CHAPTER - II

REVIEW OF RELATED LITERATURE

2.1. INTRODUCTION

Review of related literature means the process of reading, analyzing, evaluating and summarizing scholarly materials about a specific topic. The result of a literature review may be compiled in a report or they may serve as part of a research article, thesis or grant proposal. Literature review is the part of the research where the researcher will be given opportunity to strengthen his/her research work for he/she is not just writing about any random subject but that many other have also poured their thoughts on the topic. The researcher may also ask what makes literature review a necessary part of the research work. With a literature review, the researcher needs to establish a clear tie between the works that he/she has cited and the topic that he/she is doing about. The researcher should be able to justify the inclusion of a certain work in his/her review so as to make everything that he/she has written useful.

2.2. STUDIES CONDUCTED IN ABROAD

Trisha Nishimura, (2014) made a study on, “Effective Professional Development of Teachers: A Guide to Actualizing Inclusive Schooling”. This study provides a foundation for future research and areas of further examination. Follow up research studies should include a longitudinal study of inclusive coaching. Eight weeks of intensive intervention is a short time span to change teacher attitudes. Although this study attempted to provide multiple interventions customized to the needs of each teacher, the eight weeks did not allow for deeper reflection or extended practice of the inclusive strategies taught. A longitudinal study across a school year (September to June) from pre-post test would provide teachers with opportunities to reflect and
conduct peer coaching. A longitudinal study would provide time for teachers to support and problem solve collaboratively with each other in the context of their classrooms. A peer-coaching module would allow for teachers to refine their strategies and to support each other in sustaining inclusive practices and provide time to ensure actual behavior change. The process of implementing change is difficult when the culture of a system is deeply rooted in values and assumptions that are contradictory to the new vision (Fullan, 2007; Tye, 1987). Not all educators believe that students with disabilities should be educated within the general education classroom and there has been a long history of segregated schooling for students with disabilities in the state of California, like many other places in the United States.

Therefore, in order to reform the deep structure, teachers must create a shared vision for students with disabilities (Fullan, 2007; McLeskey & Waldron, 2002; Tye, 1987). Every teacher is on a journey and in order to effectively reach teachers in providing inclusive practices in their classrooms, we as educators, mentors, researchers, and scholars, must meet them on their journey. As previously stated, attitude change towards inclusive schooling is a complex issue as it deals not only with teacher attitudes towards children with disabilities, but also with teacher confidence, skill levels, and years of segregated practice involving the deep structure of schooling. Traditional professional development methods such as sit and get methods have not been highly successful in providing the necessary changes in attitudes to make inclusive schooling a reality for children with disabilities. Consequently, it is essential to continue the search for new methods of professional development are essential to explore. The limited results of this study contribute to the perspective that individualized professional development, using a coaching model, deserves greater exploration as a potential strategy for attitude change and skill development in teachers.
Khor & Ean Teng, (2014) made a study on, “An Analysis of ODL Student Perception and Adoption Behavior Using the Technology Acceptance Model”. This study presents an empirical study aiming on investigating ODL students' perception and adoption of SCORM Compliant Learning Object (SCLO). With the increasing use of SCLO in recent years, a better understanding and implementation of effective instructional resources is necessary to meet the diverse needs of ODL students and enhance their learning performance. The eventual usage of relevant stakeholders determines the success of a system. The system is useless if it is not used in the expected way by the potential users even though it is a good system. Therefore, the aim of this research is to examine if ODL students will eventually use SCLO for their learning. The study used TAM as a basis to investigate the relationship of external and internal variables. A survey instrument eliciting responses on a series of Likert-type questions was given to selected ODL undergraduate students. The results of this study confirm that users' perception has significant effect on the acceptance and adoption of SCLO. The study provides a better understanding of students' behavior on SCLO and the acceptance model.

Mariki, Belingtone Eliringia, (2014) published a paper on, “Teachers' Experiences in Educational Multimedia Content Development: The Case of Tanzania's Institute of Adult Education”. This paper is an academic observation of an Educational Multimedia Content development-training programme funded by the Commonwealth of Learning (COL) in Tanzania. This project focused on skills development in script writing and in radio and video programme development, aimed at transforming selected subjects from text to multimedia content. The ultimate objective was to enable better and easy understanding of the lessons for Open and Distance Learning learners. A group of 25 teachers from the Tanzania's Institute of Adult Education participated in the training and development of the programmes. In this paper the author shares the new and exciting experiences of teachers
on adding such skills to their professional career, as the development of these programmes. Author's own participation and interviews with peers in the project were employed as methods of data collection. A total number of 13 videos and 12 radio programmes were developed over the span of six months. Five school subjects were covered, namely: English, Mathematics, Biology, History and Geography. Some of the challenges encountered in developing the programmes included: difficulties in developing a video idea from the textbooks; working as a group online in collaboration with the training consultant in another country especially in script development; memorizing words (as actors playing in the productions) and saying it on camera; and time constraints (working under pressure). The author recommends to African nations and educators in other parts of the world to access these multimedia-learning programmes online since they are OER, and to use them in their context. The video and radio programmes reflect the Tanzanian context to some extent, but most of the lessons are general for use by any country. The paper concludes that skills development on technological innovations among ODL teachers in both formal and non-formal education system is essential towards attaining EFA goals.

Nyoni and Jabulani, (2014) published a article on, “E-Readiness of Open and Distance Learning (ODL) Facilitators: Implications for Effective Mediation”. This article is a narrative report of the findings from the analysis of multicultural facilitators' discourses on their e-readiness in the use of information and communication technologies (ICTs) affordances in open and distance learning (ODL) mediation experiences. First, the findings revealed by qualitative deconstructive discourse analysis indicated that the majority of ODL facilitators lack those e-readiness skills that are critical in the effective manipulation of ICT affordances tools in ODL mediation environments. Secondly, some facilitators did not fully understand what undergirds ODL andragogy, principles and practices. Institutions'
academic lecturers are periodically given e-training, but this seems to be inadequate. Therefore, this paper recommends that a comprehensive orientation tutorial package, covering e-readiness, e-training and ODL principles and practices, be organized for all inexperienced, as well as newly employed lecturers, to appropriately prepare them for the rigours of ODL pedagogies and methodologies.

Ansie Minnaar, (2013) made a study on, “Challenges for Successful Planning of Open and Distance Learning (ODL): A Template Analysis”. This template analysis indicated the main challenges for ODL, of which start-up costs and expenses, learner profile, competition for students, and student support were the most important. The new student base that grows up in a technology-rich environment might challenge the usage of technology in higher education and specifically in ODL. This is a challenge to get academics to use technology effectively in ODL. Another challenge for ODL providers and academics could be the fact that students who were rejected at other institutions register at ODL institutions and are in fact the weak students. The combination of very young weak students, professional enhancement students, and traditional students could challenge teaching and learning strategies in ODL. In reality there is competition among universities as students are viewed as consumers. Another challenge for ODL is the diverse needs of ODL students. Academic support to ODL students is of the utmost importance. In ODL where there is little or no face-to-face contact, academic support and feedback sometimes become the only interaction with the student. Academic support needs to be investigated and effective support needs to be a given in ODL. This means more costs, academic appointments in ODL, more technology for student support, and more training of academics to use the technology to support the students (McKay & Makhanya, 2008). A number of ODL facilities at residential universities have not been successful because of a lack of planning or because of failure to ensure that all the different systems for ODL delivery were in place and functioning. This study sheds light on
how to plan strategically and how to implement an ODL unit at an existing university. A template analysis was used to construct a road map for ODL planners. The researchers used this analytical tool to organise data from a large collection of articles, books, and documents from 1980-2010. They purposefully chose template analysis as a document analysis process to foster the recurring themes found in published articles on planning and implementing ODL facilities in higher education. The results indicate four main strategies for successful implementation of an ODL unit. The template consists of strategic planning, policies, systems, and challenges. It was concluded that the template for ODL planning offers new insight into distance education. It could be used as a foundation for ODL planning, implementation, monitoring, and evaluation. The researchers recommend further research on the template with the aim of theory construction for ODL planning and implementation.

John Mpofu (2013) made a study on “The Impact of ICT in Learning through Distance Education Programmes at Zimbabwe Open University (ZOU): Role of ICT in Learning through Distance Education Programmes”. In this study, the researchers presented some of the challenges facing ICT usage, integration and diffusion and their influence on distance education teaching and learning. The researchers also observed that Zimbabwe is faced with challenges in the area of lack of funding, institutional problems, infrastructure problems, and human capital problems. The other major challenge facing the institution is failure to link the ten provinces through ICT. Whilst the plans have been on the table for a number of years, the fact that ZOU does not have its own infrastructure in some regions makes it difficult for the institution to invest in rented accommodation. Possibly, another more serious challenge facing distance education at this level is the need for the integration of new ICT knowledge into academic courses and programmes. This state of affairs grew mainly from the political isolation that Zimbabwe experienced during the time of economic downturn.
One of the major challenges facing Zimbabwe Open University is that though the institution is decentralized in Regions, up to 2011 the institution is not networked. As a result, when students are being registered the cumbersome burden of sending documents by mail to National Centre and duplicating processes has led to many problems administratively. Zimbabwe Distance Open University enrolls students from both urban and rural settings. The majority of students living and working in rural areas have limited or no access to computers and electricity as a result the use of information and communication technology (ICT) in the learning process is very limited. Though government has realized the importance of developing ICT for learning purposes, in practice very little has materialized in the provision of the ICT technology especially in rural areas. The majority of Zimbabwe Open University students have expressed difficulties in coping with their studies partly due to lack of supplementary reading materials from internet. The research will use a descriptive survey method to extract information regarding use of ICT from students living in rural areas and those in urban areas. Observation on what actually takes place in the library and learning process will be highlighted by the researching team comprising three lecturers who all work for ZOU. A contrastive approach will be used to compare the performance of students with access to internet with those without access to internet. Interviews of ZOU students and lecturers will be used to collect data.

