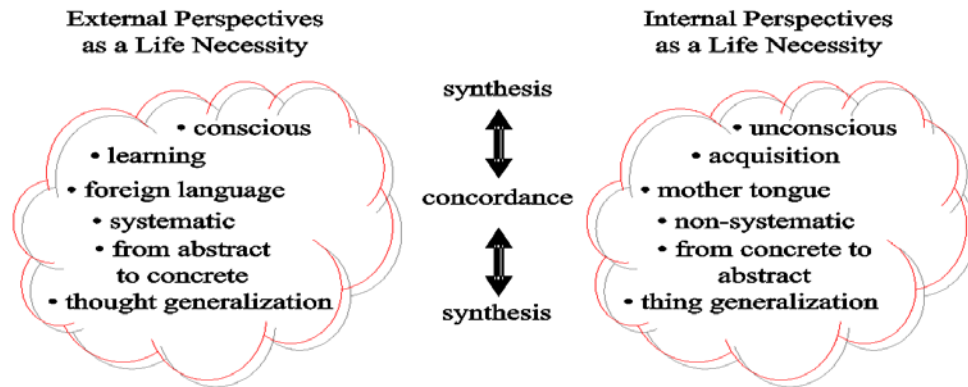


Figure 1. Developing the system of external and internal perspectives as a life necessity

the subjective aspect (Maslo, 2007, p. 44): everyone has his/her own system of external and internal perspectives (Figure 1) that is a complex open system (Osberg, 2008, p. 1; Rudzinska, 2008, p. 366) and experience plays the central role in a construction process (Maslo, 2007, p. 42). Thus, four approaches to student teachers' needs in social dimension of Web 2.0 within student teacher professional development on the pedagogical discourse are revealed, namely, from the internal perspective accentuating cognition, from the external perspective accentuating social interaction, finding a balance between the external and internal perspectives and developing the system of the external and internal perspectives. Therein, the fourth approach, namely, developing the system of the external and internal perspectives, is considered to be applicable to the present research on the student teachers' needs in social dimension of Web 2.0 within student teacher professional development on the pedagogical discourse.

3. Social Dimension of Web 2.0

The paradigm change, namely, the move towards mass collaboration (Tapscott, Williams, 2006) and/or mass socialization (Vossen, 2009, p. 38) – from person to people and from systems to service (Jones, 2008), puts the emphasis on the use of social dimension of Web 2.0.

Typical social dimension of Web 2.0 techniques and technologies include “social software” and online social networks (Vossen, 2009, p. 38-39).

“Social software” is seen by Vossen (Vossen, 2009, p. 38) as software that gets better (or at least more useful) the more people use it. While most of the time the software itself, i.e., the program system, does not change based on the number of its users or the frequency with which it is used, it is the application that the software is enabling. Examples include Skype, the eBay seller evaluation, the Amazon recommendation service, or Wikipedia. Especially the latter is a perfect example for what so-called mass collaboration (Tapscott, Williams, 2006) or crowdsourcing can achieve. There is also another impact that socialization can have, namely, that of improving some given software on a constant or perpetual basis. Traditionally, software has never been free of bugs, security holes, or errors, and it has been

common for a software company to fix them and distribute new releases or versions of the software from time to time. The new approach is to do this at a much higher pace. Software on the Web may nowadays be in a permanent beta state of release and never finished. Thus, for outsiders maintenance occurs on a permanent basis. Such a state of perpetual beta may apply to a service that can only be accessed through an API (application program(ming) interface), in which case a user is not bothered by constant release changes, at least as long as the behaviour of the API is only extended, but not fundamentally modified.

Then, Vossen (Vossen, 2009, p. 38) considers that online social networks, another form of mass socialization today, bring a dimension to the Web that goes beyond simple links between pages; they add links between people and between communities. In such a network, direct links will typically point to our closest friends and colleagues, indirect links lead to the friends of a friend, and etc.

A social network on the Web is typically the result of employing some software that is intended to focus on building an online community for a specific purpose. Social networks connect people with common interests and may be as simple as a blog, or as complex as Facebook or MySpace for mostly private applications, as LinkedIn or Xing for professional applications, or as Twitter for both. The primary impact that the current Web developments are having in this area are that connecting people and communities constantly becomes easier, and it is not difficult anymore to maintain a professional or personal network of buddies worldwide. Yet another impact is that a social network may open up novel sources of revenue, in particular through advertising. Finally, Vossen (Vossen, 2009, p. 38) underlines that two aspects should have become clear by the discussion so far: on the one hand, the most obvious change that has recently occurred on the Web is that it has changed from a pure read Web as designed by Berners-Lee (Berners-Lee, 2000) to a read/write Web, where users not only draw information from, but also add information to it. On the other hand, the dimensions we have discussed exhibit various overlaps. Indeed, technology enables functionality, which as a “byproduct” leads to data collections, and users have a new tendency to socialize over the Web, by exploiting that functionality and the technology.

