DIGITAL COMPETENCE OF STUDENT TEACHERS INTIRUVANNAMALAI DISTRICT

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ABSTRACT

Digital competence has recently emerged as a key idea in the discussion over the competencies needed to succeed in the digital world. The development of practical pedagogical knowledge for application in practise and advancement of students' learning is becoming increasingly dependent on teachers' digital proficiency. (Blau, I., &Shamir-Inbal, T. 2017) Digitalcompetence consist of being able to use software, to search, locate, transform and controlinformation from different digital sources, while the critical and creative ability also imply an ability to evaluate, use sources of information critically, interpret and analyze digital genres and media forms. The development of digital skills is a crucial part of student teacher preparation. However, this is a difficult process that involves numerous tactics. Furthermore, nothing is knownabout how they work as an integrated strategy to get future instructors ready for using educational technology. (Pettersson, F, 2018). So this study aims to determine the digital competence of student teachers in Tiruvannamalai District.

Key Words: Digital Competence, Student Teachers, educational Technology, Integrated strategy,

INTRODUCTION

Digital competence is the most recent concept describing technology-related skills. A collection of digital competencies divided into five key areas of focus makes up the Digital Competencies framework. They are:

- Information and data literacy Locate and retrieve relevant information on the internet andknow how to store, organise and analyse such information for its possible applications inteaching. Examples include the creation of teaching materials, presentations, and others. (Krumsvik,R. J, 2011)
- Communication and collaboration Share community-created resources and experiences through online tools, allowing feedback between teachers. Belong to teaching communitiesin social networks. This will enable the dissemination of good practices and the creation ofa validated resources bank. Figure 1 shows the digital competence Elements.

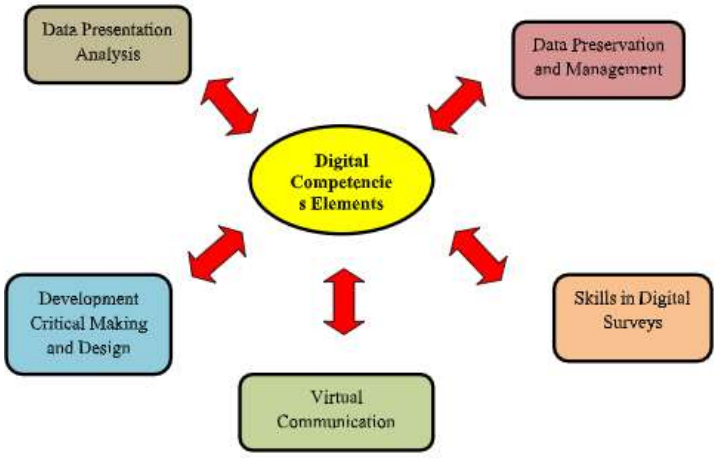

Figure 1. Digital competence Elements

- Digital content creation Create and edit own teaching materials and audio-visual productions, while understanding how copyright and licences are to be applied. In order toprovide personalised learning to students, teachers must be able to create their own resources. (Caena, F., &Redecker, C, 2019)
- Safety Protect personal data, digital content and use technology in a responsible and safe manner. Problems such as identity theft or cyber-bullying may occur if new technologies are not used properly.
- Problem solving Identify needs and know how to choose digital resources for resolving problems. Decide which are the most appropriate tools and use them properly, particularly with regard to active methodologies.

NEED OF THE STUDY

Digital competency are intended to serve as a tool for students teachers to reflect on the critical perspectives and digital skills they acquire over their training period in the teacher education college careers through both co-curricular and academic activities. (Aznar, V., &González, J. 2010) The importance of the digital competency is due to the need of the society todevelop information as a key competence of the future teachers, as well as the need to organize a form of blended learning in general education system for primary, secondary and higher secondarylevel, which provides digital literacy of the student teachers. (Badia, A., Meneses, J., Sergi, F., &Sigalés, 2014) Others may recognize skills they have already acquired and find language to describe them to various audiences, including potential employers, while some students may use the framework to find new ideas for using or thinking critically about digital technologies and seekopportunities to explore them. (Eyo, M.,2016).

REVIEW OF THE LITERATURE

The research done by Sarah K. Howard and others (2021) study on digital literacy in teacher preparation programmes. On a questionnaire dataset comprising 931 pre-service teachers' training experiences, which represented the six techniques, association rules analysis was done. The findings revealed a novel integrated method for the development of digital competence in teacher training, which included four unique clusters of related tactics. To improve pre-service teachers' experiences acquiring digital capabilities, multi-directional and dynamic linkages in techniques are required.

Ayçaebiand IlknurReisoglu (2020) investigated the study on pre-service teachers' perceptions of their degree of digital competence to see if these perceptions varied by gender, branch, and actual level of digital competence. In such a situation, the survey was done with 518 pre-service teachers who were studying in different areas of Turkey. Data were gathered for the study using a digital competence questionnaire. The findings showed that pre-service teachers' perceived digital ability is moderate and that it considerably differs by branch, gender, and other factors.

According to Katherine Fulgence's study from 2020, teacher educators need to become more proficient with technology as it has become an increasingly important ability. The majority of the educator-studied teacher education curricula did not include digital fluency as a crucial competency. Through a survey of the literature, the study developed the idea of digital fluency inits aspects. Ninety educators were interviewed for the qualitative study, including the administration of university schools of education. The results demonstrate that both individual andinstitutional mechanisms, specifically training, infrastructure, and the delivery of online programmes, contribute to the development of the digital fluency of teacher educators. Individualmechanisms, in particular individualised learning, practise, engagement in research, and consultancy. The study adds to the body of knowledge about the importance of digital fluency forteacher educators. Continuous practise should be a part of ongoing training that is focused on professional development.