Marinda Jvan Zyl J et al, (2013) made a study on, “Development of ODL in a Newly Industrialized Country according to Face-to-Face Contact, ICT and e-Readiness”. A large number of unqualified and under-qualified in-service teachers are holding back socio-economical development in South Africa, a newly industrialized country. Open and distance learning (ODL) provides an innovative strategy and praxis for developing and newly industrialized countries to reach their educational and socio-economical objectives through professional development and training. In order to examine factors which affect the success of ODL offered by the North-West University
in South Africa, a qualitative and quantitative research approach is used. Factors examined include face-to-face classroom contact, the implementation and use of ICTs, and e-readiness. The relationships between these factors are also discussed. A questionnaire was administered to 87 teacher-students in four Advanced Certificate Education (ACE) programmes to collect quantitative data regarding aspects of their classes and the e-readiness of students. This data was qualitatively elaborated upon by three semi-structured, open-ended focus-group interviews. Besides descriptive statistics, Spearman’s rank-order correlations ($r$) were determined between variables pertaining to negative feelings towards face-to-face classroom contact, ODL as students’ choice of delivery mode, and students’ positive attitude towards information and communication technology (ICT). Combined quantitative and qualitative findings were used to evaluate the effectiveness of contact classes as well as the e-readiness of students towards the attainment of ODL development Phase D. This phase refers to UNESCO’s description of ICT implementation, integration, and use. Relationships (Spearman’s rank-order correlations) between ODL, as teacher-students’ choice of educational delivery mode, and aspects of their e-readiness suggest that the e-readiness of teacher-students is implicit to their choice of ODL as educational delivery mode for professional development. Based on the findings of this report, the School for Continuing Teachers’ Education-North-West University (SCTE-NWU) could improve its ODL offerings in the following ways:

- **Effective Face-to-Face Classroom Contact:** Although the overall findings indicate that most students are satisfied with the quality of face-to-face classroom contact (65.6%) it is recommended that the SCTE investigates how to increase student satisfaction with contact classes and furthermore recommended that the SCTE investigate how to improve the quality of facilitators’ presentations and guidance.

- **Implementation, Integration, and Use of ICT:** the ODL delivery mode of the SCTE personal contact (contact classes), with computer and Internet access at study centers throughout all provinces.
Teacher-Students’ E-Readiness: the e-readiness of teacher-students is implicit to their choice of ODL as the educational delivery mode for their professional development and it is highly recommended that the SCTE initiate Internet-based e-learning. Furthermore, the NWU should increasingly implement, integrate, and make use of m-learning, while continuing with already established face-to-face contact classes, using both printed paper-based study material and various ICT to deliver quality ODL programmes.

This research was specifically conducted within the socio-economical context of a newly industrialized economy. Accordingly, the findings are not only contributed to ODL scholarship in newly industrialized economies, but also indicate to developing contexts what to expect. Developed contexts, on the other hand, could compare the findings with their own contexts to explore the impact of development.

Markus Deimann and Robert Farrow, (2013) made a study on, “Rethinking OER and their Use: Open Education as Bildung”. Despite the recent increases of interest in open education, notably in massive open online courses (MOOCs) (Fini, 2009), it has been continuously asserted that this form of social knowledge production lacks a philosophical or theoretical foundation (Vandenberg, 1975). Similar accusations have been made with respect to distance education, such as being slow to engage with critical debates in theory and research (Evans & Nation, 1992). In a similar vein, Danaher, Wyer, and Bartlett (1998) claim that researchers in open and distance learning tend to draw on too narrow a range of theoretical resources in their research. Given the considerable rise of open education over recent years, these critical appraisals urge us to expand theoretical approaches and refine our understanding of evolving pedagogical and technological relations (cf. Bell, 2011). In this study, the researchers contribute to debates surrounding open education and open educational resources by introducing the concept of Bildung (self-cultivation, self-realization) as a powerful reflective tool and framework for approaching open education. They will elaborate on the
potentials of Bildung by reviewing the history of the concept and exploring the extent to which Bildung can provide open education with a theoretical framework and their focus is not exclusively on open educational resources (OER): they follow other commentators (Mackey & Jacobson, 2011, p. 62; cf. Weller, 2011) who argue that ‘openness’ in education necessarily shifts the focus from content (OER) to practices (OEP) that are necessary for the use of that content. They also argue that the beliefs and values associated with Bildung – including autonomy, critical reflection, inclusivity, and embracing the potential for self-development – are suitable for providing a theoretical framework for open education as well as providing a critical lens through which to assess contemporary models of education (e.g., Liessmann, 2006).

The present study has attempted to provide a theoretical base for an educational field that has gained enormous attention over the past years. Developments have been closely related to and thus mediated by innovative ICT. Consequently it has become challenging to keep track of the accomplishments of the open educational movement. Besides the consequences for practitioners (e.g., difficulties to find appropriate OER materials) there is also a significant downside with concern to scholarly work. As long as there is no solid theoretical foundation, the movement is in danger of becoming weakened, which was the case during the earlier open classroom movement in Germany that exploited openness as a buzzword during the struggle for more educational innovations and thus failed to be recognised as an influential field.

The beliefs and values associated with Bildung – including autonomy, critical reflection, inclusivity, and the rejection of commercial imperatives – are suitable for providing a theoretical framework for OER as well as providing a critical lens through which to assess contemporary educational models in practice (e.g., Lessman, 2006). The commercialization of higher education threatens to conflate education and learning, and learning experiences are often treated as isolated consumer choices. We need a framework like Bildung to analyse changes in education, helping us make decisions about the kind of educational culture to which we aspire. Overall, Bildung is more reflexive,
more critical, and more open than didactic models of education or traditional theories of distance learning. There are good reasons to think that it can provide the open education movement with an improved philosophical and pedagogical foundation.

Charity Akuadi Okonkwo, (2012) made a study on “A Need Assessment of ODL Educators to determine their Effective Use of Open Educational Resources”. Nigeria has joined the global race of teaching and learning in a changing educational environment by adopting open and distance learning (ODL). Although it is a global trend, ODL poses some challenges at local levels, one of which is the untimely production of teaching materials currently affecting instructional delivery in Nigeria. The modern approach to ameliorating this challenge is the deployment of open educational resources (OER), and this practice is enabled by information and communication technology (ICT). Hence, today’s educators need OER tools and ICT skills to address the changing nature of education.

The study used a survey which collected data with a structured questionnaire adapted from an unpublished RETRIDAL (2011) questionnaire on OER used for the National Open University of Nigeria community. The population from which the sample was drawn consisted of academic staff from Ladoke Akintola University of Technology (LAUTECH) in Ogbomosho and the Federal University of Technology (FUTA) in Minna. The sample consisted of twenty academic staff from the two universities directly involved with the development of course materials for distance learners. Out of the 20 participants, 19 responded to the questionnaire items. The 19 respondents consisted of 16 males and 3 females, with ages ranging between 31 and 56 years. They had varied amounts of teaching experience, ranging from 2 to 25 years in tertiary teaching as graduate lecturers in conventional institutions. It is obvious that the capacities of our conventional institutions cannot ensure that the learning needs of our young people and adults will be met. Education for All (EFA) and the Millennium Development Goals (MDGs) have both placed emphasis on the importance of education to
economic prosperity. These have brought about open and distance learning (ODL) in Nigeria, a method of instruction which has received a global acceptance. But ODL is highly dependent on self-directed instructional materials as the backbone for course delivery. So far, the realization of a complete ODL program in Nigeria has been greatly challenged by the untimely production of instructional materials (Okonkwo, 2012). Ameliorating this challenge necessitates continuing professional development for educators in ODL. Indeed, OER and the emergence of ICT in education are playing key roles in repositioning educational provision in higher education, especially in ODL scenarios, since it has come to stay in Nigeria as a viable alternative to conventional systems of education.

The ODL approach worldwide depends largely on the deployment of OER and the use of technology to thrive and succeed. Hence, effective and efficient implementation of ODL in Nigeria calls for the professional development of educators, who are the backbone of high-level academic institutions. These personnel are needed for the effective delivery of classes and have been introduced in response to strong social demands for access to higher education. However, the results of this study indicate the following:

- The participants are familiar with OER but have not actually been using them sufficiently and effectively. Hence their experience using OER is below the acceptable cutoff point. Mere familiarity with and casual use of OER is not enough to meet the demands of teaching and learning in our changing environment. Adequate experience in using OER is necessary to bring about the desired education demanded by an increasing portion of the population.
- The instructors in higher education institutions have yet to use OER for the purposes which they are supposed to serve in teaching and learning in a changing environment.
- The tertiary educators need urgent instruction in the rudiments of OER and even ICT to enable effective OER utilization in line with current global practices.
• The respondents agree that the issues of OER are meaningful and relevant.
• Above all, they had no reservations about taking full advantage of OER provision and indicated a strong interest in relevant workshops and training.

The study therefore recommends that there should be training programs covering the rudiments of OER and the ICT skills needed for effective implementation of OER for all educators (both those serving in the conventional systems and those in the open and distance learning environment). This can be done with workshops and seminars for practicing professionals, and the programme should be deliberately included in the curriculum for students in Nigerian teacher education institutions. This paper assessed the needs, readiness, and willingness of ODL professionals from two dual-mode universities in Nigeria to deploy OER in teaching and learning. Data were collected using structured questionnaire items. The major findings of the study’s survey indicated that educators have not really embedded OER in teaching and learning, but they are very eager to be trained in the rudiments of OER and wish to employ them thereafter. The results indicate there is an urgent need for professional development to include training in the rudiments of OER for educators.

