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The Effectiveness of using Social Communications Networks in Mathematics Teachers Professional development

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Abstract

The Study Amis to Determine the Effectiveness of using Social Communications Networks in Mathematics Teachers Professional development. The Main Research Questions was: What is The Effectiveness of using Social Communications Networks in Mathematics Teachers Professional development. And the sub Questions were: (1) what are the standards of sustainable mathematics teachers' Professional development? (2) What are the main features of a sustainable mathematics teachers' Professional development program?.. The Research Using the semi experimental methodology, the research group was (20) Elementary Mathematics Teachers.

The Result indicate the effectiveness of social networking in the for mathematics Teachers professional development program. And determine the Procedural Standards for mathematics Teachers Professional Development, Presented applied Vision for Mathematics Teachers Professional Development Program.

The result recommended that work on the development of intensive training to clarify the objectives and methods of use and activation of Social Networking in Professional Development, and give Attention to the provision of Computers and wireless internet access in schools, teacher training on using social networks, work to develop a strategy to activate these networks formally within the curriculum, and to encourage and support models and successful experiences in this field and published this deployment.

Keywords: Social communications networking, professional development, mathematics teachers

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1. Introduction

The rapid development in all higher education institutions and technological resources made the ELearning Teaching has been recently stressed. Using Educational technology became a core and critical issue in education, In line with the fast advance seen in technology, the use of technological resources in education has play an important role in terms of drawing students' attention to the subjects studied in the classroom so that success increases and the knowledge is better internalized. (Can, Sendil, 2010). In addition, Teachers Have to know and use all new technological resources which facilitate the teaching and learning process, especially as using Social networks as means of Educations.

The great deal of cognitive and technological accelerating development in the world today which appears – especially- in the emergence of development of communication technologies, and the dominance of technology in general to all life situations, led to substantial exchanges in the methods of educational communication in both physical and human dimensions. That the technological, cultural, economical, and political challenges, so as the emergence of claims for quality and academic accreditation besides seeking precedence, imposed the necessity to make radical changes in both the political , economical and the educational system in both the developed and developing world alike.

So the educational institutions are trying hard to cope with the variables of this age, shift towards electronic learning systems through activating the educational and information technology to reach the concept of positive learning which is based on cooperation among strategies of quality, access and lifelong learning using network based learning systems and application of the second generation of internet "Web 2.0" including the new techniques for digital reality that made a large changes in the classroom with the modern ways of communication between teacher and student , and among students themselves, so as with the potentials for knowledge management in academic learning environment.

Thus, every teacher in Arabic school should develop and modify his performance and build up himself professionally and cognitively, to comply with the information age, and to exceed challenges by having the knowledge and the ability to make it more, and upgrading his cognitive, cultural, technological and information experience. That can be achieved by depending on computer technology and internet that will make every teacher playing the roles of the "facilitator, guide, advisor and leader" to be able to fulfil his students needs.

That was the aim of the educational systems all over the world, by providing different opportunities to build up the teacher in an integration way to raise the level of the educational process, that the teacher consider one of the pillars of the educational system, so without a qualified, academic well trained teacher aware of his role well , any education system can't achieve its objectives. Besides the explosion of information and the world gets in to the information technology and telecommunication and the high-tech , it becomes a deep need to a developed teacher cooping with his age, and to fulfil the students' needs and has the ability to deal with the technological tools to build and transfer information in different ways to meet the community needs and to be a producer for information through education directions and ongoing techniques and through the variables of the evolution of education and information technology.

So, the emergence of social communication networking sites on the Internet, is a natural result of the human needs to build a relationships and advanced and conversational interactions that rebuild relationships between individuals through the concept of individualism which is one of the requirements of using computer or we can say 'computer side effects. Because of that, These social networking has the strongest impact on the growth of the user's number of these networks, these users have the highest percentage of all interested users who use the applications of web 2.0. so each educational system should be aware of what are the modern technology applications in Web 2.0 and how to get use of it in the   professional development to overcome gaps in the development of the educational system and its obstacles of time, low budgets, and the abstention of beneficiaries to get in professional development programs.

