



# Effectiveness of a Techno-Pedagogical Intervention with Respect to Self-Efficacy and Media Literacy Among Pre-Service Teachers

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**Abstract:** The imperative shift from traditional to modern teaching methods, driven by evolving learner needs in education and assessment, necessitates enhanced competencies among teachers. While acknowledging the value of technology, some view it as disruptive, but its effective integration is crucial for designing impactful instructional strategies. The current educational landscape presents innovation opportunities for teachers, yet challenges arise amid stress and anxiety over adapting to evolving technological needs. The emergence of new literacies underscores essential skills for educators, particularly in digital, media, and technological domains. Teacher preparation programs recognise contemporary needs like ICT, environmental education, and disaster management. However, there is a noticeable emphasis on theoretical knowledge over skill development in institutes. Acknowledging the urgency of equipping pre-service teachers with a critical understanding of ICT, the research attempts to fill the gap through a techno-pedagogical intervention for enhancing media literacy and self-efficacy. Media literacy is vital for comprehending diverse possibilities in integrating media into teaching, aligning with desired outcomes. Similarly, the self-efficacy of pre-service teachers significantly influences their confidence in using technology tools for meaningful content transactions. Addressing this gap, the researcher aims to design a focused techno-pedagogical intervention for enhancing media literacy and self-efficacy among pre-service teachers.

**Index Terms - Technology Integration, Sel-Efficacy, Media Literacy, Teacher preparation**

## INTRODUCTION

Education is used as a tool for social change, but its methods and practices are changing dramatically. Teachers' duties and responsibilities are being restructured to meet their students' diverse requirements better. Various factors that are represented in societal developments impact the demands of learners. Instructors are essential in helping students change their behaviour. In the past, the influence was crucial. The relevance of altering approaches and methodologies was reinforced by the improvements in educational instruments and procedures and the contents corresponding to the promotions. Teachers began to recognise their position as facilitators in the classroom due to students being exposed to various life experiences through various media and coping with a tremendous quantity of data and knowledge.

All of the developments in behavioural research, neurological science, and even technology form the foundation of education. Technology is advancing at a breakneck pace, embracing the 1.0–4.0 industrial revolution. The parties involved in schooling are cognizant of the numerous technological advancements. Media diversity affects how information is found, processed, and informed. It also offers learners a range of experiences. ICTs, or information and communication technologies, impact every area of education. ICT provides various tools, spanning from Web 1.0 to Web 4.0.

Numerous endeavours in the literature have sought to investigate the awareness and attitudes of stakeholders towards Information and Communication Technology (ICT) and its tools. Discussions on instructional design and the pedagogical integration of ICT tools have been informed by incorporating Pedagogical Content Knowledge (PCK) into technology, leading to the widely recognised Technological Pedagogical Content Knowledge (TPACK) framework. While research has explored the integration of ICT in teaching and learning, there is a lack of widespread confidence in accepting popularised models or methods in this regard.

One crucial skill that all educators ought to possess is the capacity to use technology (Ruggiero & Mong, 2015). However, a variety of factors, such as biases, attitudes, or experiences that may arise in opposition to these regulations, may have an impact on how present and future teachers incorporate technological opportunities (Belland, 2009; Ertmer et al., 2012; Galvis, 2012; Kaya & Yilayaz, 2013; Birisci & Kul, 2019). Furthermore, pre-service teachers might not receive enough preparation from technology-related courses offered on successful technology integration (Admiraal et al., 2017). Additionally, it has been determined that

recently graduated preservice teachers lack the necessary skill sets to integrate computer technology into teaching effectively (Kurz & Middleton, 2006; Polly et al., 2010).

Individual characteristics, including self-efficacy, media literacy, and knowledge of digital tools, have been discovered to influence the effective integration of ICT tools in teaching and learning. Therefore, the current study aims to create techno-pedagogy modules and assess their efficacy in terms of pre-service teachers' media literacy and self-efficacy. This would aid in developing specific techno-pedagogical tactics that educators may apply when incorporating ICT technologies into their lesson plans. Because they are still in the training phase and may not be accustomed to the many teaching approaches, pre-service teachers are given special attention here and have ample opportunity to experiment with different approaches to integrating technology.