De Langen F.H.T. & Bitter-Rijkema, M.E., (2012) made a study on “Positioning the OER Business Model for Open Education”. Since more than a decade the Open Educational Resources (OER) movement provides new ideas on how to generate and share educational resources for educational use (within and outside formal institutional, open education) by large audiences for a variety of learning purposes. The vision of developing and sharing OER resources for Open Education (Open ED/OE) is interesting in this context for its great potential to substantially help solving existing educational problems. Open education based on sharing (OER) open resources for education enables people across continents and organizations to transform their talents into
professional competences and grow by removing existing (economic) barriers and invent new strategies to open up education. The observation that lack of adequately educated people for today’s society will negatively affect our economic prosperity and potential triggered the investigate of how the OER approach of open education by stimulating effectively sharing learning resources at almost no costs might help us to inventively find new ways to realize the urgently needed new learning formats and support methods for the future. The researchers argue that for the realization of effective open and non-formal learning, accommodating today’s professional learning requirements, they need more then the common investigation and application of existing learning design principles. They need concurrent development of sustainable business models for the emergent open education. That's why they focused in this article on the development of a sustainable business model for OER, so fundamental to the implementation of necessary new learning formats. In this study the researchers made a start to articulate how analyzing success factors in learning communities and research therein, relates to the business model of OER i.e. Open education business processes. To develop this approach in its fullness, it is necessary to augment the model sketched above. This augmented model can then be used to analyze existing successful organizations, to find the relevant critical factors. Using the method as suggested by D’Antoni & Savage (2009), one can use the outcomes to create viable scenarios for inventing; organizing and implementing OER, taking into account the requirements and constraints for economic sustainability.

The results of several researches into networks in different settings stress the importance of coordination of the goals of the participants in the network and leadership in this coordination and the correction of eventual redistribution effects. An augmented model should take these factors in account. Developing a full model for an OER-organization is beyond the perspective of this article, but a successful business model will probably combine such an internal mix of management and
education with the external balancing of the goals of different participants.

**Ebba S I Ossiannilsson & Alastair M Creelman, (2012)** made a study on “OCR Resources for Learning – Experiences from an OCR Project in Sweden”. This study aims to share experience from a Swedish project on the introduction and implementation of Open Educational Resources (OER) in higher education with both national and international perspectives. The project, **OER – resources for learning**, was part of the National Library of Sweden Open Access initiative and aimed at exploring, raising awareness and disseminating the use of OER and the resulting pedagogical advantages for teaching and learning. Central to the project’s activities were a series of regional seminars which all featured a combination of multi-site meetings combined with online participation. This combination proved highly successful and extended the reach of the project. In total the project reached around 1000 participants at its events and many more have seen the recorded sessions. Several unresolved issues beyond the scope of the project became explicit but which are absolutely crucial challenges. Firstly, the evolution from OER towards open educational practices (OEP) and open educational cultures (OEC). OEP and OEC imply the establishment of national and international policies and strategies where the use of OER is officially encouraged, sanctioned and developed. Secondly it became explicit that the issue of metadata is crucial for finding OER and facilitating their use and reuse for teachers and learners. Thirdly, the sustainability of OER must be stimulated by ensuring the creation of material that can easily be adapted and reused by teachers in other countries and contexts. The challenges facing higher education today to provide education in line with the demands of tomorrow’s global digital economy are enormous. The workplace of the future will value agile learners and it is this type of skill that needs to be fostered in school and university. Learning how to learn is one of the key skills for our students since they will be expected to take responsibility for their own competence development. Twenty-first century skills such as advanced information
retrieval and source criticism need to be an integral part of school and university education so that students will be able to find and filter the resources they need for their own development. Jane Hart describes the growing need in industry for “smart” learners. Many of today’s fundamental educational concepts must be questioned and some phased out as we move towards a greater emphasis on collaborative net-based learning and a marked increase in part-time lifelong learning. This type of radical change cannot be achieved just through grass-roots agitation; it must be part of an international development.

Evi Nikolaki, et al, (2012) made a study on “Support and Promotion of Self-Regulated Learning through the Educational Material at the Hellenic Open University”. This study examined the support and promotion of self-regulated learning in the HOU educational environment through the printed educational material, as the latter is described in its institutional level of function. Based on the literature, the printed educational material in HOU is an interactive pedagogical tool of learning, whose forms, though differently interrelated in the stages of the learning process, support significantly the strategies of self-regulated learning. In particular, it was found that the printed material is a content tool that supports the strategy of goal-setting and the cognitive strategies of organization and elaboration, an assessment tool that supports the meta-cognitive strategies of self-evaluation and self-monitoring and an administrative tool that supports the strategies of seeking information, of seeking help and of time management. Furthermore, the accessibility and the significantly high degree of interest and engagement that characterize the educational material enhance the motivation of learners regarding their self-efficacy beliefs and strengthen the social interaction and support of the subject involved. In this way the material supports entirely the SRL, since the above variables are prerequisites for the enactment and development of SRL (Self-Regulated Learning). The results of the study indicate that the self-regulated learning is considerably supported and promoted by the printed educational material at the Hellenic Open University due to its interactive pedagogical structure. However, it is pointed out that it is possible
to maximize the support provided through the improvement of the present structures’ function.

Hanlie Leibenberg et al, (2012) made a study on “Student Access to and Skills in using Technology in an Open and Distance Learning Context”. This study discusses a descriptive study that investigated students’ access to technology and their capabilities in using technology, within the broader discourse of the “digital divide.” Results support literature that challenges a simplistic understanding of the notion of the “digital divide” and reveal that the nature of access is varied. Amidst the different challenges facing higher education, and particularly distance education (DE) and open distance learning (ODL), access to information and communication technology (ICT) and students’ abilities to use ICTs are highly contested issues in the South African higher education landscape. While there are various opinions about the scope and definition of the digital divide, increasing empirical evidence questions the uncritical use of the notion of the digital divide in South African and international higher education discourses. In the context of the University of South Africa (Unisa) as a mega ODL institution, students’ access to technology and their functional competence are some of the critical issues to consider as Unisa prepares our graduates for an increasingly digital and networked world. Though our research was done in the specific context of an ODL institution in a developing economy, it highlights and confirms that digital access is nuanced and that we should not only understand, irrespective of context, how digital access and skills amplify and perpetuate existing societal inequalities within and between countries. As the cumulative effects of globalization and information-flows on higher education become more apparent (Barnett, 2000b), the digital divide becomes not only a concept germane to developing world contexts, but one that increasingly shapes and impacts all societies where global and local trends and forces interact, displace, exclude, and include. Among the many challenges facing higher education and ODL provision in developing world contexts, the questions rise by the continued prominence of the
digital divide need to be taken seriously, but also reflected on critically. Constructs such as the digital divide can be used to sustain an unwillingness by faculty (Panda & Mishra, 2007) to accept that technology is shaping higher education and that the way we see and understand knowledge and knowledge creation and validation has changed forever (e.g., Barnett, 2000a, 2000b). On the other hand, the investigators cannot negate the fact that they should understand the issue of access to technology in the wider societal context of exclusion and inclusion (Castells, 2009). This research provides evidence that the construct of the digital divide as a “bipolar societal split” (Warschauer, 2002) has very little, if any, empirical basis in the context of Unisa. Access to technologies and the skills to use these technologies vary and refuse to fit neatly into a binary model of “haves” and “have-nots.” Authors such as Brown and Czerniewicz (2010), Czerniewicz and Brown (2005), De Haan (2004), van Dijk (2006), and Warschauer (2002) provide findings to support an understanding of access to technology as a multifaceted, dynamic construct embedded in broader socioeconomic, political, environmental, and technological realities.

Jenny M Lane, (2012) made a study on, “Developing the Vision: Preparing Teachers to Deliver a Digital World Class Education System”. In 2008, Australians were promised a ‘Digital Education Revolution’ by the government to dramatically change classroom education and build a ‘world-class education system’. Eight billion dollars have been spent providing computer equipment for upper secondary classrooms, yet there is little evidence that a revolution has occurred in Australian schools. Transformation of an education system takes more than a simplistic hardware solution. Revolutions need leaders and leaders need vision. In this study a future scenario is presented in response to the challenge faced by tertiary educators to prepare teachers for the ‘Digital education revolution’. The researcher supports the current governments’ vision of developing a world-class education system, yet proposes that to achieve this we need to look beyond putting computer hardware into classrooms (Lane, 2008). We need to invest in
building our future workforce. Both government and academics need to take a serious and transformative look at the key resources to deliver the ‘revolution’, our teachers. If we continue along the current trajectory of reduced enrolments in teacher education courses, inadequate funding to deliver high quality courses for teacher education, and models of delivery that are very similar to those used in the past, we will not be able to resource this vision of a digital education revolution and a world class education system. There are many challenges facing tertiary teacher education in the future and it is beyond the scope of this paper to address them all.

In this study, the researcher have proposed that futuristic techniques can be of value in getting government and educational planners to consider options and be more flexible in their planning and thinking. The rate of change in our current era is rapid. The funding and structure of our current system will not be sustainable or able to deliver the ‘world-class education system’ we will need in the future. New technological advances are occurring on a daily basis, yet much of tertiary teacher education is continuing as it did over 100 years ago. International political changes, like the end of the cold war and the rise of China and India and the current economic global situation have led to changes in ideology held by governments in Western democracies. These are leading to changes in governance and funding models. As potentially influential players and decision makers shaping the future of tertiary teacher education, we need to be mindful of the words of Mintzberg (1996) who proposed a situation of balance. “Successful democracies have operated on the basis of strong government supported by strong partnerships with business” (Minzberg, 1996). The future of our children and future society are shaped by the quality of the teachers we train. This is too valuable and strategic to be left entirely to market forces. Education is a way of transmitting our national culture and values. There is no one-size-fits-all solution. We must not allow our academic integrity to be undermined by purely economic pressures. We need to be able to attract and select the best applicants and control the quality of our
future teachers. Above all we need to be in a position to deliver the best quality education to our students. A good education is the right of all our students and is necessary in building a strong, successful society.

