

TEACHER COMPETENCIES IN TEACHING: EDUCATION TECHNOLOGY

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Abstract:

Today's education system faces the challenges to organize individuals for the information society inside which one of the preeminent points. Teachers are one of the vital resources in academic institutions. Teachers are working awfully difficult to extend the innovation framework to form it attainable for educators and learners. In order to realize the riches of information assets and instructive materials as of now realistic through the online system and elective innovation frameworks. While teaching and learning conditions, teachers are central to the question of education's quality and performance. The student's achievement level can be analyzed based on the teacher's competency. For the improvement of student's outcomes, the teachers have to face a lot of challenges while in serving mode. The education system must prepare a new genre of skilled teachers to align learner's experiences with the changing realities of performance. In this paper, the level of competency in instructing innovation integration is portrayed.

Keyword: ISTE standards, Formal approach, Informal approach, Personal skill development, Policy issues, Teaching & Learning framework.

1. Introduction:

Competent academics apply wide, profound, and coordinates sets of data and abilities as they set up for the execution, and reexamine instruction. Innovation capability is one measurement of educator competency (D.Banners et al., 2019) (M.Burkle et al., 2018) (S.Bruka, 2015). A survey of examination on instructor data and instructing measures proposes that over time effective academicians create the consequent abilities and behaviors:

- Academician knows how to arrange, plan & plan viable educational programs, appraisal devices, and directions strategies.
- Teachers are talented facilitators and intelligent practitioners.
- Teachers are experts committed to lifelong learning.
- Teachers are viable classroom managers.
- Teachers know how to coordinate the understudies through course content.
- Teachers know how to recognize their qualities, how to assess work, and how to propel them.

The procurement of specialized information and aptitudes ought to be concomitant with the improvement of a broader cluster of competencies. Early makes an endeavor to create innovation measures for scholastics were confined from the broader instructor competencies and were focused completely on innovation abilities. Thus, these competencies were the foremost portion dismissed by the instructor – coaching teaches. The International Society for Technology in Education (ISTE) has effectively tended to the innovation confinement issue and has released a gathering of reexamined instructor competencies guidelines (G.Attwel,2007) (www.eGyankosh.ac.in) (www.iste.org) as appeared in table 1.

Table1: Teacher competencies

Sl.No	Content	Areas
1.	Technology skill	* Subject matter / skill. * Technology operations / concepts.
2.	Communication skill	* Interact with students effectively. * Communicate sensitively with language appropriate to the students.
3.	Planning and Design	* Proper plan and design the curriculum. * Implementing the plans
4.	Teaching and Learning skill	* Teach through diverse modes * Develop the teaching and learning style * Instructional practice work
5.	Evaluation	* Evaluate own teaching behavior * Design and uses various evaluate Procedure to access students learning. *.Uses to improve the students learning.
6.	Problem solving skill	*Thinks critically about teaching and learning. * Creative and analytical thinking skills
7.	Professional Practice	* Deals equitably and responsibly with all learners. *Understand legal and moral Responsibilities. *Understand the impact of societal problems.

These actualities bolster the commonly acknowledged see that innovation has to be utilized as an empowering technique that underpins and amplifies the varied capacities of instructing and learning. This approach is additionally a part of eatable to program reformers in that it's extra important to and adjusted with the bigger work of instruction framework change. With this integrated approach, the Department of Education-USA has taken as PT3 initiative step (Preparing Tomorrow's Teachers to Use Technology). This is often driving a significant effort by Universities and Colleges nationwide to reorganize their teacher preparation program, field experiences, induction programs, and collaboration with arts and science departments (S.Lopez et al., 2012) (N.Pantic, 2011) (www.tech.edu.gov).

The ISTE aligned with the Interstate New Teacher Assessment and Support Consortium (INTASC) standards, is at the center of this instruction development and is creating increased mindfulness of the significance and substance of instructor benchmarks regularly and innovation integration competencies particularly (www.iste.org). To live, learn, and work with success in a continuously complicated and information-rich society, understudies ought to be able to utilize innovation viably. Among a great academic setting, innovation will empower understudies to gotten to be:

- Capable information technology users
- Information seekers, analyzers, and evaluators
- Problem solvers and decision makers
- Creative and effective users of productivity tools
- Communicators, collaborators, publishers, and producers
- Informed, responsible, and contributing citizens

Inquire about over the past decade has too provided prove that instructors go through unsurprising a few stages of improvement as innovation – integration competence appeared in figure 1.

