# CHAPTER II

# REVIEW RELATED LITERARURE

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### 2.1. Introduction

The review of related literature is an important component of the research process. The review of related literature involves the systematic identification. location and analysis of documents containing information related to research problem. These documents include periodicals, abstracts, reviews, books and other research reports. The review tells the researcher what has been done and what needs to be done (Gay.1990). In the words of Best and Kahn (1989). "The review of related literature is a valuable guide to define the problem recognizing its significance suggesting 7 promising data gathering device. appropriate study design and source of data" Effective research in based on past knowledge and this chapter on review of related studies helps to eliminate the duplication of what has been done and provides chances for framing relevant hypotheses and helpful suggestion for significant investigations. The review of the literature promotes a greater understanding of the problem, its crucial aspects and contributes to the scholarly presentation of the research. A brief summary of previous researches references and writings of scholars and experts provides evidence that the researcher is familiar with what is already known and what is still unknown and untested.

# 2.2. Studies related to attitude towards ICT

Beri, N., & Sharma, L. (2019). Teachers' attitude towards integrating ICT in teacher education. *International Journal of Innovative Technology and Exploring Engineering*, 8(8), 285-295. "Conducted research on the subject "Teachers' attitude toward ICT integration in teacher education". The goal of this research is to study the attitude of teacher-educators toward ICTs and the extent of understanding and use of these ICT tools and devices among teacher-educators in teacher training colleges. A self-prepared interview guide was used in the present study. Purposeful sampling was applied in the present study to include respondents that are 50 teacher educators of various teacher-training colleges in the State of Haryana. India. The results showed positively

responding and somewhat with favorability to ICT and its tools and devices in the education process of teacher and educators. Current findings reveal that teacher educators do not have sufficient training and technical support. Current study also seems to indicate that teacher educators do also have some level of anxiety while incorporating technology and training tools within teaching learning experience."

Bindu, C. N. (2017). A research entitled ""Attitude towards and Awareness of Using ICT In Classrooms: A Case of Expatriate Indian Teachers in UAE" has been carried out. This research currently studies the Indian suffrage teaching in UAE on awareness of using ICT in teaching and the correlating it with the person's gender and age. Collected data was conducted through questionnaire survey and interview. The first phase of data collection included 57 teachers from 7 different Indian curriculum schools, selected by consecutive sampling technique. The second phase involved a purposive sampling of 10 teachers qualified as subject coordinators. Results drawn from both quantitative and qualitative analysis indicate a positive hold of attitude by teachers in general towards ICT, irrespective of gender and age. On the contrary, the average level of ICT awareness among the teachers continued to be gender and age influenced. It indicates that ICT usage for educational purposes needs to receive more consideration than what it currently does.

Fanai, L., &Chhangte, R. (2016). Carry out research under the topic "A Study of the Attitude of the secondary school teachers with Respect to Teaching Experience and Professional Qualification towards ICT". The present study attempts to find out whether secondary school teachers of Aizwal district, Mizoram are aware of ICT. It also attempts to see whether teaching experience and professional qualification have any effect on the attitudes of the teachers with respect to ICT. It is found that they have a positive attitude towards ICT and also that no difference exists in attitudes between junior and intermediate teachers, intermediate and senior teachers and junior and senior teachers. It is also found that educational qualification does not affect it.

Verma, C., Dahiya, S., & Mehta, D. (2016)An analytical approach to state diversity with respect to ICT: A study of six universities of Punjab and Haryana is the title of the research study conducted. The student T-test assuming equality of variance was used to test for any meaningful diversity between faculty and students in the matter of their states

of residence. The stratified random sampling method was employed to collect 560 samples of students and 344 samples of faculty from six universities of Punjab and Haryana. The study results indicate that there are no significant differences between students and faculty as regards their state of residence. There is no diversity found between the students of Punjab and the students of Haryana concerning ICT awareness. Likewise, there is no diversity found between the faculty of Punjab and the faculty of Haryana about ICT awareness concerning the state variable.

**Dixit &Kaur, 2015.**Well, quite an interesting name of a project indeed! Trying to understand "Attitude of B.Ed. students towards ICT Teaching" involved taking a concourse with B.Ed. students through ICT teaching. For this study, a random sample of 200 teacher trainees was taken from the Moga district of Punjab state. An ICT teaching attitude scale (ICTTAS) developed and standardized by T. Pradeep Kumar (2013) was used to collect the data. The means, standard deviations, and t-values were used to analyze the data. Accordingly, it was found that locality and gender of the B.Ed. students significantly influenced their attitudes towards ICT teaching.