In this study, the researcher argues that we must first develop educational leaders by inspiring future teachers with a vision and by designing our teacher-education courses as technology-rich learning-spaces. A multilayered scenario is developed as the inspiration for a vision of a future-orientated teacher-education system that prepares teachers to deliver a ‘world class digital education’ for every Australian child. Although written for the Australian context this study has broad relevance internationally for teacher education.

Kirsten Petrie & Clive McGee, (2012) made a study on “Teacher Professional Development: Who is the Learner?” One of the challenges in in-service teacher education is how teachers can be given professional development (PD) that enables them to respond to national curriculum and policy change. In recent years primary teachers in New Zealand have been inundated with Ministry of Education-funded professional development programmes to help them implement a plethora of curriculum policy and reform initiatives. This paper explores how the design and delivery of one PD programme, the Physical Activity Initiative (PAI), positioned and supported teachers as learners. An evaluation of the programme sought data from 25 teachers and 14 advisers to schools. The focus was the impact of the PD on how and what teachers learnt about teaching physical education and how their learning impacted upon their classroom practices. The data highlight the difficulty of accommodating the teacher as a learner, within a “one size fits all” PD model. A focus on ways to develop sustained, intensive and contextualized PD for teachers of PE has intensified in recent years. This study has reported on the impact of one model of PD in PE that sought to help primary teachers – some of whom had little confidence in teaching PE- to increase their repertoire of PE topics and learn how to teach them.
The findings and discussion demonstrate that there are two major competing aspects of teacher learning in PE: on one hand, there is the goal of designing and implementing PD that increases teacher learning and explores how teachers’ best learn. On the other hand, there is the goal of simultaneously meeting outcomes associated with student learning and achievement in specific classroom contexts. In line with previous research (Bantwini, 2009; Hardy, 2008, Roux & Ferreira, 2005), this study demonstrates an underlying difficulty in designing PE PD that is responsive to each school and individual teachers’ needs in a programme where timeframes and access to external support are limited. In contrast to the advocates (Borko, 2004; Darling-Hammond & Bransford, 2005) of the centrality of teachers-as-learners in PD programme, the findings suggest that in this PD, both at the policy and implementation levels, the student was positioned and talked about as the learner and the teachers were, in effect, in a neutral position as intermediaries through which enhancements to student learning outcomes could be achieved. The teachers tended to be treated by professional developers as unproblematic; teachers would learn what was taught in the PD and apply it in the classroom in a similar way to all other teachers. This assumption oversimplifies the considerable differences that were seen to exist among the teachers in this sample: differences in their confidence in teaching PE, in their content knowledge in PE, in their actual teaching approaches in PE, and in their assessment and planning capabilities. It is, of course, essential to recognize the importance of enhancing the learning experiences and outcomes for students. However, if the goal of a PD programme is to change teaching approaches, it is imperative that teachers-as-learners should be the central focus. Further research needs to explore alternative models of PD that are contextually relevant and sustainable and focus on improved teaching while not neglecting outcomes for students that occur as a result of teacher change. Developers of PD, at both national policy and implementation levels, ought to focus on teachers as both learners and teachers. This means providing adequate time and support for training the advisers and then allowing adequate time for advisers to develop and implement PD programmes that reflect the unique needs of
each school and teacher. In terms of resourcing a programme of PD like PAI, there need to be general guidelines that establish a framework of intentions and content.

Within this framework, providers need to explore the differences between teachers in the programme: for example, their preferred ways of learning, levels of subject content knowledge and gaps in knowledge, preferred ways of teaching and interacting with students and overall levels of confidence in teaching the subject. Finally, PD providers need to be helped to analyze the school and classroom context and plan learning experiences suited to that particular setting.

Tariq Ahsan M, et al, (2012) made a study on “Exploring Pre-Service Teachers’ Perceived Teaching-Efficacy, Attitudes and Concerns about Inclusive Education in Bangladesh”. This study reports on pre-service teachers’ preparedness for inclusive education (IE) in Bangladesh through measuring their perceived teaching-efficacy, concerns and attitudes towards inclusive education and identifying predictor variables that contribute to those three variables. The sample of the study were 1,623 final year/term pre-service teachers from primary ($n=890, 54.8\%$) and secondary ($n=733, 45.2\%$) level pre-service teacher education institutions in Bangladesh. Among the participants, 38.9\% ($n=631$) were male and 61.1\% ($n=992$) were female. Using two standardized scales (Teacher Efficacy for Inclusive Practice (TEIP) scale and Sentiments, Attitudes, Concerns regarding Inclusive Education (SACIE) scale) with 1,623 pre-service teachers from 16 teachers training institutions, it was found that variables such as length of training, gender, interaction with persons with disabilities, knowledge about local legislation, and level of training involved had significant relationship with participants’ perceived teaching-efficacy, attitudes and concerns. In addition, it was also found that pre-service teachers’ perceived teaching efficacy is correlated to their attitudes towards inclusive education. Findings of this study have several implications both internationally and in Bangladesh context.
This study also validated other international data that higher perceived teaching-efficacy is correlated with positive attitudes and fewer concerns of pre-service teachers about IE. Besides, this study indicates that what is taught in the pre-service teacher education programme is more important than increasing the length of the programme. Regarding primary and secondary level pre-service teacher preparedness, this study contradicts with global findings and raise to address more context-based issues related to teacher preparation for IE. Contrasting findings related to gender claim in-depth study focusing gender, equity and pre-service teacher education for IE in developing countries like Bangladesh. This study also validated the importance of including knowledge of local legislations; experience and prior training on children with disability also contribute to better teacher preparation for inclusive classrooms. These findings indicated some teacher education curriculum reforms ideas for Bangladesh. Practical implication of the findings of this study would hopefully be able to create teachers with higher confidence level and positive attitudes who would be able to ensure education for all children through inclusive education. This study also revealed that pre-service teachers having higher perceived teaching-efficacy showed lower level of concerns towards inclusive education.

Mishack Gumbo et al, (2012) made a study on “The Impact of In-Service Technology Training Programmes on Technology Teachers”. The aim of this study is to assess the impact the Advanced Certificate in Education (ACE) in-service technology training programme has on technology teachers’ knowledge and understanding of technology. The training of technology teachers is an initiative toward teachers’ professional development within the mathematics, science, and technology sphere of education (MSTE). ACE is a two-year training programme that technology teachers in the Gauteng and Mpumalanga Provinces (South Africa) attended during 2008 through 2009. The programme attendees were senior phase teachers; of whom a few taught in the Further Education and Training band of education (certain high schools begin with grade 8). The research problem that the study
addressed is stated in terms of the following hypothesis: There is no statistically significant difference between the pre- and post knowledge and understanding survey scores for teachers attending the ACE professional development program in technology education. A survey questionnaire to collect biographical and technological input was administered to teachers who attended on the days the questionnaire was administered. The same questionnaire was administered at the beginning of training in 2008 and at completion of the program in 2009.

The aim of the quantitative study was to evaluate whether the ACE-Technology training had a statistically significant impact on technology teachers’ knowledge and understanding of technology. In total, 304 completed questionnaire responses were included in the study. The results indicated that there were improvements in the teachers’ technological knowledge and understanding. This indicates that teachers benefited positively from the ACE-Technology training. This paper reported the findings of the study that inquired into the effect of ACE Technology training of teachers regarding their knowledge and understanding of technology. In terms of the research question and the hypothesis that was stated, the main finding of the study is that the ACE training in technology education enhanced teachers’ knowledge and understanding of technology.

This is an important finding considering that technology education is a relatively new learning area/subject and that there is dire need for training teachers to offer the same to learners. Furthermore, the training of teachers in the field should be seen to make a difference in their knowledge of technology and the methodologies of presenting it to the learners. It is hoped that teachers who underwent this training are now serving their learners in schools by implementing what they have acquired.
Richard Tafara Nenge (2012) made a study on “ICT Implementation Challenges and Strategies for ODL Institution: The ZOU’s National Centre Academic Staff Experiences”. This study highlighted some of the major challenges that Zimbabwe Open University (ZOU) academic staff experiences in connection with Information Communication Technology (ICT) implementation. It employed a qualitative paradigm rooted in a case study research design focusing on ZOU Academic Staff at the selected Faculties. It purposively sampled 20 ZOU Academic Staff members comprising two Deans, six Chairpersons and 12 Programme Leaders. Seventeen managed to participate willingly by filling in the in-depth questionnaire. The study cited lack of literature as one of its limitations. Data were gathered and analyzed thematically. The study found out lack of training and expertise in ICT by ZOU Academic staff of the studied Faculties topping among ICT implementation challenges. The study concluded that training and development of personnel is a fundamental concept that keeps staff abreast with evolving technological changes. The study recommended the need for ZOU to mount regular academic staff focused training workshops that equip them with functional knowledge on computers and computer software applications. It also recommended the need for ZOU to carry out Faculty wide research in the same area using either quantitative or triangulation methodologies.

This research concluded that training and development of personnel is a fundamental concept that keeps staff abreast with evolving technological changes. Development is teaching managers and professional employees broad skills needed for their present and future jobs (Bateman and Snell, 2009). Therefore, there is need to develop the lecturers at ZOU so that they are able to deliver the best quality service to the students at the same time acquiring lifelong skills for self enhancement. This research has acted as a needs assessment for the ZOU as it has identified the areas where training of staff is required and the button stick is now left in the hands of the ICT unit to roll-over the stick by providing either on-the-job training or off-the-job
training to the lecturers. In this day and age where organizations are singing the song of performance based rewards; it would be very difficult for ZOU to appraise their lecturers if they do not have resources to carry out their work. Mobile libraries links the library with lecturers, since most lecturers have access to computers at home and at work and are exposed to the internet ‘dongles’ availed by the Econet wireless service provider. Most institutions have their general information on their websites, so does ZOU. This will enable the lecturers to have access to this information and use it to improve service delivery.