### The TPACK framework

Based on Shulman's (1986) theory of Pedagogical Content Knowledge (PCK), the Technological Pedagogical Content Knowledge (TPACK) framework is a conceptual model for the knowledge that supports effective technology integration into classroom teaching practices (Mishra & Koehler, 2006). Illustrated in Figure 1, the TPACK framework represents the complex interactions among the types of essential knowledge for successful teaching with technology.

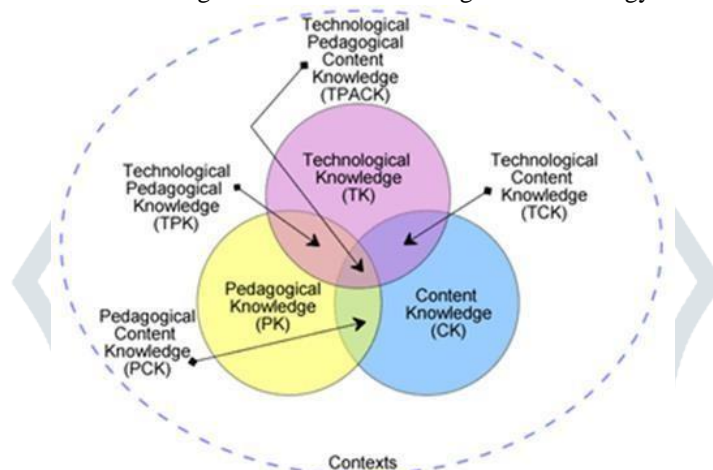


Figure 1: Technological and Pedagogical Content Knowledge (Mishra & Koehler, 2006)

Like Shulman's (1986) concept of Pedagogical Content Knowledge (PCK), the TPACK framework highlights Content Knowledge and Pedagogical Knowledge as foundational components of a teacher's proficiency. Additionally, it introduces a Pedagogical Content Knowledge (PCK) dimension, underscoring the pedagogical expertise tailored to a specific subject matter. Building upon the PCK framework, TPACK incorporates Technological Knowledge (TK) as a third essential knowledge domain. Consequently, this yields three intersecting knowledge domains: Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK), and Technological Pedagogical Content Knowledge (TPCK) (Koehler & Mishra, 2005; Mishra & Koehler, 2006). To ensure clarity, the combined knowledge domain of Technological Pedagogical Content Knowledge is denoted by the acronym "TPCK" to distinguish it from the overarching knowledge model referred to as "TPACK."

### Self-Efficacy Beliefs About Technology Integration

As a broad conceptual framework, self-efficacy pertains to an individual's perception of their capabilities within a specific domain. According to Bandura (1997), self-efficacy is defined as "beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments" (p. 3). Bandura elaborates that these beliefs in self-efficacy play a pivotal role in influencing various aspects of behaviour, including the selection of a course of action, the level and duration of effort exerted, and the emotional response to the success of an undertaking (Bandura, 1997, p. 3). The theory of self-efficacy posits that beliefs about one's capacity to influence the desired outcome impact both cognitive processes and behavioural actions. Generally, stronger self-efficacy beliefs are anticipated to provide positive reinforcement for undertaking a specific course of action, while lower self-efficacy beliefs may impede the decision to proceed with the same course of action.

Schunk et al. (2009) delineated that self-efficacy, a psychological construct integral to social cognitive theory, plays a crucial role in both learning and performance. Additionally, they emphasised the significant impact of motivation on learning and performance. Within the realm of motivation, self-efficacy represents a personal assessment of one's abilities to effectively address tasks and achieve specified objectives. About technology in teaching and learning, multiple domains of self-efficacy beliefs may play a role in the thoughts and actions of a teacher regarding technology in the classroom. Albion (1999) argued that instructional strategies such as Problem-Based Learning (PBL) influence self-efficacy beliefs and can effectively improve a teacher's ability to use technology in classroom teaching practices.

