



Need Analysis of School Teachers for Technological Skills

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ABSTRACT

For a nation's educational and social programmes, the development of technological skills is a key concern. Students have the chance to learn and improve a variety of abilities, including technology skills, over the course of their educational careers, from basic to secondary education and subsequently in higher education. Digital technology integration in HEIs is crucial for the advancement of teachers' technological expertise, for their professional future, and subsequently, and concurrently, for the improvement of their quality of life. The study was conducted to identify school teachers' technological skill needs. A total of 360 teachers of Bhopal were selected and a self-made tool was administered among school teachers of government and private schools. It was concluded that the schools teachers are in need of technological skills. There is a difference among government and private school teachers needs for technological skills. The study concluded that the rural and urban teachers also in need of technological needs for implementing in their classrooms.

Keywords: Technological skills, Professional Development, School Teachers, Online Teaching

Education professionals have been debating the use of technology in the classroom for more than three decades. Access to technological resources started to improve in the early to mid-2000s, dramatically lowering and in some cases entirely eliminating this first-order barrier. As a result, academics and researchers started to focus on the connection between teachers'

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pedagogical views and meaningful technology use, particularly that which promoted student-centered learning (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012). Along with adjustments to professional development and district technology plans, these factors will combine to form the ideal “technology integration” storm that will continue to enable more and more teachers to use technology in ways that will better prepare our students for the future they will inherit (Ertmer *et al.* 2012). The development of technological skills is a key concern for a nation’s social and educational policy. Students have the chance to learn and develop a variety of abilities, including technology skills, throughout their academic careers, from primary to secondary education and subsequently in higher education (Rodrigues, Cerdeira, Machado-Taylor, & Alves, 2021). For students’ individual, social, and professional futures, as well as for their quality of life, it is essential that they develop their technological skills in university education in a balanced way. This is especially true given that the incorporation of technological technologies is important for changing how academic work is organised, how students and teachers interact with institutions, and how new teaching and learning methods are implemented.

REVIEW OF RELATED LITERATURE

For the effective implementation of virtual learning, it is recommended that both teachers and students have access to ICT resources and facilities, that both groups receive enough training, and that curricular materials be digitalized (Khanal, 2021).

(Sailer *et al.* 2021) investigated at the instruments’ correlations with instructors’ frequency of technology use in class and teachers’ initiation of various sorts of student learning activities incorporating technology to see if they were predictive. The predictive validity of our instrument is supported by structural equation modelling results that show relationships between self-assessed skills in different phases of teaching with technology and self-reported initiation of student learning activities involving overt actions (active, constructive, and interactive learning activities). Positive views toward technology-related teaching are linked to the start of learning activities employing digital technologies, but especially learning activities that do not need learners to take visible actions (passive learning activities). Thus, rather than attitudes, teachers’ self-assessed technology-related skills may contribute to facilitating critical learning activities for students.

The knowledge needed to create and optimise teaching-learning situations across subjects, including declarative and procedural knowledge of classroom management, teaching methods, classroom assessment, and student heterogeneity, is referred to as teachers’ general pedagogical/psychological knowledge (PPK) (Kunter *et al.* 2013). From the students’ perspective, pedagogical/psychological knowledge (PPK) was favourably related with indices of instructional quality.

(Angeli & Valanides, 2009) conducted a study in which ICT-TPCK is introduced as a strand of TPCK and is defined as the process of synthesising knowledge about tools and their affordances, pedagogy, content, learners, and context into an understanding of how difficult-to-understand or difficult-to-represent topics can be transformed and taught more effectively with technology in ways that demonstrate its added value. The findings showed that ICT-TPCK competency improved significantly over the course of a semester. The findings of this study demonstrate that the proposed theoretical models can have a positive impact on the development of ICT-TPCK. Finally, these findings can be utilised as a baseline for future research that aims to further validate or improve the presented models in various scenarios.