Robin Goodfellow, (2012) made a study on “Web-Based Writing Support: Making it Useable for Distance Teachers”. This study considers the issues that distance teachers in higher education who are not writing specialists face in supporting their students’ academic writing development. The researchers discussed the usefulness of open web-based writing support resources, and propose the need for a system that serves as an interface with these resources. This study explored the gap between the needs of distance teachers, who may have neither the time nor the expertise to provide writing support to their students directly, and the affordances of the writing support resources that many universities and other agencies are putting online. The researchers proposed some principles for a system that can act as an interface between teachers and the world of web-based writing support, and illustrated the functionality that might be involved by piloting a small prototype. The researchers described here could be a solution to the problem of utilizing the many excellent generic resources that exist on the internet, in the specific context of a teacher marking a student assignment. It is also possible that it would be found useful by face-to-face teachers as well as their distance colleagues, in contexts where there is no writing centre or dedicated writing support personnel available to help the students. In this study the delayed-feedback strategy described by one of the pilot tutors could be supported by enabling a list of recommended links to be compiled on a single page with a unique URL that could be sent to a student. The system could also be better
geared for contextualization in supporting teachers to create subsets of resources considered particularly relevant for particular subjects and courses. Other useful functionality might be to enable specific resources to be ranked, annotated and recommended, so as to benefit other teachers and learners in other academic writing contexts who may use the resource at a later time. This work could point the way to a new type of online resource supporting both teachers and learners involved in developing academic writing, and in the process add value to the many materials already openly available. Such a system should help teachers to make quick selections of materials that can be offered to students to address specific problems in the students’ assignments. We consider principles for the design of such a system, based on the experience of building and testing a small prototype for tutors on an Open University Masters in Education course.

Sandy Schuck & John Buchanan, (2012) made a study “Dead Certainty? The Case for Doubt in Teacher”. In this study the researchers discuss the value of doubt in teacher education for themselves and, by implication, more broadly. The researchers develop an argument for the value of doubt in teacher education that grows out of the recognition of the complexity of teaching. They interrogate meanings of doubt in this context and debate the value of doubt and certainty. They also indicate the challenges of fostering and nurturing doubt in teaching and teacher education. They suggest that doubt is a necessary element of teacher education as its presence helps to prepare our students for their careers as teachers in a complex and uncertain world. It is also more fundamentally honest than a professed certainty on the part of the teacher educator. The investigators conclude by suggesting some possible ways forward for teacher education arising from this discussion but include the following caveat: a definitive call to doubt might be at odds with our beliefs and understandings of its value; for the sake of consistency, they feel compelled to doubt the value of doubt as well. And yet they dare to trust that the efficacy of doubt transcends our idiosyncratic understandings, perspectives and experiences of it. Their analysis of the value
of doubt indicates several directions that teacher education might take to both insert doubt into their programmes and to teach their students how to manage that doubt. Teacher educators need to tread the fine line between freezing student teachers into inactivity through an emphasis on the complexity and uncertainty of teaching, and encouraging student teachers to engage with doubt and use it to enhance their practice. Finally, they conclude with a central question for teacher education. How is doubting generative of better teaching? We do need to ask what our doubt contributes to our teaching and to our students’ teaching and learning. The investigators have found value in accepting doubt as a valuable component of our teaching, and argue for acceptance of its value as a possible strategy for other teacher educators. Wheatley (2002, 13) speaks of the capacity to ‘make peace with uncertainty’, but this, too, may be part of the problem and the solution. They hope that this paper will stimulate some responses and open a conversation among teacher educators about the place of doubt in our teaching.

Soraya Kouadri Mostefaouri & Judith Williams, (2012) made a study on “Using Creative Multimedia in Teaching and Learning ICTs: A Case Study”. This study presents a case study based on the experiences surrounding a distance-learning module in the area of Information and Communication Technologies (ICT) that includes a creative multimedia component as an integral part of its teaching and assessment. The module requires that students engage in multimedia production to articulate their ideas and understanding of technology-related concepts, in contrast with the text-based assessment practices that are more commonplace in technological subjects. Open Educational Resources (OER) form an integral part of the module both in its delivery and assessment: whilst open-source software and media are used within the teaching materials, students’ multimedia work submitted for assessment has the potential to become resources for their peers. The emergence of digital media effectively provides a space for bridging the gap between technology and art, between scientific method and creativity.
However, this bridging presents many challenges to accepted ways of assessing progress and learning. In particular, for ICT educators engaged in integrating digital media in their practices, a key issue emerges: how can creativity be successfully brought into their teaching? Indeed as Craft (2003) notes, there may be limits and dilemmas in how educators engage with the concept of creativity that need to be further examined, and these will be of increasing relevance to ICT education as the boundaries between art and technology become more blurred. The study examines the challenges encountered in developing the module and provides a preliminary discussion of views, concerns and potential issues faced by students, drawing upon the experiences of the module development team and the first cohort of students enrolled in the module. Whilst providing an overview of these experiences, the text explores issues pertaining to the integration of creative work into a domain where creativity has not been seen to play an explicit role. The module sits within an undergraduate ICT degree offered by the UK Open University (UKOU).

Zamam I Nyandara (2012) made a study on “Challenges and Opportunities of Technology Based Instruction in Open and Distance Learning: A Comparative Study of Tanzania and China”. This study presents challenges and opportunities of technology based instruction in Open and Distance Learning (ODL) institutions particularly at the Open University of Tanzania (OUT) and Center for Continuing and Distance Education (CCDE -China). This study developed out of a cross sectional survey design study with a mixed approach of qualitative and quantitative methods to collect and analyze data. A total of 144 (83-OUT; 61-CCDE) respondents from both institutions were involved in the study with a subpopulation of students, instructors and technical staffs. Main data instrument was questionnaire followed by focus group discussion. Quantitative data were analyzed using SPSS v.17, whereas qualitative data were reduced into main themes and reported accordingly.
The findings revealed that CCDE institution is far better than OUT in the practice of technology based instruction due to some favorable conditions that support technology based instruction. Either, OUT instructors, have better access to computer and internet than their students although despite the access, instructors are not active initiators and implementers of technology based instruction and learning. Generally, participants from both institutions have positive attitude and even acknowledged the opportunities of using technology in ODL. There are some challenges which seem to affect both institutions although at a varied extent, OUT being at a stake than CCDE. The paper concluded by suggesting that OUT should opt some of the CCDE strategy to successfully implement e-learning. In addition, the use of blended technology is crucial in increasing the access to e-learning materials especially under situations like slow internet or lack of internet connectivity.

Akande Joshua Olusola, (2011) made a study on “Globalization, Information and Communication Technologies and Open/Distance Learning in Nigeria: Trends, Issues and Solution”. The main thrust of this study is to discuss the development of open and distance education in Nigeria and the major manifestations of the use of information and communication technologies (ICTs) in education in open and distance learning. This study further discusses the importance and use of ICTs in open and distance learning in making education accessible to a larger population of students. This study identifies a number of issues that impede the effective optimization of ICTs in open and distance learning in developing countries. Prominent among the issues highlighted are poverty, intermittent supply of electricity and language barrier. The study argues that these problems are to be tackled if the objective of enhancing the potentials of ICTs in open and distance learning in developing countries were to be achieved. This study has discussed the development of open and distance education in Nigeria, the factors that encouraged the
development of distance and open education and the importance of ICTs in open and distance learning with particular focus on Nigeria. It was established that if the MDGs (Millennium Development Goals) with respect to education in developing countries is to be achieved, the importance of ICTs to open and distance learning can hardly be over-emphasized. However, ICT is yet to be fully integrated into distance and open education on large scale in the country. The study identified quite a number of factors that hinder the effective application of ICTs to open and distance education. Prominent among the problems identified include low ICT skills, poverty, epileptic supply of electricity, political bottlenecks, poor economy, culture, constant changing traditional values and language barrier. However, these problems are not insurmountable if governmental and non-governmental agencies, corporate bodies, philanthropists, organizations, financial, material and technical interventions are made readily available. In addition, all the stakeholders in the open and distance learning, such as students, facilitators, support staff and administrators should be computer literate. This is with a view to demystifying the application of ICTs to open and distance learning in an era of globalization.

Caleb Kangai, (2011) made a study entitled, “Teacher Development through Open and Distance Learning: The Case for Zimbabwe” This is a case study of distance teacher education at the Zimbabwe Open University is part of an ongoing longitudinal study the two researchers are undertaking at the Zimbabwe Open University (ZOU) concerning issues of quality and effectiveness in open and distance learning (ODL). The article argues that distance teacher education has the potential to solve the current and future problems of teacher shortage in Zimbabwe and elsewhere. Data for the present study were collected over a period of two years through personal experience, participatory methods, observations, document analysis, informal discussions and illuminative methods. On the basis of the present findings, effective
distance education programmes would require the adoption of the following key strategies: Winning government support for distance teacher education, setting up a directorate for the coordination of distance teacher education and Adoption of the partnership model in the training of teachers.