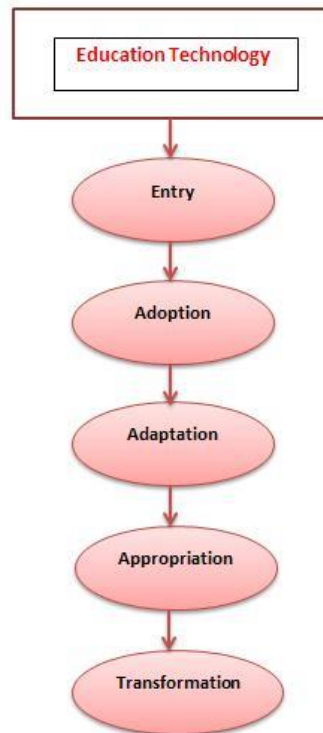


Figure 1: Education Technology stages

It is critical to get it these stages since instructors at each who are attempting to achieve higher levels of competence in innovation integration require distinctive sorts and proficient advancement at each level (M.Siddique, 2004) (A.Ivanitsky, 2002).

2. Methodologies:

For the effective teaching and learning system, the kinds of strategies are required to train the teachers. Global educational practices have been transformed in parallel with advances in information and digital technologies. In proficient advancement, the following characteristics are to be focused commonly (B.Fishman & C.Dede, 2016) (G.Bowen, 2013) (T.D.Schwarzbeck, 2012).

- Ultimate objective of high quality proficient advancement is to progress understudy learning.
- Professional advancement ought to center upon improving understudy scholastic accomplishment. The development of instructor capability within the integration and application of innovation must be connected to understudy learning of the subject matter and fulfillment of state and nearby substance standards.
- Professional advancement is most compelling when coordination and innovation are connected with broader change objectives of academic institutions improvement.

- Professional improvement is outlined to raise instructor capability within the integration and application of innovation is most effective when it is not conducted as a separated initiative.
- High-quality professional advancement contributes to the foundation of a collegial and collaborative culture.
- Effective professional improvement joins assessment (performative, formative, and summative evaluations) to guarantee that each movement is assembly the learning needs of its participants.

In order to maximize the teacher competencies, the following categories are to be implemented effectively.

2.1. Formal Approaches:

Formal approaches to professional improvement envelop those exercises that happen generally beneath the heading of a teacher or coach who expect the part of interceding the learning. It can explain with four elements as shown in figure 2.

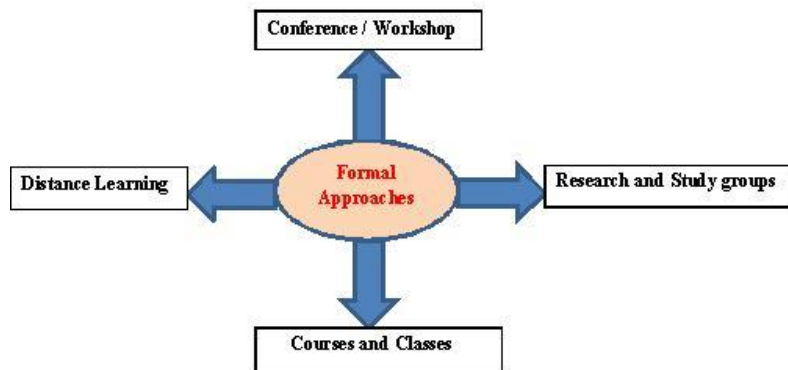


Figure 2: Formal approach structure

- **Conference / Workshop / Webinar:** These exercises are valuable strategies for presenting particular aptitudes to a learner gathering of people, such as how to utilize a specific program application or how to explore the Web, especially when take after up back will be given.
- **Action Research and Study groups:** Activity inquires about is an approach to proficient improvement in which instructors regularly spend one or more a long time locked in classroom-based inquire about ventures. Loucks-Horsley depicts activity investigate as a prepare in which instructors look at their home and related understudy learning. This

point is finding in expressive composed reports. When activity investigation is conducted collaboratively, it cultivates the development of a learning community.

- **Courses and Classes:** Enrollment in a program of think about given by an institution of higher instruction is another conventional approach to proficient improvement
- **Distance Learning:** It permits teachers and learners to associate with one another, free of space and time, by utilizing intelligently computer conferencing, video and/or sound tape, the web, or any combination thereof. It offers the preferences of adaptability in time and area and gives instructions with an endless cluster of assets. Moreover, interest in proficient improvement that's electronically conveyed empowers instructors to connect with peers that bring with them wealthy differing qualities in culture, point of view, and involvement.