This study, which was carried out by Joseph A. Maderick (2015), at a significant Southwestpublic institution, contrasts matched surveys of subjective self-evaluation and objective assessment on seven categories of digital competence for pre-service teachers.. The findings, which are in line with past research, show that the pre-service teachers who took part in the studymade an unreliable assessment of their digital ability. According to the study's findings, subjectiveself-evaluation is not a reliable standalone predictor of pre-service teachers' digital competence since it lacks the necessary validity. Self-assessment, however, may prove helpful for pre-service teachers to reflect on their competence, abilities, and knowledge and to help them alter their perceptions and attitudes toward technologies throughout their professional practise if taken into consideration in conjunction with other methods.

METHODOLOGY ADOPTED FOR THE PRESENT STUDY

Normative survey method is adopted for the present research. Student teachers of Tiruvannamalai district are selected in random sampling. Nearly 150 data was collected form male75 and female 75 student teachers. The tool used to measure digital competency of student teachersis Questionnaire by Garcia-Vandewalle Garcia (2021), which is measured in 4 point Likert scale.

RESEARCH QUESTIONS

1. Is there is any significant difference in the Digital Competence and its dimensions of thestudent teachers with respect to gender?
2. Is there is any significant difference in the Digital Competence and its dimensions of thestudent teachers with respect to locality?
3. Is there is any significant difference in the Digital Competence and its dimensions of thestudent teachers with respect to age?

ANALYSIS AND INTERPRETATION OF THE STUDY:

Is there is any significant difference in the Digital Competence and its dimensions of the student teachers with respect to gender?

Answer for the Research Question No: 1

Table -1-Significance of Mean difference between Male and Female in all thedimensions of Digital Competency

Dimensions ofDigital Competency	Gender					
	Male (N=75)		Female (N=75)		't' value	Level of significance
	Mean	S.D	Mean	S.D		
Informationand Data literacy (ID)	46.64	6.61	46.35	6.85	0.267	P>0.05
Communication and Collaboration (CC)	85.04	11.71	84.88	10.71	0.087	P>0.05
Digital content creation (DCC)	42.64	6.56	42.99	6.63	0.322	P>0.05
Safety (SF)	34.57	7.46	34.89	7.33	0.265	P>0.05
Problem solving (PS)	36.00	7.34	38.02	7.98	0.001	**P<0.001**
Over All Digital Competence	**246.89**	**35.06**	**247.11**	**35.02**	**0.037**	P>0.05

It is observed from the above table that there is no significant difference between the maleand female student teachers in their areas and overall digital competence except the problem solving area.

Is there is any significant difference in the Digital Competence and its dimensions of the studentteachers with respect to locality?

Answer for the Research Question No: 2

Table -2-Significance of Mean difference between Rural and Urban Locality in all thedimensions of Digital Competency

Dimensions of Digital Competency	Location				't' value	Level of significance
	Rural (N=137)		Urban (N=13)			
	Mean	S.D	Mean	S.D		
Information and Data literacy (ID)	46.36	6.97	47.85	2.51	0.759	P>0.05
Communication And Collaboration (CC)	84.69	11.43	87.85	7.97	0.973	P>0.05
Digital content creation (DCC)	43.04	6.75	40.46	3.68	1.352	P>0.05
Safety (SF)	34.57	7.46	34.89	7.33	0.139	P>0.05
Problem solving (PS)	38.00	7.34	38.00	7.98	0.454	P>0.05
Over All Digital Competence	**246.89**	**35.06**	**247.11**	**35.02**	**0.075**	P>0.05

It is inferred from the above table that there is no significant difference between the Rural andUrban student teachers in their areas and overall digital competence.

Is there is any significant difference in the Digital Competence and its dimensions of the student teachers with respect to age?

Answer for the Research Question No: 3

Table -3-Significance of Mean difference between Age below 25 years and above 25years in all the dimensions of Digital Competency

Dimensions ofDigital Competency	Age				't' value	Level of significance
	Below 25 yrs (N=90)		Above 25 yrs (N=60)			
	Mean	S.D	Mean	S.D		
Informationand Data literacy (ID)	48.64	6.61	46.35	6.85	3.236	**P<0.001**
Communication and Collaboration (CC)	85.04	11.71	84.88	10.71	3.547	**P<0.001**
Digital content creation (DCC)	48.64	6.56	42.99	6.63	3.443	**P<0.001**
Safety (SF)	34.57	7.46	34.89	7.33	1.961	P>0.05
Problem solving (PS)	39.00	7.34	38.00	7.98	2.071	**P<0.05**
Over All Digital Competence	**250.89**	**35.06**	**247.11**	**35.02**	**3.286**	**P<0.001**

It is inferred from the above table that there is a significant difference in the areas of Information and Data literacy (ID), Communication and Collaboration (CC), Digital content creation (DCC), Problem Solving (PS), Overall Digital competence of the student teachers with respect to Age. But it inferred that there is no significant difference in the area of safety (SF) of the student teachers with respect to Age.

Hence it is conclude that the student teachers who are above 25years age have better digital competency than the student teachers who are below 25 years.

CONCLUSION

In this present digital era everyone should consider digital literacy as the fourth pillar of the teaching learning system. Apart from using the chalk and board method it is needed to use theblended teaching method by using digital skills in the modern classroom. Digital literacy increasesthe ability to think critically, evaluate information and argument, identify patterns and connectionsbetween two things, and construct meaningful ideas. Through the knowledge of these digital competencies, students and teachers can apply them in their life and outer world.

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