### Media Literacy as a Predictor of Technology Integration

Teachers seem confused about selecting media tools that could be integrated into teaching-learning. Technology developers provide numerous tools, but most of them are not meant for educational purposes. Still, attempts exist to use the different media as part of teaching-learning. When discussing media literacy, one could easily connect it with digital media in the expanded media horizon.

The discussion around Digital Media Literacy (DML) education has been framed within the ongoing debate about the definition of DML itself as a subject matter or body of knowledge. This debate has been increasingly articulated with the complexification of the media environment that digitalisation is bringing about. Our understanding of DML depends on our definition of media, which changes rapidly due to technological and commercial developments, literacy, and the purpose we assign to learning in such a domain (Potter, 2010).

The digital media literacy concept can be traced from the tradition of Media Education (ME), which defined media literacy as "the ability of a citizen to access, analyse, and produce information for specific outcomes" (Aufderheide, 2018). This definition emphasises its critical nature and puts forward the skills required to access messages, critically understand them, and actively use a

variety of instruments and formats for generating original messages. Critical understanding in this domain means learning about (a) the audio-visual languages that the different media use, (b) how media represent realities and the relationship between fact and fiction in the media; (c) the production processes of media messages and (d) the relationship between the media and audiences (Buckingham, 2019).

Efforts in teaching media literacy to preservice teachers have revealed some success in positively impacting teaching practice when instruction includes prolonged and sustained approaches to teaching media literacy across the teacher education program and thoughtful attention to a range of concepts related to media literacy (Felini, 2014; Meehan et al., 2015; Nagel, 2018; Schmeichel et al., 2018; Weninger et al., 2017).

### NEED AND SIGNIFICANCE

The in-service teachers are exposed to various kinds of training, and their accountability in attaining the desired outcomes provides a scope for improved quality of teaching-learning. The teaching-learning environment, peer pressure, and monitoring systems are the other factors that create the expectation of achieving quality. At the same time, pre-service teachers need to be oriented towards advancements in different fields, focusing on integrating the elements for quality teaching. Environmental education, Critical Understanding of ICT, Gender and Society, etc., are already included in the pre-service teacher education program. As part of the teacher education curriculum, these topics also reflected a more theoretical nature. Justice Verma Commission has advocated the importance of Information Communication Technology (ICT) laboratories in the teacher education institutions (TEIs) as mandatory and training in it.

The fundamentals of ICTs are addressed to an extent, but pre-service teachers seem to be not confident in integrating ICTs into their teaching-learning. They are confined to operating with technology rather than incorporating technology in their teaching-learning. This curtails the effective use of ICTs in the classroom and hence lacks the attainment of desired outcomes. To integrate ICTs into teaching-learning, they must be trained with the essence of Instructional Designs (IDs) and Technological Pedagogical and Content Knowledge (TPACK).

In the current fast-paced digital technology era, teacher education programs demand an up-to-date curriculum that supports pre-service teachers' technology integration self-efficacy to empower them building 21st-century skills in K-12 classrooms (Ananiadou & Claro, 2009; Bellanca, 2010; Griffin & Care, 2015; Hamilton et al., 2016; Scherer, 2017). Teacher education institutions employ different strategies to train their pre-service teacher's ineffective use of technology in classrooms.

A thorough examination of the literature and relevant theoretical frameworks suggests a compelling need for integrating technology tools to enhance the appeal and meaningfulness of the teaching-learning process. Teacher educators commonly employ technology tools at the operational level, leading pre-service teachers to emulate similar practices in their teaching approaches. The selection and integration of technology tools must align with creative and constructivist teaching methodologies. While the Technological and Pedagogical Content Knowledge (TPACK) framework has been explored as a methodology, such attempts have largely remained confined to theoretical exploration rather than being implemented as pedagogically integrated practices.

Several factors influence the integration of technology tools in the teaching-learning process, including the attitudes, beliefs, and competencies of both teacher educators and teachers. Despite various initiatives, the focus on equipping teacher educators and pre-service teachers with the necessary skill sets appears insufficient. Media literacy is a critical factor influencing the judicious selection and constructive integration of technology tools in the teaching-learning process. Media literacy empowers educators with awareness, attitudes, and skills to locate, access, integrate, and assess technology tools for effective educational practices.