Individuals with similar interests or goals get together to share resources, develop working strategies, solve problems, and improve individual and organisational performance. The online community of practise (CoP) has become an important platform for teachers' professional development in the online context. Stronger integration among online CoP members can lead to better recognition of and generosity toward others, according to the findings. Furthermore, knowledge-sharing participation is influenced by performance expectations and self-efficacy beliefs. As a result, the formation of social interactions among online teacher members aids them in obtaining prospective resources and dependable support through their social network. Teachers' participation in the online professional CoP also creates a prosocial attitude, which increases their readiness to share beneficial resources and alleviate the difficulties of other members, both emotionally and practically. As a result, prosocial commitment and performance expectation are both important predictors of knowledge-sharing behaviours in terms of knowledge giving and receiving (Tseng & Kuo, 2014).

(Van Laar *et al.* 2017) conducted a study and revealed that 21st-century abilities are significantly more diverse than digital skills – the list of skills mentioned is far longer. Furthermore, unlike digital talents, 21st-century abilities are not always based on technology. In addition, seven fundamental talents were identified: technical, information management, communication, teamwork, creativity, critical thinking, and problem solving. Ethical awareness, cultural awareness, flexibility, self-direction, and lifelong learning were also listed as contextual skills.

METHODOLOGY

Descriptive survey method was used in the research study.

Sample

The sampling technique employed for the study was stratified random sampling.

Independent variables of the study:

- ❖ Gender- Male and Female

- ❖ Location- Rural and Urban
- ❖ Type of school- Government and Private

Dependent variables of the study

- ❖ Training Needs of Teachers

TOOLS AND TECHNIQUES

Questionnaire for Identification of Training Need of Teachers

A questionnaire was developed by the investigator for teachers to identify the training needs of the school teachers. The statements or items of each section of the questionnaire were reviewed by the experts for their suggestions in terms of language, relevance, conceptuality of each of the item of each of the section.

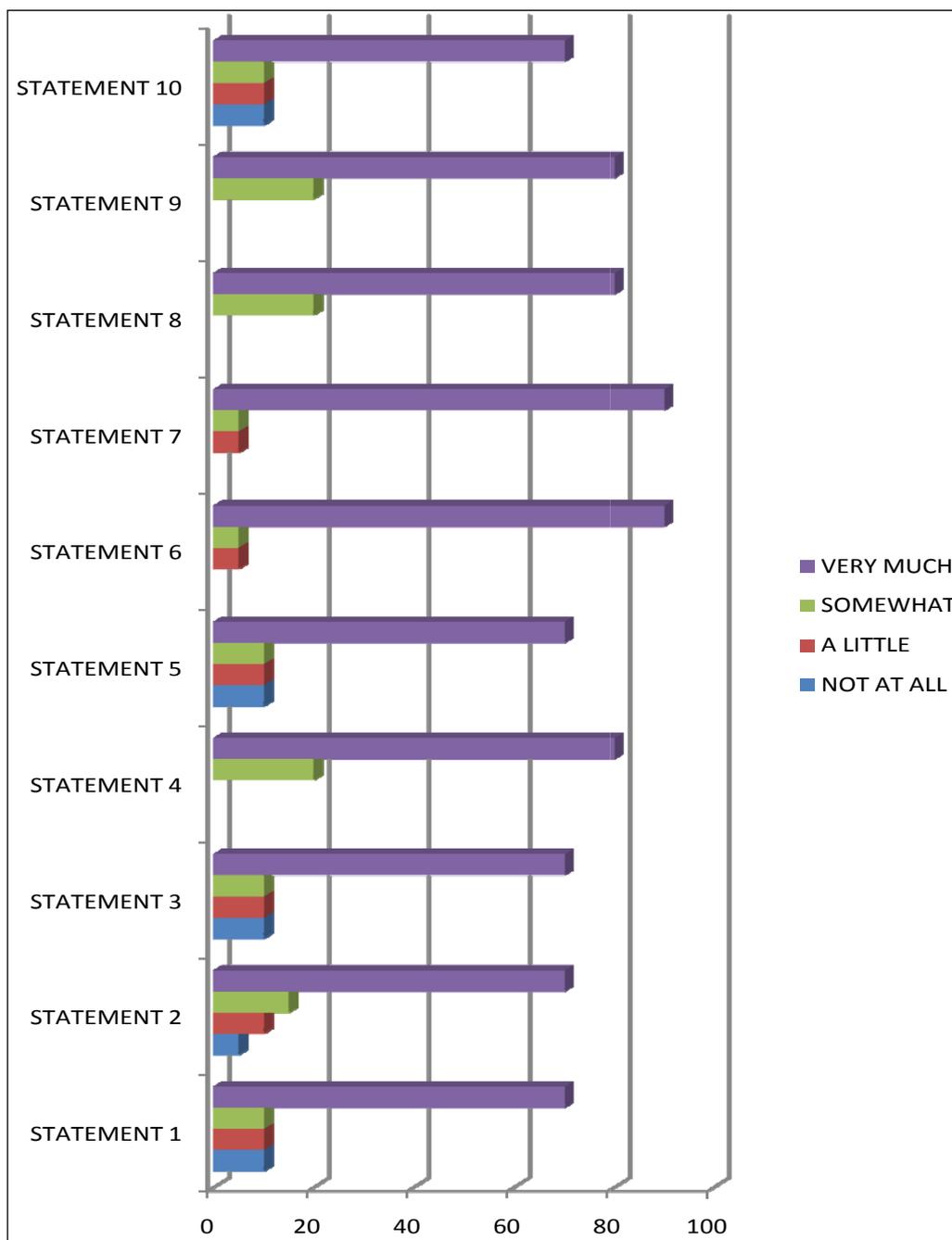
As per their suggestions the items of the questionnaire were modified and an initial try-out in initial phase of the study was conducted with 360 teachers of Bhopal District of Madhya Pradesh in the initial phase. Suggestions were invited by the teachers for the questionnaire. As per the suggestions given by teachers and experts the items of the questionnaire were again analysed and the items were modified and restated. Finally, following items in each section were kept for the final Try-out of the questionnaire.