2.2. Informal Approaches:

The informal approach structure has three elements (Figure3).

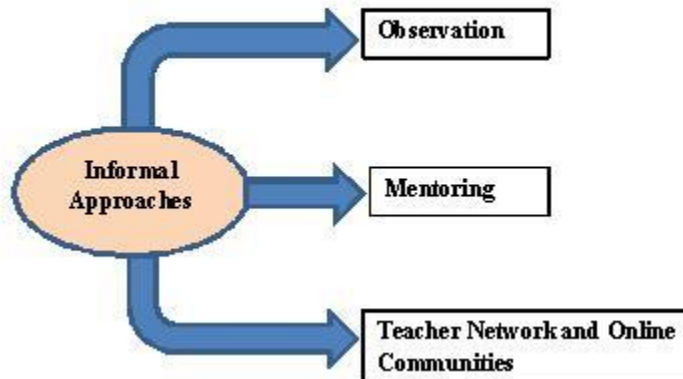


Figure 3: Informal approach structure

- **Observation:** It may be a handle of common to the individual being watched and the eyewitness. Communication between the instructor being focused and the observer contributes encourage to the proficient advancement movement. It is additionally vital that the observer is cognizant of fitting strategies for giving input that's helpful and empowering instead of disparaging.
- **Mentoring:** It includes matching instructors who are gifted in a specific guidelines strategy or technique with one or more amateur instructors. Mentoring can take put at a

common location or at a remove utilizing innovation. Long separate mentoring can be finished utilizing email, composed correspondence, and phone conversations.

- **Teacher Network and Online Communities:** Instructors can moreover connect proficient systems to communicate approximately imperative issues, to pick up investigating help, to get elective points of view for issue understanding, to share reflections, and to exchange resources.

2.3. Personal Development Program:

Professional development is progressively planned with the aim to set up collegiality, energize experimentation, reflection, and collaboration (A.Ivanitsky, 2002).

In the world, the most of the Higher Education Institutes (HEI) aims for the online project are to:

- Identify and assess the taken a toll of a run of models of online learning and to decide the scope of the extension given monetary, time, and innovative constraints.
- Develop criteria to help Faculties in deciding which models are fitting for which units and courses of study.
- Identify, gauge the fetched of and arrange models of proficient advancement to help all scholarly staff included within the plan, improvement and conveyance of instructive programs, to coordinated innovation into adaptable educating and learning strategies and to create these models for endorsement by the college, to meet both particular venture prerequisites and more extensive needs inside the university

The part of scholarly staff advancement in actualizing social alters in instructing and learning with unused innovations is well recognized. One of the major destinations of the staff improvement technique is to help Faculties coordinated suitable on-job and off- work preparing in zones related to the Staff ventures.

2.4. Policy Issues:

For instruction policymakers, the requirement for prepared instructors to capitalize on ventures in innovation foundation is apparent but not so effectively finished. In common, policymakers may wish to consider an assortment of ways to spur and back instructors to pick up innovation competencies.

Policymakers may wish to consider setting up an arrangement that produces it helpful and doable for an educator to memorize around advances by making conditions beneath which proficient advancement for instructors is more accessible. It is exceptionally vital to obtain information and aptitudes on how to utilize information (M. Siddique, 2004).

2.5. Teaching & Learning framework:

The part of ICT (Information and Communication Technology) within the learning handle is emphatically related to the academic vision and instructive objectives of the institutions. Coordination ICT within the learning handle isn't as it were the matter of the mixture of unused materials but it impacts all viewpoints of the educating and learning prepare. The utilize of ICT in instruction as a question refers to learning approximately data innovation and has been broadly executed within all sorts of scholastic teach. As of now, most of the scholarly centers are following the new innovation conspire of learning handle is the Learning Management system (LMS). The LMS could be a web-based or cloud-based program which helps in instructing learning handle and makes a difference in the viable conveyance of instruction, preparing, and advancement program. This framework encourages teachers, learners, and policymakers to utilize and to get of administrations, instructing, and learning processes (A.Chaubey & Dr.B.Bhattacharya, 2015).