Charles Musarurwa, (2011) made a study on “Teaching with and Learning through ICTs in Zimbabwe’s Teacher Education Colleges”. The use of ICTs (Information and Communication Technologies) in Zimbabwe’s teacher education colleges is of paramount importance. The teacher trainees have a dual role to play: learning through ICTs and also learning how to teach through them. Interestingly, the rate at which schools have embraced the use of ICTs is unprecedented, but this has not been matched with an equal effort by teacher education colleges and hence teacher trainees have been less exposed and trained in using such technologies. Evidently, this has created a mismatch between the need for teachers who are conversant with ICTs and e-learning and their availability. This paper stems from a pilot programme in which the author was an active participant. It reflects on efforts made to integrate ICTs into the teacher education curriculum and evaluates the impact that this programme will have on teacher education in Zimbabwe. As Unwin (2005) argued, there should be a shift from an emphasis on “education for ICT” to the use of “ICT for education”. Tubin (2006) went further pointing out that the ICT “lever” takes many forms and as such ICT’s roles in the curriculum can be viewed as learning about ICT, learning with ICT and learning through ICT. This is an ideal situation that unfortunately, the author’s experience as a participant in CITEP (College Information Technology Enhancement Programme) does not confirm. Very few lecturers were prepared to integrate ICT technologies into their own subjects. Many of them were of the view that IT should be a separate subject taught by IT personnel. For them, such integration was time-wasting and of no importance. Of course, there are several reasons for such a scenario as pointed out by Coutts, Drinkwater, and Simpson (2001). They argued that teachers in schools see ICT use as an
additional subject or complementary teaching activity, because of the lack of the knowledge or skills that would allow them to integrate ICT into classroom learning, or begin to think about how ICT could be used to transform learning and teaching. As Loveless (2007, p. 514) revealed, ICT can be presented as a subject with particular knowledge, skills and concepts and as a tool to support learning in other curriculum subjects. However, both aspects are lacking in Zimbabwe’s teacher education curriculum, as these are yet to be incorporated. No integration model or framework was employed. Indeed, the belief was that once adequate hardware and software resources were made available, integration would be a success. Despite of these challenges, the CITEP program provided an excellent launch pad, not only for the integration of ICTs into the teacher education curriculum, but also for the effective development of ICT skills within the teacher trainees, making it possible for the further cascading of the same skills to pupils once they join the schools as professional teachers.

Christine I Ofulue, (2011) made a case study on “Survey of Barriers Affecting the use of Information Communication Technologies (ICTs) among Distance Learners: A Case Study of Nigeria”. The use of Information Communication Technology (ICT) to bridge the communication gap between teacher and learner has been identified as a major characteristic of Open and Distance Learning (ODL). In many developing counties, including Nigeria, several barriers prevent OD learners from maximizing the potentials of ICTs to enhance their learning. This study seeks to identify these barriers and consequently, strategies to overcome them within the Nigerian context. Subjects of the research are OD learners in three selected distance learning institutions in Nigeria. Responses from administered questionnaires and interviews constitute the data, which were analyzed using appropriate statistical instruments. The data shows that, although much of ODL instructional delivery is print based, some significant progress has been made especially with regard to encouraging the use of some nontraditional ICTs through ODL. However,
while Nigeria has embarked on implementing computer literacy at all levels, the issue of cost remains a barrier. Indeed, as shown in the data most are unable to have continuous access to the equipment. Farrell and Shafika (2007) in a survey of ICT and education in Africa highlight some current trends. Countries like Nigeria have adopted the use of second hand computers through SchoolNet, Nigeria in partnership with the Education Trust Fund (ETF) to support computer literacy efforts. Another initiative is the One Laptop per Child (OLPC), a non-profit organization established to promote access to technology to support children’s learning experience. Electricity is usually supplemented by using generators, albeit expensive. The data shows that most can afford mobile phones thus providing a unique opportunity to maximize them as tools for learning as has been reported for South Africa and Kenya (2007:21). The findings of this study which form part of an ongoing regional research on the use of ICTs by distance learners show that:

- much of ODL instructional delivery is still primarily print based;
- there is some significant progress has been made especially with regard to encouraging the use of some nontraditional ICTs through ODL; and
- Although Nigeria has embarked on implementing computer literacy at all levels, the issue of affordability, bandwidth, and infrastructural facilities like constant electricity remain barriers.
- However, the data that most can afford mobile phones thus providing a unique opportunity to maximize them as support tools for learning.

Kangai, (2011) made a study entitled “Teacher Development through Open and Distance Learning: The Case for Zimbabwe”. This study is a case study of distance teacher education at the Zimbabwe Open University is part of an ongoing longitudinal study the two researchers are undertaking at the Zimbabwe Open University (ZOU) concerning issues of quality and effectiveness in open and distance learning (ODL). The study argues that distance teacher education has the potential to solve the current and future problems of teacher shortage in Zimbabwe and elsewhere. Data for the present
study were collected over a period of two years through personal experience, participatory methods, observations, document analysis, informal discussions and illuminative methods. On the basis of the present findings, effective distance education programmes would require the adoption of the following key strategies: Winning government support for distance teacher education; Setting up a directorate for the coordination of distance teacher education; Adoption of the partnership model in the training of teachers.

**Kellt Harding & Jim Parsons, (2011)** made a study on “Improving Teacher Education Programmes”. In this study, the researchers review current practices in pre-service teacher education. They suggest that radical improvements are possible and that, if practiced, would help mediate many of the pressures young teachers face. To do so, the researchers 1) outline the experiences of young teachers to consider how teachers might thrive in a difficult vocation; 2) share recent research in the area of in-service teacher professional learning (including their own) as a way to inform teacher education programs; and 3) to use these research findings to suggest possible changes and improvements to pre-service teacher education programs. Synthesizing the research, the authors generate a “To Do List” of activities they believe should become part of pre-service education programs. They are:

- During our coursework, instruct and engage students in action research processes, ethics, and methods
- Engage young teachers in collaborative work. Working together to explain ideas, agree on a problem’s root causes, determine a plan of action, agree on resources and task responsibilities, inspire colleagues, take learning risks, negotiate different personalities, build peer capacities, overcome barriers or unforeseen complications - such collaboration matches work taking place in successful schools.
- Build classroom cultures that support community, agency, and service.
- Work on real classroom issues, and do this work transparently. Allow students to become part of the classroom planning.
• Work to allow and increase individual skills and interests. Celebrate diversity. Not all teachers need similar skills, so encourage young teachers to be more “at home” with their own abilities and give them opportunities to employ these skills within the classroom.

• Allow young teachers to actively consider and discuss the kinds of cultures they hope to build in their classrooms and schools and practical ways those cultures might be built.

The researchers believe such instruction can become essential career foundations for teachers that would help build Master Teachers, would help stem the exodus from teaching, and would help our teacher education programs begin to educate teachers for the wellness of long and healthy careers.

**Madalina Fkirebtina Tanase & Teresa Ann Leavitt, (2011)** made a study on “The Impact of Teacher Education Programmes on In-Service Teachers in China and USA”. This study investigated the impact some teacher education programmes from China and the USA had on the teachers’ beliefs and teaching strategies and how these teachers integrated the acquired knowledge and teaching strategies in their practice. Researchers were particularly interested in investigating teachers’ ability and willingness to use the strategies congruent with constructivist learning theory in their classrooms. Findings revealed that, even in the case of a centralized curriculum (China), teacher education programmes exposed their students to a variety of teaching strategies. This is the case of Jane and Jojo, who witnessed constructivist approaches to education and stated that they felt comfortable enough to use those strategies in their classrooms. The other Chinese teachers (Rex and Joann), who were exposed to a more traditional education programmes, stated that they relied more on traditional approaches. On the other hand, the US teachers had different experiences as students, two of the three US teachers experienced different education programmes. From the US group, Tiffany’s experiences and beliefs about the nature of teaching and learning matched more
with two of the Chinese teachers’ beliefs (Jane and Jojo) than that of the teachers in her group. This study enabled the researchers to compare and contrast seven different educational backgrounds and perspectives and to analyze the impact of the university programs on the participants. First, our findings showed that university training had impact on all participants’ attitudes about learning, as well as their teaching practices. The participants’ beliefs about learning and teaching were consistent with the practices they were exposed to as students, that is more constructivist in nature or more traditional. This is the case of both the Chinese and the US teachers. Second, findings also show that teachers from the two countries were more similar than different. Chinese teacher education students may be exposed to diverse teaching strategies that may have a strong impact on their classroom practice. Brittany (the US teacher) and Rex and Joann (the Chinese teachers) held similar beliefs due to their exposure to similar teaching strategies in their teacher education programs, not necessarily to the same curriculum. Teaching strategies also accounted for similarities in the other two US teachers (Tiffany and Charlotte) and Chinese teachers’ beliefs (Jojo and Jane). To conclude this, the above mentioned findings suggest that the impact of teacher education programs on teacher candidates is very significant. The implications of these for administrators and course instructors may be equally significant: If the challenge is for teachers to develop the skills necessary to meet the challenges of the diverse classrooms, and learn to teach in ways they were not exposed to as students, then they need to be guided into changing their beliefs (Ball & Cohen, 1999), which will enable them to refine and improve their instruction (Darling-Hammond et al., 2002).

Olugbade Oladokun & Lenrie Aina, (2011) made a study on “ODL and the Impact of Digital Divide on Information Access in Botswana”. Open and distance learning (ODL) has created room for the emergence of virtual education. Not only are students found everywhere and anywhere undertaking their studies and earning their degrees, but geographical boundaries between nations no longer appear to have much
relevance. As the new education paradigm irretrievably alters the way teaching and learning is conducted, the application of modern educational ICTs has a major role to play. With students of transnational or cross-border education dispersed into various nooks and crannies of Botswana, many others enlist for the “home-baked” distance learning programmes from their diverse locations. Like the face-to-face conventional students, distance learners also have information needs which have to be met. But blocking the distance learners’ realization of their information needs is the digital divide, which further marginalizes the underclass of “info-poor”.

The survey method was used, and a questionnaire administered to 519 students of four tertiary level distance teaching institutions that met the criteria set for the study yielded a 70.1% response rate. The results showed that while the Government of Botswana has made considerable effort to ensure country-wide access to ICT, which now constitutes an effective instrument for meeting information needs, a number of problems still exist. The factors impeding easy access are unearthed.