Hence, social dimension of Web 2.0 techniques and technologies, namely, “social software” and online social networks, is seen as an integral part of student teacher professional development.

4. Social Dimension of Web 2.0 in Student Teacher Professional Development

The change in teacher entering the service area, namely, not working permanently at an educational institution but accepting project-related orders of educational institutions (Bassus, Wolfgramm, 2009, p. 38) reveals the significance of social dimension of Web 2.0 techniques and technologies to be integrated into the processes and environments of student teacher professional development.

A proper integration of social dimension of Web 2.0 techniques and technologies into student teacher professional development is provided by needs analysis. However, the emphasis of the System-Constructivist Theory on the subjective aspect of human being’s point of view and experience that plays the central role in a construction process does not allow analyzing the student teacher needs objectively: human beings do not always realize their experience and their wants (Maslo, 2007, p. 44).



Figure 2. Individual, organizational and professional needs

In accordance with the research methodology, namely, developing the system of the external and internal perspectives, needs analysis is revealed to be of three levels within student teacher professional development as depicted in Figure 2. Moreover, needs analysis includes four domains to analyze (Karapetjana, 2008, p. 15) as highlighted in Figure 3. Thus, needs analysis has the potential to contribute decisively to the sustainable incorporation of social dimension of Web 2.0 technologies into student teacher professional development.

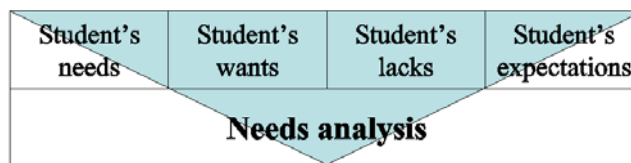


Figure 3. Four domains of needs analysis

5. Empirical Results

The sample of the present empirical study involves 22 pre-school student teachers and 25 pre-school and primary student teachers of the Department of Pedagogy at Riga Teacher Training and Educational Management Academy, Latvia, in September 2008. All 47 pre-school and primary student teachers are at the beginning of the third semester in the second year of their Bachelor studies. The goal of studies in the four-year Bachelor's program is to prepare the bachelor as a university-educated operational professional for all fields of pre-school and primary teacher education with a basic knowledge of the relevant theories and with practical skills. A graduate has the opportunity to continue in the study of the pre-school and primary teacher education fields or other related fields in the Master's study program. The professional bachelor study programmes "Teacher of Pre-School Education" and "Teacher of Pre-School and Primary School Education" offers the "English for Specific Purposes" course to support preparation for international Master and Ph.D. programmes in the European Union, further specialization in pre-school and primary teacher education and learning in a simulated environment.

The aim of the "English for Specific Purposes" course is determined as to improve pre-school and primary student teachers' communicative competence in English as an integral part of professional development for the participation in international research activities. The "English for Specific Purposes" course involves a variety of teaching/learning techniques and/or activities, namely, discussion, prepared talk and

communication games and information-gap activities (Zaščerinska, 2009a, p. 27-30) to promote social dimension of Web 2.0. Analysis of the use of social dimension of Web 2.0 is based on needs analysis as a basis for designing (Surikova, 2007, p. 385) the following questionnaire:

- Question 1: Do you know the word Web 2.0?
- Question 2: Do you know the basic idea of Web 2.0?
- Question 3: Have you already used Web 2.0, namely, Facebook, Twitter, Wikipedia, etc?
- Question 4: Do you think Web 2.0 requires a lot of profound knowledge, namely, math, physics, etc?
- Question 5: Do you think Web 2.0 is useful for your individual needs?
- Question 6: Do you think Web 2.0 is useful for your organizational use?
- Question 7: Do you think Web 2.0 is useful for your professional use?

The evaluation scale of five levels for each question is given where “1” means “disagree” and low level of experience in the use of social dimension of Web 2.0 technologies and “5” points out “agree” and high level of the use of social dimension of Web 2.0. The survey of the use of social dimension of Web 2.0 by the pre-school student teachers and the pre-school and primary student teachers (Figure 4 and 5) reveals the following: the use of social dimension of Web 2.0 by the pre-school student teachers and the pre-school and primary student teachers is heterogeneous as well as the pre-school student teachers and the pre-school and primary student teachers do not realize the possibilities offered by Web 2.0 properly.

Due to the “English for Specific Purposes” course’s volume and content, Survey 2 of the pre-school student teachers’ and pre-school and primary student teachers’ use of social dimension of Web 2.0 is being carried out in May, 2010.