This framework has diverse categories depending upon their utilization and openness. Distinctive LMS agreeing to their categories (Forouzesh et al., 2012):

* ***Open Source Learning Management System:*** The open-source LMSs are learning administration stages that are accessible beneath an open free permit, giving clients the rights to use, to consider, to make and to convey the comes about, to anybody and for any reason. Example: MOODLE

* ***Cloud-Based Learning Management System:*** Cloud-based learning administration comes with cloud computing highlights and provides the instruction online to any understudy, at any time and any place around the world. It must necessities to be satisfied being the presence of a Web association and of an instrument (i.e., computer, tablet, smartphone).

Example: Eduwave

* ***Proprietary Learning Management System:*** These frameworks have been authorized and having a place to the copyright owner/s.

Example: ANGEL (property of Blackboard Inc.). There are three stakeholders in this system.

- Learner: the main users of LMS.
- Instructor: usages LMS to guide, supervise, assist and evaluate learners.
- Administrator: keeps the proper flow of operation of services and its users.

The LMS gives an awfully true and organized encounter of virtual learning. Without LMS it would be most troublesome to arrange, actualize, and convey the instruction and preparing in an effective way. In spite of the fact that LMS may be a web-based framework, the utilize of the LMS is not limited to online classes as it were. LMS has been broadly utilized and will proceed to develop within the future in the higher instruction education system (G.Attwel, 2007). It does

not restrain to the online environment, but moreover, progress and coordinated into the crossbreed and web-enhanced instructing and learning environment. The implementation of LMS has encouraged improving learning capacities, counting problem-solving, and collaboration skills.

3. Future Challenges:

In a traditional, mostly teacher-oriented educational setting the teacher is completely responsible for the arrangement of most of the learning activities towards the student’s performance. Currently, the education system has changed to meet the challenges of the information society, it is inevitable that the role of the teacher has to change and the student has to become more actively involved in the learning process and produce a good level of achievement (S.Brucaj, 2015).

The mutual exchange of new approaches for the student’s success has to become a natural ‘attitude’ through the teacher competencies. As teachers gain confidence, use technology as part of more innovative instruction, including team teaching, interdisciplinary project-based instruction, and individually paced instruction (T.D.Schwartzbeck, 2012). For the proper achievement, all academic centers should apply the 3T formula (Figure 4) and implement it properly.

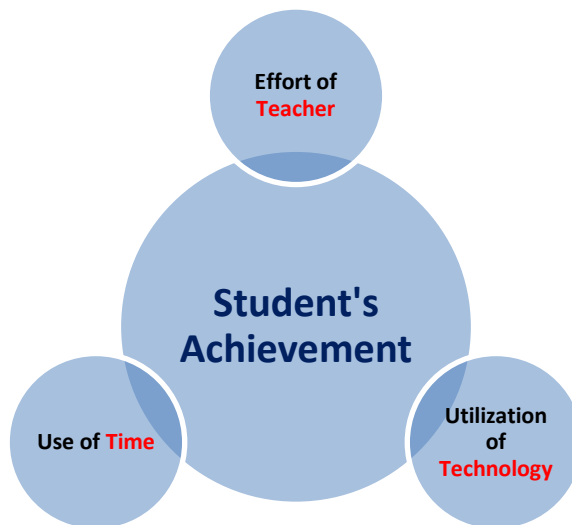


Figure 4: Student achievement structure

In addition, the following categories to be considered and implemented for getting good challenging in the teaching and learning process.

- * Effective instruction
- * Teachers recruitment
- * Personality skill development

4. Conclusion:

From some recent studies, the majorities of the teachers feel inadequately trained to use technology and is not aware of ICT-based teaching and learning systems. In order to get the maximum student's learning outcomes; teachers should focus on serving the teacher oriented system into serving what emerges as the education of the future (student-oriented). Innovative programs can be a growing impact on teacher competencies.

Policy issues are very important for teachers to acquire knowledge and skills in how to use technologies for teaching and learning systems. The effect of the utilization of ICT in instruction will not be constrained to the performing artists included within the learning to prepare but will to alter the regulation framework, relations, and designs of behavior inside the instruction framework, and indeed the substance of instruction. In any case, the information society is within the change towards the data and communication age.

In short, the teacher's effort with technological revolution can be of help to transform education from teacher to student orientation, to become a more constructive and global one. To maximize student learning, academics should have experience in a wide-ranging array of competencies in a particularly complicated atmosphere wherever many essential choices are needed on a daily basis.

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