The beliefs and attitudes of teachers toward technology tools also significantly impact their integration into the teaching-learning process. Challenges such as the fear of using technology tools and the stress associated with integrating them effectively hinder the maximised utilisation of these tools. Self-efficacy, defined as an individual's belief in their capacity to execute activities required for a particular job successfully, becomes crucial in overcoming challenges and uncertainties. Individuals with high self-efficacy demonstrate greater effort, persistence, and courage in tackling tasks, thereby effectively controlling their environment.

In the context of 21st-century education, the effective use of technological tools, especially digital tools, is essential for ensuring students' enduring learning. Therefore, digital literacy and self-efficacy are identified as key elements in teacher preparation. Enhancing these aspects is expected to lead to the optimal and effective use of technology tools. Consequently, the researcher is motivated to investigate the effectiveness of a techno-pedagogical intervention in enhancing the media literacy and self-efficacy of pre-service teachers, aligning with the identified need and significance outlined in the literature review.

### STATEMENT OF THE PROBLEM

As the effectiveness of any teaching-learning practice depends on the media selected for transaction and teacher competencies, pre-service teachers need to be equipped with media literacy and improve their self-efficacy. Since technology tools play a vital role in realigning with the changing needs of present learners, the improved methodological skills of pre-service teachers are needed, which helps them to prepare for the new generation classrooms. Hence, the present study entitled "Effectiveness of a TECHNO-PEDAGOGICAL INTERVENTION WITH RESPECT TO SELF-EFFICACY AND MEDIA LITERACY AMONG PRE-SERVICE TEACHERS".

### OPERATIONAL DEFINITIONS

- **Techno-pedagogical intervention-** In the present study, techno-pedagogical intervention means synchronising content, method, and technology - integrating technology tools appropriately to the content and following pedagogic methods. The different modules follow instructional design principles focusing on the components of self-efficacy and media literacy. Self-efficacy- According to Albert Bandura, "Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that influence events that affect their lives". In the present study, self-efficacy means the pre-service teachers' beliefs about their capabilities to integrate technology in the teaching-learning process in order to improve the learning.
- **Media Literacy- According to the Centre for Media Literacy-** "Media Literacy is a 21st century approach to education. It provides a framework to access, analyse, evaluate, create and participate with messages in various forms — from print to video to the Internet". In the present study, media literacy means knowledge about identifying, accessing, analysing, evaluating, creating and participating in the message in various digital media.

## OBJECTIVES OF STUDY

- To study the difference in pre-service teachers' self-efficacy before and after the intervention.
- To study the difference in media literacy of pre-service teachers before and after the intervention.

## HYPOTHESES OF STUDY

- There is a significant difference in self-efficacy of pre-service teachers before and after the intervention.
- There is a significant difference in media literacy of pre-service teachers before and after the intervention.

## THE RESEARCH DESIGN

A quasi-experimental research design with a non-equivalent pre-test, post-test experimental and control group was used. In the pre-test- post-test non-equivalent groups design, there is a treatment group that is given a pre-test, receives a treatment and then is given a post-test. However, at the same time, there is a non-equivalent control group that is given a pre-test, does not receive the treatment, and is then given a post-test. The question, then, is not simply whether participants who receive the treatment improve but improve more than participants who do not. The intact group, consisting of 30 pre-service teachers from a training college where two units of B.Ed batches are available, was selected randomly for the experimental and control groups.

### Tools used for data collection

The Self-Efficacy Scale for Pre-Service Teachers and Media Literacy Scale for Pre-service Teachers, which the investigator developed, was used for the data collection.

- Self-efficacy Scale for Pre-service teachers- Self-efficacy beliefs of preservice teachers on technology integration- the tool in a 5-point rating scale format, consisting of selection in the categories of technology tools, mapping of technology tools to outcomes, integrating technology tools.
- Media literacy Scale for pre-service teachers- A five-point scale in the categories of media types, awareness of the nature of the message, and scope of media.