Processing, analysis and interpretation of data gathered from the survey of the pre-school and primary student teachers’ experience in the course of the present research reveal that needs analysis of social dimension of Web 2.0 contributes to the use of social dimension of Web 2.0 by the pre-school and primary student teachers within student teacher professional development.

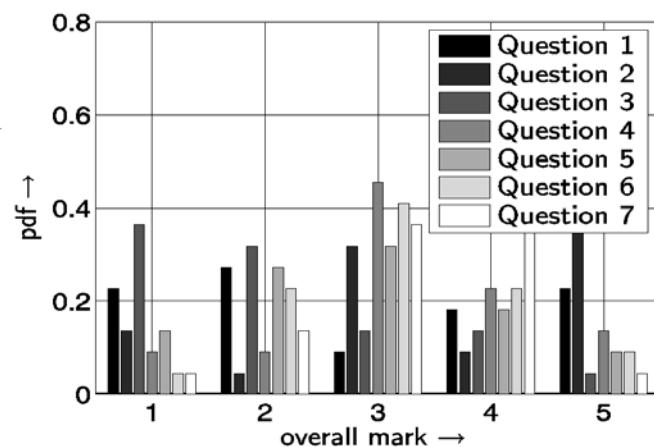


Figure 4. PDF (probability density function) of the pre-school student teachers’ evaluation in September 2008

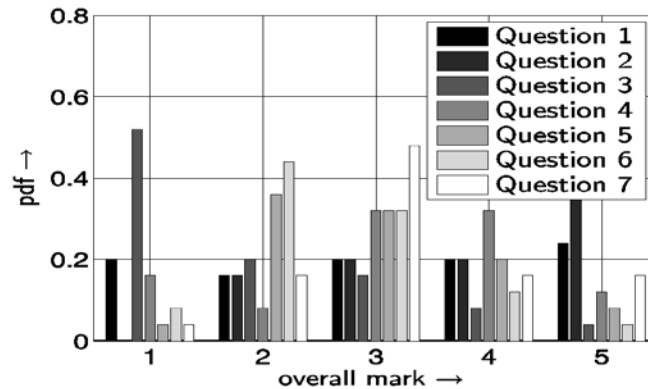


Figure 5. PDF (probability density function) of the primary student teachers' evaluation in September 2008

6. Discussion

The meaning of key concepts, namely, *social dimension of Web 2.0* and *needs analysis* has been analyzed. Moreover, the study has demonstrated how the key concepts are related to the idea of *student teacher professional development* and has shown a potential model for development indicating how the steps of the process are related following a logical chain: determining *social dimension of Web 2.0* → revealing *social dimension of Web 2.0* in student teacher professional development → defining *needs analysis* → empirical study within a multicultural environment.

The conclusion reveals that the social dimension of Web 2.0 in student teacher professional development is an opportunity for enhancing student teacher experience as a condition for creation of new knowledge.

The recommendation here is the role of trainers as mentors for student teacher self-discovery and self-realization; to motivate student teachers, to stimulate their interests, to help them to develop their own structure and style, as well as to help them to evaluate their performance and be able to apply these findings (Maslo, 2007, p. 45) to improve their further use of social dimension of Web 2.0. The solution here to process, analyze and interpret gathered data objectively is to improve the questionnaire, to triangulate the methods of gathering data, i.e. student teachers' trainer evaluation and other trainer evaluation, to evaluate the dynamics of each student teacher in the sample and to apply a variety of statistics tests. The recommendation here for an objective analysis is the role of trainers as researchers (Zaščerinska, 2009b, p. 78) that is to develop continuously educators' experience in social interaction and cognitive activity.

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Kopsavilkums

Web 2.0 sociālajai dimensijai, kas ietekmē mūsu sabiedrību, ir potenciāls veicināt topošo skolotāju ilgtspējīgu profesionālo attīstību. Raksta mērķis ir izanalizēt topošo skolotāju vajadzības Web 2.0 sociālajā dimensijā. Pamatjēdzieni “Web 2.0 sociālā dimensija” un “vajadzību analīze” tiek piedāvāti diskusijai. Empīriskā pētījuma rezultāti ļauj secināt, ka Web 2.0 sociālās dimensijas vajadzību analīze veicina Web 2.0 sociālās dimensijas lietošanu topošo skolotāju profesionālajā attīstībā. Secinājumi liecina, ka Web 2.0 sociālā dimensija ir iespēja topošo skolotāju pieredzes, kā nosacījums veidot jaunas zināšanas, veicināšanai topošo skolotāju profesionālajā attīstībā.