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Role of Teacher's Digital Competence in Teaching

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Abstract:

In Technological era, digital competence becomes a fundamental competence for teachers. It plays a key role to change and improve the teaching and learning process in the classroom for all. Changing demands of education affects and change the teaching professions so rapidly in broader set of competences than earlier. This concept progressively initiates and develops in schools, classroom and policy. The teacher has responsibility how to develop digital competence in students. Teacher's role and their perspectives about how they think and what they want to do with technology in the classroom, facilitate the student's digital competence. Digital competence is person's ability related to knowledge, attitude, experience and skills concerning her/his interaction with digital media or play active role for personal and professional life. Digital competences enable individual helps to acquire the other competences such as learning to learn, language, mathematics, cultural awareness etc. It is concerns with many key components so it is called 21st century skills. Every teacher requires minimum teaching competences using digital resources in their teaching profession. Thus it is important for all persons to participate actively in economy and all aspects of society for development of nation. This paper presents the need and importance of digital competence in pedagogical context.

Keywords: *Digital Competence, Teaching*

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I. INTRODUCTION

In the past few years growth in communication technology, computer system, computer network, information technology become easy to use, the power and diversity of information transfer provide a platform both teacher and student to access the world beyond the classroom. According to Coiro, Knobel, Lankshear, &Leu (2008) argued that we read, write, listen and communicate differently in digital era than 500 years back. According to UNESCO (2003) mentioned that ICT is major tool for building knowledge societies. It provides a new system in efficiently, creatively and purposefully to improve quality of life and effectiveness of work. Researchers mentioned the digital competence as domain specific which is related to differentinteraction with digital media looking for information, presenting information, acquiring knowledge and skills (learning) using e-content, problem solving using computer simulations, communicating with others, synchronous and asynchronous, collaborating in online communities, participating in social web sites, chats and fora.

II. NEED OF DIGITAL COMPETENCE

In last decade studies of digital competence more fundamentally studied. It becomes the vital in 21st century skills for teachers and students and essential for learning, work, active participation in society. Today's digital competence becomes as important as other competence and also helps to develop other master competences such as language skills, communication, basic skills in science and math's. The changing demands of teaching professions change the role of teachers and require new and more sophisticated set of competence than earlier. Digital competencies used by students in following such as searching, categorizing, information regarding school project, recording and storing digital video, photos and audio, editing and sharing. It is used by teachers in documentation, digital learning resources used by his/her subject, for professional development (Majumdar, S. 1997). Anusca Ferrari (2012) defined digital competence as the confident, critical and creative use of ICT to achieve goals related to work, employability, learning, leisure, inclusion and/or participation in society.

III. IMPORTANCE OF DIGITAL COMPETENCE

Digital competence enables individual's ability to participate in school, home workplace and community effectively. Person who is digitally competent has effectively ICT skills, social awareness and ability to critically evaluate information. European Parliament and the council (2006) mentioned eight keys for lifelong learning: Communication in the Mother Tongue; Communication in Foreign Languages; Mathematical Competence and Basic Competences in Science and Technology; Digital Competence; Learning to Learn; Social and Civic Competences; Entrepreneurship; and Cultural Awareness and Expression. Nature of digital competence studied by the European Commission and developed European Digital Competence Framework for citizens (DigComp) which is

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divided into five areas. This describes 21 competences that policy maker and citizens can be used as tools to improve digital competence. The European Framework for the Digital Competence of Educators (DigCompEdu) is scientifically described framework for educators. This defines 22competences which is organized in six areas for all levels of Education from early childhood to higher, adult education, general and vocational education and training, special needs education and non-formal learning contexts.The Framework emphasized mainly on how digital technologies can be used to enhance and innovate education and training but this framework not focuses on technical skills.

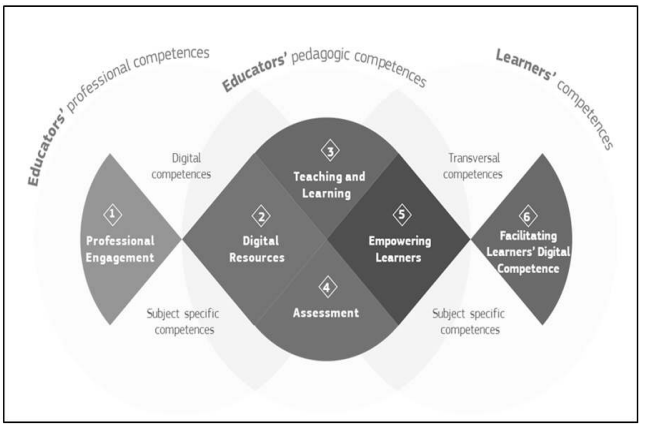

Figure: Depicts six areas for all levels of Education in DigCompEdu Framework

According to OECD (2011) mentioned that use of ICTs and technologies become "both a requirement and a right" because both started to understand as life skills than to literacy and numeracy. Prensky (2011) called youngest generations as digital natives. Pisa (2009) mentioned that student not showed well performance in online reading digital competence international tests. Only 8% of respondents showed high competence and had considered to use the internet in an efficient way (Martin, 2006).DigComp 2.0 identifies the key components of digital competence in 5 areas which can be summarized as below:

- **Information and Data Literacy**

  Information and data literacy is to articulate information needs, browsing, searching, filtering data, to locate and retrieve digital data, information and content. To judge the relevance of sources and content in teaching. To store, manage and organize digital data, information and content, evaluation of data.

- **Communication and Collaboration**

  To interact, communicate, sharing and collaborate through digital technologies while being aware of cultural and generational diversity. Participate in society through public and private digital services and participatory citizenship. Manage one's digital identity and reputation.

- **Digital Content Creation**

  To create and edit digital content to improve and integrate information and content into an existing body of knowledge while understanding how copyright and licenses are to be applied. Teachers should know how to give understandable instructions for a computer system in the form of programming.

- **Safety**

  Safety means protect devices, content, personal data and privacy in digital environments. Teachers should be know how protectingthe physical and psychological health, to be aware of digital technologies for social well-being and social inclusion. Teachers should be aware of the environment impact of digital technologies and their uses.

- **Problem Solving**

  Problem solving means identify needs and problems, to resolve conceptual problems and problem situations in digital environments. Digital tools should be used to innovate processes and products in teaching. And always keep up-to-date with the digital evolution field.

IV. CONCLUSION

Pedagogical aspect of digital competence is important in teaching practices. It is important for teachers to use digital technologies in teaching and learning practices. Digital competence evolves over time and it becomes integral part of teacher's core teaching competence (Blau and Shamit-Inbal, 2017). Hence digital competence explains the variations in the teacher's pedagogical use of digital technologies. This concluded that teacher's digital competence is crucial for design teaching and learning activities through technologies.

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