### Techno-pedagogical Intervention

After a thorough analysis of the syllabus for the course on the critical understanding of ICT for the pre-service teacher education program, the investigator decided to develop a techno-pedagogical intervention for the pre-service teachers. The intervention focused on improving the pre-service teachers' media literacy and self-efficacy. There were 7 modules developed as an instructional package, covering the following topics:

- Module 1: Techno-Pedagogical Designs (4 hours)
- Module 2: Instructional Design (3 hours)
- Module 3: Mind Mapping (4 hours)
- Module 4: Screencasting (4 hours)
- Module 5: Online Assessment (3 hours)
- Module 6: Content Authoring (4 hours)
- Module 7: Learning Management Systems (3 hours)

The intervention consisted of 7 modules for 25 hours, including instructional and practice hours. More emphasis was on the hands-on experience of the pre-service teachers with substantial discussion and handholding.

## RESULTS AND DISCUSSIONS

The formulated hypotheses were tested using an independent sample t-test and the details are given in the following section.

**Hypothesis 1:** There is a significant difference in the self-efficacy pre-test scores of the experimental and control group. In order to test the above hypothesis, it was restated in its null form as

**H<sub>01</sub>:** There is no significant difference in the self-efficacy pre-test scores of the experimental and control groups. The above hypothesis was tested using an independent sample t-test; the details are given in the table below.

Table 1: N, Mean, SD, and t values for the self-efficacy pre-test scores for experimental and control groups

| Group              | N  | Mean  | SD   | 't' value | Significance                  |
|--------------------|----|-------|------|-----------|-------------------------------|
| Experimental Group | 30 | 91.67 | 1.15 | 1.78      | Not significant at 0.05 level |
| Control Group      | 30 | 91.13 | 1.17 |           |                               |

The above table shows that the obtained t-value is 1.78, which is not significant even at a 0.05 level. This indicates that the self-efficacy pre-test mean scores do not differ significantly. Thus, the null hypothesis stating that there is no significant difference in the self-efficacy pre-test scores of the experimental and control groups is not rejected. Thus, one may conclude that the pre-service teachers of the experimental and control groups did not show significant differences in their self-efficacy before the intervention.

**Hypothesis 2:** There is a significant difference in the media literacy pre-test scores of the experimental and control groups. In order to test the above hypothesis, it was restated in its null form as

**H02:** There is no significant difference in the media literacy pre-test scores of the experimental and control groups. The above hypothesis was tested using an independent sample t-test; the details are given in the table below.

Table 2: N, Mean, SD, and t values for the media literacy pre-test scores for experimental and control groups

| Group              | N  | Mean   | SD   | 't' value | Significance                  |
|--------------------|----|--------|------|-----------|-------------------------------|
| Experimental Group | 30 | 115.30 | 3.18 | 1.18      | Not significant at 0.01 level |
| Control Group      | 30 | 114.57 | 1.16 |           |                               |

From the above table, it is evident that the obtained t-value is 1.81, which is not significant even at a 0.05 level. This indicates that the media literacy pre-test mean scores do not differ significantly. Thus, the null hypothesis stating that there is no significant difference in the media literacy pre-test scores of the experimental and control groups is not rejected. Thus, one may conclude that the pre-service teachers of the experimental and control groups did not show significant differences in their media literacy before the intervention.

**Hypothesis 3:** There is a significant difference in the self-efficacy post-test scores of experimental and control groups. In order to test the above hypothesis, it was restated in its null form as

**H03:** There is no significant difference in the self-efficacy post-test scores of the experimental and control group. The above hypothesis was tested using an independent sample t-test, and the details are given in the below table.