Table 1: Training Needs of Teachers on Technological Skills

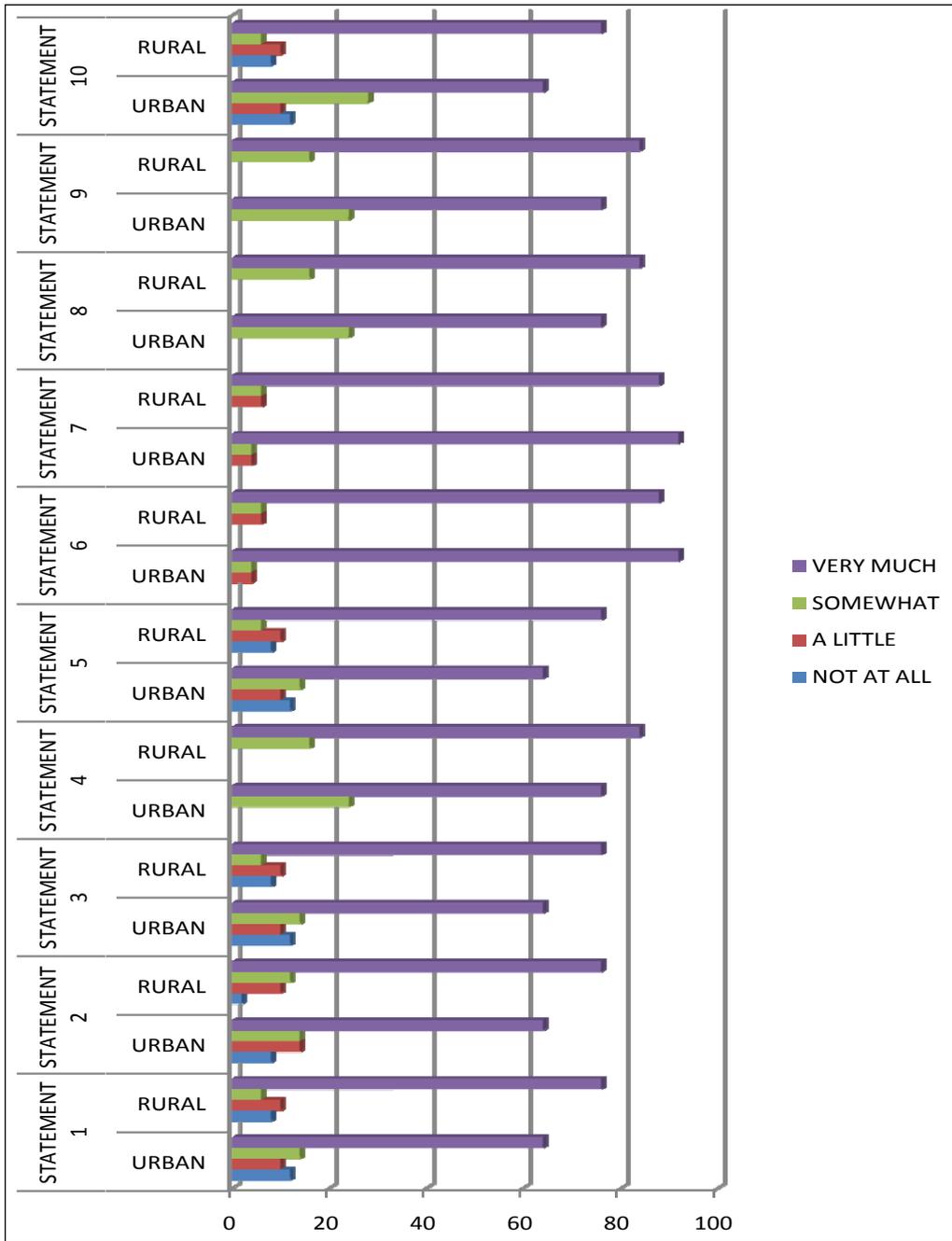
Sl. No.	Statement	Not at All	A Little	Some what	Very much	
1	Design lesson plans using Microsoft office	10%	10%	10%	70%	
		Urban	12%	10%	14%	64%
	Rural	Government	12%	8%	12%	68%
		Private	12%	12%	16%	60%
		Government	8%	10%	06%	76%
		Private	12%	8%	4%	76%
2	Use of audio-visual media for teaching and learning	5%	10%	15%	70%	
		Urban	8%	14%	14%	64%
	Rural	Government	12%	8	12%	68%
		Private	4%	20%	16%	60%
		Government	2%	10%	12%	76%
		Private	4%	20%	16%	60%

Sl. No.	Statement	Not at All	A Little	Some what	Very much
	Government	4%	8%	12%	76%
	Private		12%	12%	76%
3	Design computer assistant assessment	10%	10%	10%	70%
Urban		12%	10%	14%	64%
	Government	12%	8%	12%	68%
	Private	12%	12%	16%	60%
Rural		8%	10%	6%	76%
	Government	12%	8%	4%	76%
	Private	4%	12%	8%	76%
4	Integrate technology with the curriculum			20%	80%
Urban				24%	76%
	Government			32%	68%
	Private			16%	84%
Rural				16%	84%
	Government			8%	92%
	Private			24%	76%
5	Use of internet in the classroom	10%	10%	10%	70%
Urban		12%	10%	14%	64%
	Government	12%	8%	12%	68%
	Private	12%	12%	16%	60%
Rural		8%	10%	6%	76%
	Government	12%	8%	4%	76%
	Private	4%	12%	8%	76%
6	Upload and share audio-visual learning material		5%	5%	90%
Urban			4%	4%	92%
	Government		8%	4%	88%
	Private			4%	96%
Rural			6%	6%	88%