This study confirms that more information resources and services are available in the city than in the town or village. The results show that there is abundant evidence of the digital divide in Botswana, notwithstanding the popularized Maitlamo Project on ICT policy of the government. Accessibility to digital resources by distance learners is seen to have a location dimension in that it is much more convenient to access information in the metropolitan areas than in rural locations. In order to curtail the effects of the emerging class system in tertiary distance and cross border education in Botswana and ensure that electronic access issues do not lead to even greater student isolation and that teachers are not “pushed further into becoming designers of pre-packaged programmed learning” (Stephens & Unwin, 1997), the following suggestions are offered:
• More effort should be exerted by the Government of Botswana on its Maitlamo ICT policy and the policy implementation, especially in rural locations. Because most villages in Botswana enjoy relatively stable electricity and telephone connections, encouragement should be given to private ISPs, DSPs, PTNs, and government agencies to spread their services beyond municipalities to rural locations.

• Distance teaching institutions need to not only teach but also make computing and information literacy skills training mandatory for distance learners.

• Information resources and services should be provided through establishment of study centers in strategic locations and collaborative partnerships with viable institutions, schools, or public libraries.

• Adequate utilization of cell phone functionalities should be encouraged.

• The use of modern ICTs such as email, facsimile, and telephone answering machine should be encouraged.

• Services available for DLs, including the use of librarians and help/reference desks, should be adequately promoted.

Although the information world is increasing digitally, the distance learning environment in Botswana is still largely print-based, and this should be respected.

Rebecca Essel & William Owusu-Boateng, (2011) made a study on “Access and Success in Learning: Technologies for Scaling up Open and Distance Learning Programme in the Institute of Distance Learning, Kumasi, Ghana”. This study has looked at some of the technologies that can be used to enhance Open and Distance Learning (ODL) programmes at Institute of Distance Learning (IDL). It has also looked at the facilitators/learners use of some current technology at the
Institute. In recent years, there has been some extra-ordinary increasing international interest in it and Ghana is no exception. Currently, new ways of providing education are inevitable and ODL provides an effective alternate way. It represents approaches that focus on opening access to education and learning, freeing learners from the constraints of time and place and offering flexible learning opportunities to individuals/group. To the distant learner, ODL means increased access and flexibility and the combination of work and education. Many countries are trying to use ODL as a strategy for opening access to education. Inadequate infrastructure and professional competence in ODL serve as barriers. The study was designed to examine how learners can gain access to and success in learning. Again, it sought to ascertain some technologies which could be used to improve existing conditions at the IDL (Institute of Distance Learning), KNUST. The questionnaire was administered to 200 students and 20 facilitators. Stratified sampling was employed. The facilitators were interviewed. Lessons learnt include the fact that ODL will be an important element of future education and training. The emergent picture was that even though students use some computers, it could be extended to embrace other technologies, such as video conferencing, phone counseling and writing examinations on line so as to curtail any cultural and social barriers. It is worth noting that information could support the quality/variety of existing educational structures which enhance and consolidate capacity. Hopefully, usage of electronic information technologies in ODL would enhance retrieval/storage and distribution of information. It would also increase facilitation/communication among learners, facilitators and stakeholders in providing lifelong education.

The findings from the study indicated that, generally, both facilitators and learners utilize and are aware of some current technologies at IDL. In future, if there should be any development, there should be networking between national stakeholders. Facilitators and learners should make use of technology in a way that would ensure lifelong learning for development.
When this is done, people will develop multiple competencies through continuing education. It will also enhance the international dimension of educational experience and improve the quality of existing education services (Rumble, 1989; Ljosa, 1992).

Frances O’ Connel Rust, (2010) made a study on “Shaping New Models for Teacher Education”. American teacher education is stuck in an unproductive and dysfunctional pattern, not unlike the American domestic automobile industry. American teacher education programs graduate thousands of newly certified teachers each year, but the evidence that even half of the new graduates are dynamic and capable teachers is weak. The reputations of the teacher education programs through which they pass are poor; both within the academic community and in the field of K-12 education. Tinkering to improve at the margins of university-based teacher education has not worked. The time has come for dramatic, fundamental change in the way we prepare the teachers of America’s fifty-five million school children. The dramatic change needed will require a redefinition of teacher education, taking it beyond pre-service preparation to include the ongoing support of teachers throughout their professional lives.

Further, teacher education should be situated at the nexus between universities and schools—the place where theory and practice can come together. And finally, making these fundamental changes in teacher education will require that teacher educators in both school and university settings have the benefit of the type of ongoing professional development that research has shown to be essential to consequential, long-lasting reform in schools (Lieberman & Miller, 2001; Little & McLaughlin, 1993; Little, 2007). Powerful, sustainable reform must be driven by inquiry among teacher educators themselves and it must be active, collaborative, embedded in a teacher education context, and a central part of school and university cultures. Criticisms of teacher education relate directly to the problem of practice. Levine, for example, cites the following problems with teacher education:

Inadequate Preparation: Many students seem to be graduating from teacher
education programs without the skills and knowledge they need to be effective teachers.

- **A Curriculum in Disarray**: Unlike law and medicine, in education there is no standard approach to preparing teachers.

- **Disconnected Faculty**: While almost nine out of ten (88 percent) education school professors have taught in a school at some point in their careers, alumni and students complain that too often the experiences of faculty members were not recent or long enough.

- **Low Admissions Standards**: Universities use their teacher education programs as “cash cows,” requiring them to generate revenue to fund more prestigious departments.

Line of research suggests that teacher educators embracing a broader conception of their work must become adept at moving between these communities, retaining the scholarly discipline required by the university and embracing the discipline of practice that is essential to effective teaching in school and child care environments. Like all scholars, they must be knowledgeable about their field here, teaching and learning. They must be inquirers-investigators of their own practice. They must be committed to working from research to practice, to looking at whether and how their research and that of colleagues across the field is evident in their practice.

**Hanna Ragnarsdottir, (2010)** made a study on “Internationally Educated Teachers and Student Teachers in Iceland: Two Qualitative Studies”. This study draws upon two qualitative studies with internationally educated teachers and teacher assistants in preschools in Iceland as well as ethnic minority student teachers at the Iceland University of Education. The common research question in both studies is whether the experiences of these teachers reveal barriers to integration within the Icelandic educational system. The theoretical framework draws on writings and research on equal rights in education, critical multiculturalism and multicultural education as a basis for school development and marginalization and discrimination within schools and universities. The findings of both studies reveal barriers to integration.
and marginalization. The common research question introduced in the beginning of this study focused on whether the experiences of internationally educated teachers and ethnic minority student teachers in Iceland reveal barriers to integration within the Icelandic educational system.

The findings of both studies referred to above reveal barriers to integration at different levels of the educational system. At the preschool level, barriers to integration include lack of knowledge and understanding among principals and other staff of the schools. In relation to these findings, Ryan’s (2003, 2006) writings on the importance of extensive knowledge of principals, teachers and other staff in schools on multicultural issues are relevant as well as Schein’s (2004) writings on the important task for leaders to ensure good cross-cultural communication and mutual cultural understanding in organizations. Nationalistic sentiments appearing in the emphasis on retaining Icelandic cultural heritage and Icelandic language appear in rules and guidelines applied by principals in hiring foreign staff. Some principals thus limit the percentage of foreign staff in the schools. Barriers to full participation of internationally educated teachers emerge in a variety of settings within the schools in the studies referred to above, from inhibitions to read for the children as their unsatisfactory accent in Icelandic is said to have negative influence on the children’s language development to mistrust as the internationally educated teachers are said not to have full understanding of the ideological and pedagogical principles applied in the schools and therefore not to be trusted to work with the children without supervision. Ladson-Billings (2001) and Lumby and Coleman (2007) have drawn attention to the fact that in schools in some countries, the majority of teachers belong to the majority culture while the students are ethnically and racially diverse. In this respect, the ethnicity, culture, and history of the leader and his or her relationship with the school community is an important factor to consider (Lumby & Coleman, 2007). In the preschool study introduced above all the principals were Icelandic while the teachers and other staff had diverse backgrounds.
As described above, the relationships between principals and teachers varied from one preschool to another. At the university level, the findings of the study on ethnic minority student teachers revealed marginalization and exclusion although the students noted that the ethos of the university was positive and the programmes were of high quality. The barriers they faced were not being included in student groups and being silenced. Bauman (1997) has called for universities being multivocal while Gundara (2000) has called for policy and commitment of universities in the light of increasing diversity. Taylor (2000) has similarly contended that universities need organizational cultures that accept the value of diversity and empower minorities. Altbach (2004) has warned against universities isolating themselves from economic and social developments.

All these authors provide important theoretical guidelines for the development of universities in diverse societies. Issues of marginalization and exclusion of students at all school levels call for ideological developments in education where the experiences, cultures, history and languages of students are valued, acknowledged and respected (Banks, 2005; Nieto, 1999; Noddings, 2005; Ryan and Hellmundt, 2005). As noted in the beginning of this study, the Icelandic educational system has generally not responded sufficiently to the changing demographics in Iceland. Ideological frameworks and values within educational policy and national curriculum guides are based on the majority culture (see Banks, 2005) and although they state equity as a principle, implementation within diverse school settings may not be apparent as evidenced by the two studies reported on here. Teacher education programmes are generally focused on the experiences of Icelandic teachers in Icelandic schools, again aimed at the majority culture. However, a new International Studies in Education program has now been launched to provide variety of teacher education (Háskóli Íslands, 2008). Similarly, new multicultural policies for schools at different levels are being developed in a number of municipalities in Iceland and progressive projects focusing on social equality and diversity are being implemented. Research on positive and negative experiences of ethnic
minority teachers in Iceland is an important addition to the growing field of multicultural educational research in Iceland. It will presumably give important directions for improvement within the Icelandic educational system in the light of the increasing diversity in Icelandic society.