All of the above shows the extent of the use of social networking in teaching and learning and professional development, which reflects the importance of the current study as it discuss a none touched area by Arabic studies.

They are many studies refer that, the Using of Social networks (Facebook for Example) has Effectvnes in teaching and Training as: Chen، Y. C. (2008), Coyle، J. (2007), Craig Deed; Anthony Edwards(2010), Cristina Maria BĂLTAREŢU; Delia Cristina BALABAN(2010), Ellison, Nicole B., Steinfield, Charles, Lampe, Cliff (2007), Federica Oradini, Gunter Saunders.(2007) , Filiz Tiryakioglu ; Funda Erzurum (2011), Kevin P. Brady, Lori B. Holcomb, and Bethany V. Smith (2010), Klassen، J. D. (2005) Lockyer; J. Patterson (2008), Marianne Lenox & Maurice Coleman (2010), Mpine Makoe, Exploring the use of MXit(2010), Murphy، J.، & Lebans، R. (2008), Naomi Kurata (2010), Ryan، R. B. (2007), Sacide Güzin Mazman; Yasemin Koçak Usluel(2009), Vasudha Kamat, Devika , Vildan Donmus (2010), Wolf M . Alison. (2010), Yih-Ruey JUANG (2010), YU-CHING CHEN (2008).

2. The Study

2.1. The Problem of the study:

The professional development system of Mathematics Teachers faces many defects which strictly the benefits of all development efforts, then this study try to involve the Social networks in mathematics Teachers professional development, which agree with studies of (Giraud, 1997; Keeler & Steinhorst, 1995; Rohrbeck, Ginsburg-Block, Fantuzzo & Miller, 2003).

The study main question is:

What is the effectiveness of Social networks in mathematics Teachers professional development?

The sub questions are:

- What is the realty of mathematics Teachers professional development?
- What are the professional needs of mathematics Teachers?
- What are the main features of Training programe based on Social networks for professional development of mathematics Teachers?
- What are the effectiveness of the suggested program in developing the teaching performance of mathematics teachers?

2.2. The Limitations:

- The Domain of Teaching skills of professional development domains.
- Elementary mathematics Teachers?

2.3. The Tools:

- Electronic Questionnaire directed to Elementary mathematics Teachers
- List of Professional development needs.
- Program for Elementary mathematics Teachers Professional development
- Performance Teaching Test

2.4. The producers:

- Building an Electronic Questionnaire directed to Elementary mathematics Teachers for exploring the reality of professional development.

- Building List of Professional development needs.
- Building The Training programe (defines the aims – the content - The Levels of the programe - The Time table - open the Facebook Page – trainers invitations)
- Pre-teat
- Train the teachers
- Post-test

2.5. The Result:

The researchers found some result about the effectiveness of the suggested program in developing the teaching performance of mathematics teachers
are being displayed in the following tables:

Table (1) Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre Post	-67.82500	6.39666	1.01140	-69.87075	-65.77925	-67.060	39	.000

Table (2) The descriptive statistical of pre-post

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Pre	20	64.9500	4.96806	1.11089	62.6249	67.2751	58.00	73.00
Post	20	73.7000	5.26258	1.17675	71.2370	76.1630	63.00	80.00
Total	40	69.3250	6.71923	1.06240	67.1761	71.4739	58.00	80.00

Table (3) F-test of pre-post test

	Sum of Squares	DF	Mean Square	F	Sig.
Between Groups	765.625	1	765.625	29.236	.000
Within Groups	995.150	38	26.188		
Total	1760.775	39			

Frome the last tables, there are an effectiveness of the Social networks in developing the teaching performance of mathematics teachers. This result agree with the result of many studies as: (Lenox &Coleman 2010) , Lockyer ; Patterson,2008, Wolf,2009. The result recommended that work on the development of intensive training to clarify the objectives and methods of use and activation of Social Networking in

Professional Development, and give Attention to the provision of Computers and wireless internet access in schools, teacher training on using social networks,   work to develop a strategy to activate these networks formally within the curriculum, and to encourage and support models and successful experiences in this field and published this deployment.

2.6. The suggestions:

- Involving the social networks in Teachers professional development
- Doing more studies about using WEB2 in Teachers professional development

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