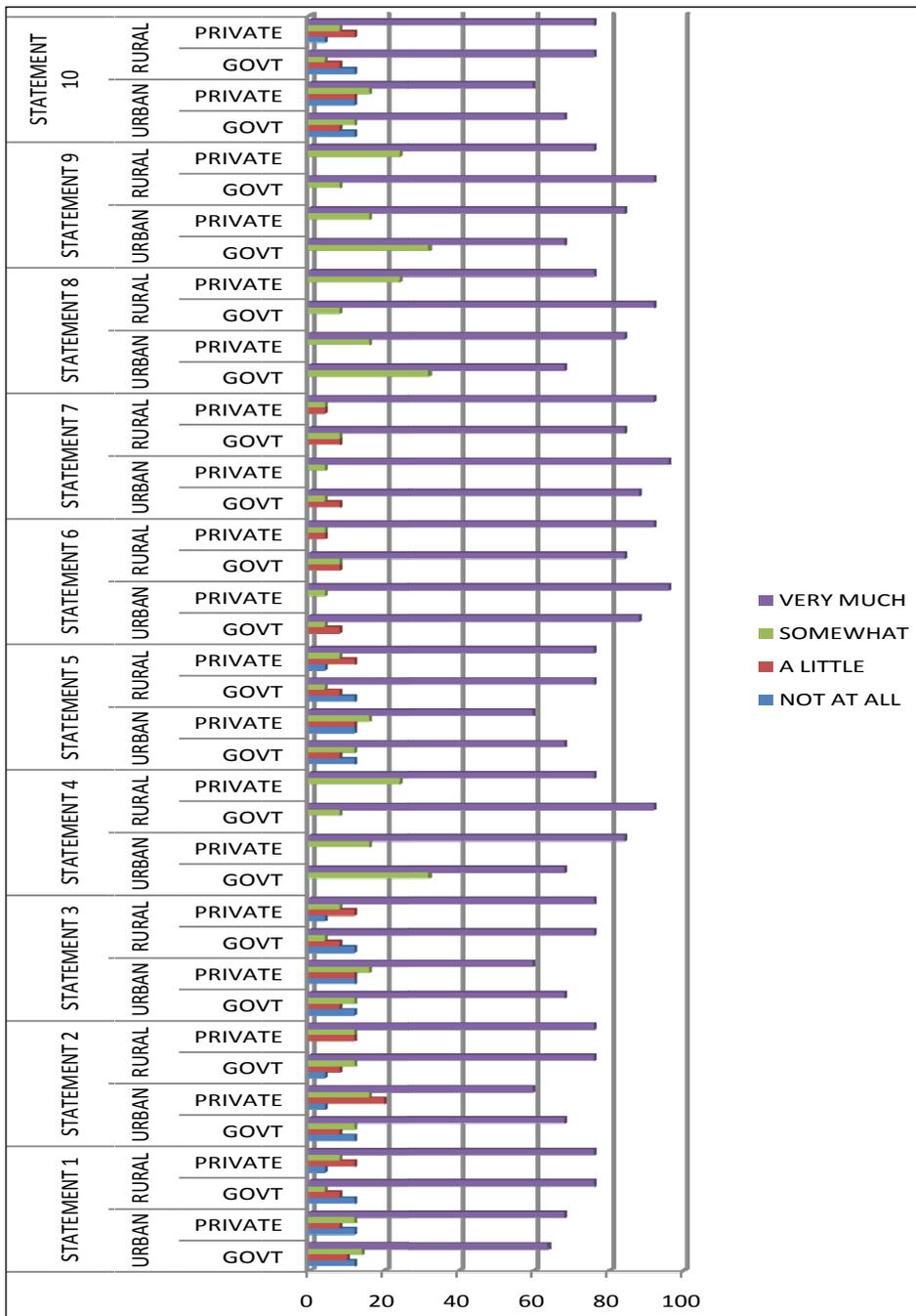
Sl. No.	Statement	Not at All	A Little	Some what	Very much
	Government		8%	8%	84%
	Private		4%	4%	92%
7	Design online study material for students		5%	5%	90%
Urban			4%	4%	92%
	Government		8%	4%	88%
	Private			4%	96%
Rural			6%	6%	88%
	Government		8%	8%	84%
	Private		4%	4%	92%
8	Evaluate the accuracy and usefulness of web resources			20%	80%
Urban				24%	76%
	Government			32%	68%
	Private			16%	84%
Rural				16%	84%
	Government			8%	92%
	Private			24%	76%
9	Design websites to communicate with students			20%	80%
Urban				24%	76%
	Government			32%	68%
	Private			16%	84%
Rural				16%	84%
	Government			8%	92%
	Private			24%	76%
10	Communication tools such as email and video-conferencing	10%	10%	10%	70%
Urban		12%	10%	28%	64%
	Government	12%	8%	12%	68%
	Private	12%	12%	16%	60%
Rural		8%	10%	6%	76%
	Government	12%	8%	4%	76%
	Private	4%	12%	8%	76%