Table 3 : N, Mean, SD, and t values for the Self-Efficacy post-test scores for experimental and control groups

| Group              | N  | Mean   | SD   | 't' value | Significance              |
|--------------------|----|--------|------|-----------|---------------------------|
| Experimental Group | 30 | 108.47 | 1.59 | 30.63     | Significant at 0.01 level |
| Control Group      | 30 | 96.83  | 1.34 |           |                           |

The above table shows that the obtained t-value of 30.63 is significant even at the 0.01 level. This indicates that their self-efficacy post-test scores significantly differ among the experimental and control groups. Thus, the null hypothesis stating that there is no significant difference in the self-efficacy post-test scores of the experimental and control group is rejected, and hence, the alternate hypothesis stating that there is a significant difference in the self-efficacy post-test scores of the experimental and control group. Thus, one may conclude that there is a significant difference in the pre-service teachers' self-efficacy after the intervention. Further, by considering the mean scores, one can conclude that the experimental group has shown significantly higher self-efficacy, 108.47, than the control group, 96.83. Finding: The experimental intervention helped improve the pre-service teachers' self-efficacy.

**Hypothesis 4:** There is a significant difference in the media literacy post-test scores of the experimental and control groups. In order to test the above hypothesis, it was restated in its null form as

**H04:** There is no significant difference in the media literacy post-test scores of the experimental and control groups. The above hypothesis was tested using an independent sample t-test; the details are given in the table below.

Table 4: N, Mean, SD, and t values for the Media Literacy post-test scores for experimental and control groups

| Group              | N  | Mean   | SD   | 't' value | Significance              |
|--------------------|----|--------|------|-----------|---------------------------|
| Experimental Group | 30 | 126.47 | 2.06 | 17.42     | Significant at 0.01 level |
| Control Group      | 30 | 119.13 | 1.04 |           |                           |

The above table shows that the obtained t-value of 17.42 is significant even at the 0.01 level. This indicates that the experimental and control groups' media literacy post-test scores significantly differ. Thus, the null hypothesis, which states that there is no significant difference in the media literacy post-test scores of the experimental and control group, is rejected, and hence, the alternate hypothesis, stating that there is a significant difference in the media literacy post-test scores of the experimental and control group. Thus, one may conclude that there is a significant difference in the media literacy of the pre-service teachers after the

intervention. Further, by considering the mean scores, one can conclude that the experimental group has shown significantly higher self-efficacy, 136.47, than that of the control group, 117.13. Finding: The experimental intervention helped to improve the media literacy of pre-service teachers.

### Major Findings of the Study

Through the data analysis, the following were the major findings of the study:

- The pre-service teachers of the experimental and control groups did not show significant differences in their self-efficacy before the intervention. The pre-service teachers of the experimental and control groups did not show significant differences in their media literacy before the intervention.
- There was a significant difference in the self-efficacy of the pre-service teachers after the intervention. Further, by considering the mean scores, it could be concluded that the experimental group has shown significantly higher self-efficacy, 108.47, than of the control group, 96.83.
- The experimental intervention helped to improve the self-efficacy of the pre-service teachers. There was a significant difference in the media literacy of the pre-service teachers after the intervention. Further, by considering the mean scores, it could be concluded that the experimental group has shown significantly higher self-efficacy, 126.47, than that of the control group, 119.13.
- The experimental intervention helped to improve the media literacy of pre-service teachers. Thus, it could be concluded that if hands-on training is provided, the pre-service teacher can be exposed to handling technology tools, improving their media literacy and self-efficacy. Improved media literacy and self-efficacy will equip the pre-service teachers to prepare well in integrating technology tools and achieve the desired learning outcomes in teaching-learning.

### Discussions

The observed outcomes can be attributed to several factors inherent in the experimental intervention: The experimental intervention likely involved practical, hands-on activities to familiarise pre-service teachers with technology tools. This immersive approach would have provided them with direct experience in utilising these tools, thereby enhancing their confidence and competence in employing technology for instructional purposes. Active engagement in the learning process, as facilitated by the experimental intervention, is known to enhance learning outcomes. By actively participating in activities designed to improve media literacy and self-efficacy, pre-service teachers were likely more motivated and invested in their own learning, leading to more significant gains in these areas. The experimental group may have benefited from a supportive learning environment encouraging experimentation and risk-taking. Feeling supported and encouraged to explore new technologies and instructional strategies could have bolstered pre-service teachers' confidence, contributing to the observed increase in self-efficacy. It's possible that the experimental intervention incorporated opportunities for feedback and reflection. Regular feedback on performance and opportunities for self-assessment and reflection are essential components of effective professional development. By receiving feedback on their progress and reflecting on their experiences, pre-service teachers could have gained valuable insights and improved their media literacy and self-efficacy. The curriculum of the experimental intervention may have been specifically designed to target the development of media literacy skills and self-efficacy in technology integration. By addressing these areas directly and providing structured learning experiences, the intervention could have maximised the impact on pre-service teachers' outcomes.