**Sekar, J., & Lawrence, A. S.** (2015) The study on the "Attitude of B.Ed. trainees towards information and communication technology," which was conducted to find out the attitude of B.Ed. trainees towards ICT. However, there was no significant difference in the attitude of B.Ed. trainees towards ICT with respect to gender, discipline, course of study, locality, aided colleges of education B.Ed. trainees are better than government college trainees with regard to their attitude toward ICT.

**Victor, S. R.** (2013)A research has been carried out on the topic entitled ~'attitude towards ICT among B.Ed. trainees'. It is primarily concerned with the extent of the attitude of B.Ed. trainees towards ICT. The findings revealed that the large section of the B.Ed. trainees who recorded 60.5% have showed confusion in their attitude and only 39.5% of trainees showed a positive attitude towards ICT. Further, irrespective of gender and locale, the attitude of B.Ed. trainees towards ICT is at the same level.

Ang"ondi.,(2013) studied teachers attitudes and perceptions on the use of ICT in Teaching and Learning as observed by ICT Champions. The findings revealed that

although teachers were enthusiastic about ICT integration, there were several challenges that were still holding them back from fully utilizing the ICTs.

**Brindamani and Manichander.**,(2013) examined attitude towards ICT among B.Ed.trainess. The findings showed that the attitudes of ICT among male trainees are higher than female trainees. The findings also showed that The attitudes of ICT among below 25 yrs are higher than above 25 yrs B.Ed. trainees.

Ly Thanh Hue.,(2013) conducted a study on Attitudes towards ICT Integration into Curriculum and Usage among University Lecturers in Vietnam. The results of the correlation analysis identified a slightly moderate positive relationship between lecturers attitudes towards ICT integration into the curriculum and their ICT use in the classroom.

Mohamed AbdelazizElsaadani (2013) explored the relationship between teaching staff age and their attitude towards Information and Communications Technologies' (ICT). The results showed that there is a moderate and positive relationship between the age of participants and their attitude towards ICT; thus, when considering attitude towards ICT by teaching staff members in Egyptians HEI, age is a significant factor. The result of this research has significant implications to HEI when they plan, develop, and adopt ICT. HEI has to consider that teaching staff attitude towards ICT is related to their age.

Omollo, Indoshi&Ayere., (2013) analysed attitude of teachers and students towards use of information and communication technology in the implementation of biology curriculum in selected secondary schools. The results of the study teachers and students there were no statistically significant differences across gender towards ICT use in the implementation of Biology curriculum even though males had slightly more positive attitude toward ICT use than females. Thus it may be deduced that attitude towards ICT use is not gender related and both male and female students and teachers appear to be similarly motivated to use ICT in the implementation of Biology curriculum.

**Snit SittiandSrikulNuntachompoo.,**(2013) studied Attitudes towards the use of ICT Training Curriculum for Thai Elderly People. The research findings indicated that the elderly who use ICT learning show more positive attitudes towards new technologies.

Lal, C. (2014).studied User and Non-User Teachers' attitudes towards ICT in Relation to Their School Teaching Subjects The findings of study revealed that the ICT user teachers' attitude towards ICT was highly positive in comparison to ICT non-user teachers but they have also positive attitude towards ICT in relation to their school teaching subjects. It is clear that vast majority of secondary school teachers had positive attitude towards ICT in relation to their school teaching subjects for many reasons.

**Nikolopoulou(2015)** investigated early childhood teachers' beliefs about information and communications technology (ICT) and play in preschool, as well as their confidence in integrating ICT in the classroom. The result viewing ICT as a mode of learning that should be embedded in the curriculum is expected to lead to ICT integration in a teacher's daily practices.

**PavlaSlechtova.**,(2015) studied attitudes of undergraduate students to the use of ICT in education. The results showed that the students' willingness to use ICT for studying and attitudes to e-learning are not homogenous and showed certain relation to their field of study and computer skills. The characteristics of digital natives do not apply to everyone, which should be reflected in courses using ICT in higher education institutions.