Graph 1: Technological Training Needs of Teachers (Over All)



Graph 2: Technological Training Needs of Teachers (Location wise)



Graph 3: Technological Training Needs of Teachers (Type of school wise)

CONCLUSION

It can be inferred from the presentation of percentage data that there was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to Design lesson plans using Microsoft office. The govt. and private teachers of rural location needed training more than the govt. and private teachers of urban location on the aspect to improve their technological skills. A high percentage of govt. and private teachers of rural location needed training on the aspect to be able to design the lesson plan using Microsoft office. There was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to Use the audio-visual media for teaching and learning. The govt. and private teachers of rural location needed training more than the govt. and private teachers of urban location on the aspect to improve their technological skills. A high percentage of govt. and private teachers of rural location needed training on the aspect to be able to Use of audio-visual media for teaching and learning in their classroom. There was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to Design computer assistant assessment. The govt. and private teachers of rural location needed training more than the govt. and private teachers of urban location on the aspect to improve their technological skills. A high percentage of govt. and private teachers of rural location needed training on the aspect to be able to Design computer assistant assessment in the classroom. There was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to integrate technology with the curriculum. The govt. and private teachers of rural location needed training more than the govt. and private teachers of urban location on the aspect to improve their technological skills. A very high percentage of govt. teachers of rural location needed training on the aspect to be able to integrate technology with the curriculum to improve their technological skills.

There was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to Use the internet in the classroom. The govt. and private teachers of rural location needed training more than the govt. and private teachers of urban location on the aspect to improve their technological skills. A high percentage of govt. and private teachers of rural location needed training on the aspect to be able to Use the internet in the classroom for improving the teaching-learning processes.

It can be inferred from the presentation of percentage data that there was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to Upload and share audio-visual learning material. The govt. and private teachers of urban location needed training more than the govt. and private teachers of rural location on the aspect to improve their technological skills. A very high percentage of govt. teachers of urban location needed training on the aspect to be able to Upload and share

audio-visual learning material, to improve their technological skills in sharing the learning material with students online. There was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to Design online study material for students. The govt. and private teachers of urban location needed training more than the govt. and private teachers of rural location on the aspect to improve their technological skills. A very high percentage of govt. teachers of urban location needed training on the aspect to be able to Design online study material for students, to improve their technological skills in sharing the learning material with students online. There was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to be able to evaluate the accuracy and usefulness of web resources. The govt. and private teachers of rural location needed training more than the govt. and private teachers of urban location on the aspect to improve their technological skills. A very high percentage of govt. teachers of rural location needed training on the aspect to be able to evaluate the accuracy and usefulness of web resources. There was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs to be able to Design websites to communicate with students. The govt. and private teachers of rural location needed training more than the govt. and private teachers of urban location on the aspect to improve their technological skills. A very high percentage of govt. teachers of rural location needed training on the aspect to be able to Design websites to communicate with students for improving online communication with the students. There was a difference among the teachers serving in private schools and govt. schools of urban and rural location so far as the training needs for communication tools such as email and video-conferencing. The govt. and private teachers of rural location needed training more than the govt. and private teachers of urban location on the aspect to improve their technological skills. A high percentage of govt. and private teachers of rural location needed training on the aspect to be able for communication tools such as email and video-conferencing. Few govt. and private teachers of urban and rural location needed no training for online communication tools such as email and video-conferencing.

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