

## **SUMMARY**

Technological evolution has brought revolution in the whole world. Technology is ubiquitous today and touches us on all walks of our life (**Haughton et al, 2015**). Every aspect of human life is highly affected by the latest technological advancements; our educational system is of no exception. Globally as well as in our country there is a leading trend of including the latest technological facilities in the educational system in order to improve its efficiency and the process and products of education. Initially the emphasis was on the introduction of simple audio-visual tools, but with the rapid growth of societies, there is a latest trend of integrating the technologies in our classrooms. With the development of Shulmans PCK, one latest and successful development emerged in teaching area i.e. Kohler and Mishras TPACK i.e. the integration of teachers pck and technological knowledge. For this purpose the the researcher was interested to assess such knowledge among the teachers in higher education level. So the researcher go for a research study which was entitled as '**A study of techno-integrated teaching of college teachers**'.

For this purpose the researcher conducted a study in the degree colleges of the state of J&K and selected a sample of 320 teachers through the random process from randomly selected 10 colleges using the application Pick Me. The researcher collected the primary data for this purpose. The researcher distributed in person the technology availability, technology usage and pedagogy usage checklist and TPACK questionnaire among the selected respondents and collected from them after they filled them. From some teachers the data was collected on spot and some asked for to come on next day and the researcher collected

from them accordingly. This was the quantitative data of my study. The researcher further extended the work by collecting the qualitative data from 10 teachers who were also selected through random process from the already selected respondents but on the basis of their high self-assessed TPACK score. The researcher conducted in depth interviews and their classroom observations. The data was analyzed using the frequency method, percentage rates, t-0test and ANOVAs for quantitative data and for qualitative data, the researcher read the transcripts thoroughly and started their coding process. After all the transcripts were coded , the researcher developed important themes by joining the codes which were he think are similar. These themes were then explained by the researcher in detail along with the actual statements made by the teachers. The qualitative data was interpreted in support or against the quantitative findings in order to understand them very clearly and also interpreted separately in order to explore the techno-integrated teaching concept with much clarity. “The analysis of the collected data revealed that there is a lack of technological facilities necessary for techno-integrated teaching either in person or in the colleges selected teachers are teaching. The researcher also observed that the available technologies in the colleges were old, outdated and not properly maintained. Also, colleges which are old established in urban areas proceed the colleges which are new and in rural and far flung areas. Further, the researcher found that the use of technologies like computers, laptops, internet, smart phones and Wi-Fi are used by teachers frequently for their personal use and also sometimes for the teaching purposes. However, the use of latest technologies like smart classrooms, google classrooms, blogs, online teaching, constructivism, simulation, google cardboards ,virtual classrooms, digital boards, interactive boards are used by the very small number of teachers and not frequently but very rare. The researcher also observed that teachers are mostly using the projectors, PPT,

showing of online YouTube videos and documentaries to their students related to their content taught or subject of teaching and sometimes for their general information and knowledge. The study then focused on the self-assessed TPACK knowledge of the teachers. The quantitative data showed that teachers hold average techno-integrated knowledge when their scores were compared with the standardized TPACK scale. The researcher then compared their techno-integrated teaching knowledge with their demographic variable of gender, locale, teaching experience, teaching position, teaching subjects, educational qualifications and finally between teachers of Jammu and Kashmir division. The quantitative data revealed no significant difference in the seven components of TPACK among teachers in relation to their gender, locale, and significant difference was found in the content knowledge and pedagogical knowledge of teachers in relation to their teaching subjects, and significant differences were found in the TPK, TCK PCK and TPACK components in relation to their teaching experience, teaching positions and academic qualifications. No differences were found in the seven components of TPACK among the teachers of two divisions i.e. Jammu division and Kashmir division. The qualitative data revealed that teachers are lacking in their techno-integrated teaching. Especially the pedagogical and technological knowledge and there integration with their good content knowledge is very little among the teachers. Teachers are mostly relying on the lecture methods and very rarely using the other pedagogies and technologies in their classroom teaching. The planning of lessons to teach is also lacking among the teachers. Teachers are mostly focusing on what to teach and very less on how to teach as they believe that there is only one way of teaching. However some teachers made efforts to improve their teaching methods as they are sometimes using the pedagogies like discussions, demonstrations, buzz sessions, activity methods and role playing. Besides,

these teachers are using the smart classrooms, Google classrooms, Google cardboards, simulations, blogs, online lessons, developed the e-content for their teaching subjects, subject specific teaching applications like Geogebra, Photomath, Newtonium etc. The researcher further explored the motivational factors encouraging the teachers to teach accordingly, the replied the factors of to remain up to date, access to online resources, latest developments, classroom attentiveness , interest among learners, 21<sup>st</sup> century skills etc”. The researcher further explored the challenges teachers face in making their teaching more techno-integrated. The teachers responded that dearth of technological material resources, absence of time, absence of awareness, skill and competency in pedagogies and techno-integrated teaching, poor administrative support, fear of losing their importance and lack of interest. The researcher finally provided some remedial measures for making the techno-integrated teaching more effective These are providing sufficient resources, sound financial support, increasing GDP % in education, staff for the proper maintenance of equipments, training for teachers, administrative support, rewards and incentives, help from NGOs , permanent job positions and digital literacy among the learners.