### Educational Implications

Teachers' comprehensive understanding and convictions play a pivotal role in shaping the incorporation of technology tools in the teaching-learning process. The outcomes of this current study yield implications for teacher educators, emphasising the necessity of offering extensive exposure to technology tools and optimising hands-on experiences. This instructional approach, facilitated through modular training, enables pre-service teachers to delve into diverse technology tools and integrate them pedagogically. In a world marked by unprecedented disruptions in the realm of teaching and learning, using technology tools is advocated to augment learner engagement and facilitate enhanced learning outcomes.

### Annexure

#### Sample Module

**Title:** Techno-pedagogical Designs

**Objectives:** Through this module, you will be able to

- Explore the meaning of techno-pedagogy
- Describe the different components of techno-pedagogy
- Analyse the factors influencing techno-pedagogy
- Explore the scope of TPACK

#### Activity 1

You are familiar with the different phases of teaching-learning and the process of preparing a lesson plan. Content analysis, framing learning objectives, designing learning experiences, and assessment are the core of any planning. As you know, the learning experiences must be multi-sensory to address the learners' need for varied learning styles. You have to select a topic of your choice and prepare a plan including all possible learning resources that can enhance the teaching-learning quality.

#### Activity 2

Now you know that the selection of the learning resources needs to be according to the type of content and the designed learning objective, keeping in mind the scope of assessment also. Now, go through the plan you have prepared and then note down the scope of technology tools that can be used in each learning experience. Reflect on your selection of technology tools.

#### Activity 3

Based on your reflections, you will find that the scope of technology tools that can be used for each learning experience is more. How will you filter your selection to reach a final selection of the most appropriate technology tool? What are your considerations in selecting the same?

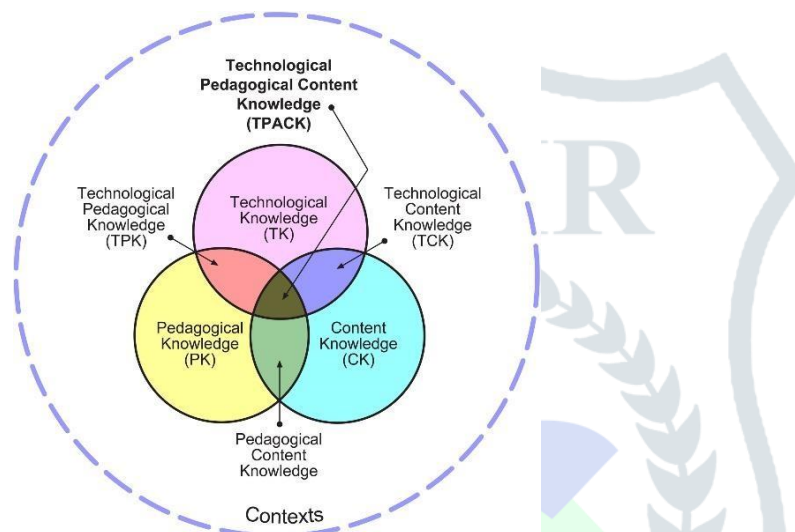
The selection of the most appropriate technology tools will depend on the type of content, the learning objectives, assessment, ease of use, scope for integrating the device into the learning experience, learner participation, etc.

Now try to answer these questions:

- What is techno-pedagogy?
- What are the different components of techno-pedagogy?
- What are the factors influencing techno-pedagogy?

#### Activity 4

Analyse the given diagram



Source: image ©2012 by tpack.org | From <https://educationaltechnology.net/technological-pedagogical-content-knowledge-tpack-framework/>>

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