Yang (2015) investigated pre-service mathematics teachers' mathematics beliefs, beliefs about information and communication technology (ICT), and their relationships. The results indicated that pre-service mathematics teachers' dynamic belief about the nature of mathematics, constructivist belief about mathematics learning and teaching, and positive attitudes towards ICT are more likely to be correlated with their constructivist belief about ICT use.

John Paul ObillosDela Rosa.,(2016) analyzed the experiences, perceptions and attitudes on ICT integration: A case study among novice and experienced language teachers in the Philippines. Results revealed that the experienced language teacher had more exposure to ICT use than the novice teacher. However, the novice teacher makes use of more ICT-related materials and activities in her language class. Both teachers also had positive views on the impact of ICT on students overall learning and achievement. Moreover, the

novice teacher views ICT use as time-consuming and does call for a more knowledgeable manipulation of technological devices.

Kazan, S. &ELDaou, B. (2016) studied the relationship between teachers' self - efficacy, attitudes towards ICT usefulness and students' science performance in the Lebanese inclusive schools 2015. Findings of this study revealed that teachers 'self-efficacy in the level of technology use, and attitudes had significant effects on the grades and interaction of students with special needs. The results indicated that participants of group one, who were trained, were able to better define and apply technology in the science classroom than group two which was not being trained.

Konca, A.S., Ozel, E. &Zelyurt, H. (2016) analyzed the Attitudes of preschool teachers towards using information and communication technologies (ICT). The result of the study, the teachers showed a very positive attitude towards using technological tools. It was found out that preschool education graduate teachers showed a more positive attitudes towards using technological tools as comparing with the distance education graduate preschool teachers.

Mehmet Kemal Aydin, Ali Semerci and Mehmet Gürol., (2016) took a study on Teachers' attitude towards ICT use in secondary schools: A scale development study. The results illustrated that Teachers' ICT Attitudes Scale (TICTAS) had a Factor Analyses indicated good goodness of fit estimates. As a result, a reliable and valid scale comprising of 16 items loaded in two factors (ICT willingness and ICT anxiety) was developed.

**Mustafina, A.** (2016) investigated Teachers' attitudes toward technology integration in a Kazakhstani secondary school. Findings showed that teachers possess positive attitudes toward ICT in school mostly due to the advantages that technology offers 83 such as distant learning and visualization of the material (3D programs). Moreover, the analysis showed that all four factors – confidence, knowledge, gender and age – had the potential to influence and change teachers' attitudes toward technology.

AlyyaMeerzaand Gary Beauchamp., (2017) analysed the Factors Influencing Undergraduates Attitudes towards ICT: An Empirical Study in Kheis, The quantitative

results showed that the Usefulness of ICT and Ease of use of ICT factors are the key dimensions of undergraduates' attitudes towards ICT. Another result showed that the examined factors had a direct impact on undergraduates' attitudes. Moreover, the qualitative results revealed that the factor of peer learning had a strong impact on undergraduates' attitudes towards the use of ICT. Aslan( 2017) investigated on to what extent ICT-related variables--such as perceived ICT competence, perceived competence in ICT integration, attitudes toward ICT, anxiety around ICT usage, external barriers to ICT integration, ICTrelated courses, pedagogical knowledge, and prior experience concerning the use of ICT--predict the dependent variable "integration of ICT into teaching practices" for pre-service teachers. The findings of this study showed that preservice teachertraining programs, especially pedagogical knowledge and ICT-related courses, have a significant effect in enabling pre-service teachers to use ICT in their teaching practices.

**Bindu C.N.**,(2017) studied the Attitude Towards, and Awareness Of Using ICT in classrooms: A Case of Expatriate Indian Teachers in UAE. The findings of the study, through the analysis of both quantitative and qualitative data, revealed that teachers had a positive attitude towards using ICT irrespective of their gender and age. However, the ICT awareness of teachers is at the average level and is influenced by their gender and age.

**Stephen AduGyamfi.,**(2017) investigated the pre-service teachers' attitude towards information and communication technology usage: A Ghanaian survey. The findings revealed that the following: (1) leadership support significantly influenced perceived ease of use; (2) job relevance significantly influenced perceived usefulness; (3) perceived usefulness significantly influenced attitude towards use; (4) perceived ease of use significantly influenced attitude towards use (5) the TAM is significant 84 for pre-service teacher education context except the relationship between perceived ease of use and perceived usefulness.