Mary Christianakis, (2010) made a study on “Collaborative Research and Teacher Education”. Teacher research has the power to improve how prospective teachers learn information about both teaching, as well as transform how they are mentored into the profession. Knowledge discovered through research can then be added to the “codified” knowledge presented in coursework. Integrating teacher research into pre-service education, re-skills and positions teachers to be inquiry-oriented, rather than implementer-oriented. Many teacher education programmes incorporate practitioner inquiry into their credential programmes (Levin & Rock, 2005; Graham & Hudson-Ross, 1999). Those programmes can lay the groundwork for a common understanding of collaborative educational research. What might a collaborative research approach look like in teacher education and what kinds of institutional and programmatic changes would need to take place? One way to reconceptualize institutional relationships in research is for teacher education programs to re-think how they work with public schools and the role of teacher mentors. For example, the theme for the Summer (2010) issue of Teacher Education Quarterly entitled, “Moving Teacher Education into Urban Schools and Communities” explores the possibility of blurring the lines between public schools and the academy, by working with schools to relocate teacher education into Professional Development Schools (PDS). PDS cast public schools in roles analogous to teaching hospitals in which they serve as sites where teachers and researchers might jointly explore professional standards, knowledge, practice, inquiry, and research (Darling-Hammond, 1989, 2010; Doolittle, Sudeck, & Rattigan, 2008; Holmes, 1990; Kennedy, 1990). In such professional development sites, academics, mentor teachers, and pre-service teachers could construct on-going, longitudinal, collaborative research projects that might inform curricular development and respond to children’s learning.
needs. Another way that some teacher education programs might incorporate programmatic changes to support collaborative research is by shifting from teacher “training” to true teacher “education” that requires inquiry (Ravitch, 2010). In this regard, teacher education programmes that emphasize incorporating inquiry into practice and student communities need to incorporate research methods, not in addition to, but as an integral part of teacher credentialing. In her groundbreaking book, *The Flat World and Education*, Darling-Hammond (2010) documents that Finland, Korea, and Singapore have developed exemplary pre-service teacher education by, amongst other changes, incorporates a strong teacher inquiry into pre-service education. Buchberger and Buchberger (2004) document that, in Finland, teacher education takes place in “model schools,” which house both academics and experienced classroom teachers engaging in ongoing research. Within those schools, pre-service teachers learn to research learning and teaching with the expectation that they will develop problem solving “capacity” to share with other public school teachers (p. 10).

Pre-service teachers in Singapore do their practicum in “school partnerships” between universities and public schools with the purpose of teaching candidates to engage in teacher inquiry or research (Chuan & Gopinathan, 2001). While the United States does not advocate for such models of collaborative research, an example of such a shift is Pedro Pedraza’s (2005) recent community action research efforts in Latino communities in California, which seek to shift teacher education into more collaborative research relationships with schools and their surrounding communities. Pedraza’s work shows the collaborative possibilities of pre-service teachers, academics, public school teachers, and community members working together to improve learning and generate relevant knowledge. In order for teacher education to shift to a more collaborative inquiry-based approach, pre-service teacher assessments would have to incorporate research methods and the incentives must reward teacher research.
Darling-Hammond (2010) finds that Korean teachers are promoted based on amongst other achievements, their research accomplishments. While there is no systematic training for teacher inquiry, in California, an emphasis already exists in the Performance Assessment for California Teachers (PACT). In PACT, teacher candidates conduct child case studies, analysis of student learning, and curricular/pedagogical analysis. The PACT assessment lays the groundwork for those credentialing to engage in more systematic teacher research, if they choose to do so. Finally, for collaborative teacher research to take place, teachers will have to work alongside academics to engage in continuous professional development. Just as in the medical profession, some teachers may choose to do so by focusing on their practice, while others may engage their teaching as teacher-researchers. In Singapore, the government compensates teachers for professional development and facilitates with research training to conduct teacher research (Darling-Hammond, 2010). Such a national commitment to teacher research in the United States does not yet exist.

While very promising, collaborative teacher research, like all research has some challenges to overcome (Castle, 1997). Pine (2009) identifies three specific challenges that those participating in teacher research collaboration must address. First, he argues, collaboration that involves practice must focus on inquiry and research, rather than on discussions and emotional support of the daily practice. Second, collaboration that is contrived (Hargreaves, 1994) must be avoided because it leaves some stakeholders less invested than others. Third, researchers have to be mindful that collaboration can lead to “group think,” which limits the possibilities for dissenting views or counter narratives within the collaborative group (Pine, 2009, p.158). In addition, there are several concerns regarding equity in collaborative research. For one, collaboration is not always egalitarian; it can reiterate hierarchy by reinforcing institutional authority and efficiency (Ede & Lunsford, 1990). Collaborative research should entail a negotiation of roles and responsibilities.
Another challenge to egalitarian collaboration in teacher research has to do with the control of the research questions, research focus, budget size, leadership, and decision-making (Kapunscinski, 1997; McGlynn-Stewart, 2001). As Anderson (2002) argues, collaboration in practitioner inquiry may inadvertently serve to reinforce the status quo. For example, administrators or academics might seek to assert leadership over collaboration and determine the direction of the research. If teachers and academics collaborate with one another in forced and uncomfortable ways, the research may reiterate existing hegemonic infrastructures. Thus, those who participate in collaborative teacher research must resist temptations to use their knowledge or social locations to control or undertake contrived or coerced collaboration. Collaborative approaches have shown great promise to bridge the “great divide” between academics and teachers, between universities and schools, and between theory and practice; however, issues related to control, power, and authenticity persist. As Olson (1997) asserts, true collaboration involves conversation—academics and teachers listening to one another even when they have conflicting opinions. Similarly, Nesbitt & Thomas (1998) argue for a paradigm shift that seeks collaboration on common ground, negotiated by all practitioners: Authentic collaborative research is conception, investigation, and nurturance of ideas through a naturalness of interaction that underlies any concurrent attention to power disparities resulting from the researchers’ particular social locations. Authentic collaboration can occur only when the mutual respect and trust—between those from the dominant paradigm and those who have had to work from the margins—is sufficient to produce interaction that is naturally egalitarian, rather than mediated by vigilant awareness of status difference. (p. 32). The Wells (2001), Dyson (1997) and the Graham & Hudson-Ross (1999) studies show the benefits of negotiated collaborative research for both professional development and pre-service education.
However, note that such collaborations were voluntary. Overall, it is important to explore and maintain the volunteer and democratic aspects of collaborative research. Collaborative approaches have the potential to improve not only the status position of teachers in research, but also to provide what Cochran-Smith and Lytle (2009) describe as a “constructive disruption” to the educational research hierarchy. Such constructive disruptions shake up the status quo and allow educators to re-imagine what research means in a participatory democracy. This is not to say that academics and teachers are equally qualified for research. They are differently qualified and differently positioned. Teachers bring different positions and understandings, as do academics. At different points in collaborative research, one may have more knowledge or skill than the other way. If teacher education is to empower future teachers as powerful stakeholders in both educational research and in production of the professional knowledge base of teaching, then certification programs must move beyond simply educating teachers to implement the standards and assessments their districts provide them. Teacher certification programs should seek to establish opportunities for teacher research with experienced teacher mentors, administrators, and academics.

Pamela LePage et al, (2010) made a study on “Curriculum Recommendations for Inclusive Teacher Education”. This study focuses on the recommendations of the Committee on Teacher Education (CTE) which wrote three books describing the basic foundational knowledge that all American teachers—including special education teachers—should know before they graduated from their pre-service programs. In this study, the authors articulate the CTE’s recommendations and then provide additional special education content recommendations for general education teachers working in highly diverse inclusive classrooms. As part of the discussion on curriculum, the CTE reports included suggestions about effective pedagogy and assessment strategies in
teacher education. The reports presented research evidence about core experiences and knowledge that help teacher educators develop the capacities and dispositions teachers need to teach children. One goal was to outline signature pedagogies for teacher education that related to specific content areas. Some of the pedagogies and experiences that were discussed in detail included (a) action research, (b) cases, including child case studies and cases of teaching and learning, (c) analyses of teaching, including videotaped samples with artifacts, as well as commentaries and other print analyses, (d) analysis of student work and learning, and (e) the development of curriculum. Given increasing full inclusion and cultural and linguistic diversity, novice teachers need to be better prepared to teach children with disabilities. All novice teachers need to be provided with specific strategies for teaching children with disabilities and for dealing with issues of inclusion and professional collaboration. These strategies should be included in the next major text developed to provide recommendations on teacher education curriculum, so that novice teachers are enabled to become more skillful teachers for all children.

Patrick Kelly & Charlotte Stevens, (2010) made a study on “Narrowing the Distance: Using E-Learner Support to Enhance the Student Experience”. The United Kingdom Open University has experimented with a range of information and communication technologies (ICT) to support learners and foster the development of learning communities, including online resources, email, e-messages, SMS messaging, and Second Life. The initial creation of information and resources to support study has been followed by the expansion of e-communications and interactive activities, which form part of a revitalized learner support blend, aimed at reducing the 'distance' in distance education for the learner. Here, the researchers describe how ICT has been used by two major learner support projects to strengthen student identity in the context of a programme of study, and to support students at key
points in their learning journey. Much of the work described here has fed into a major Open University review of student support. The core recommendations, now being progressed, involve a clear shift to supporting students in the context of a programme of study by means of an integrated student support team. Seven large scale pilots have been established to test out new models of support. Central to the pilots is the further exploitation of online technologies to complement personal support. This will include a student profile system to bring together information provided by students, course and qualification registration, academic performance, and online tracking data. The student profile will be used to drive proactive communications from the university, to support personal contact, and structure the personalization of the university's online presence. We are convinced that there is an important role for e-support within an overall learner support strategy but cannot yet offer a comprehensive model. There is still much to learn about the range of media and tools available and how to use them to best affect.

The OU has recently adopted Elluminate, an online communication and collaboration tool that enables teaching staff to run live interactive lectures and seminars. It also has a presence on Face-Book and Twitter, and has launched its own channel on YouTube. Some OU associate lecturers have recorded YouTube videos to introduce themselves to students, and use Face-Book and Skype as a formal part of tutorial support. Students are also independently experimenting with a range of social networking tools. While the use of e-technologies presents students with more and more opportunities to interact with each other, and build networks and communities, there remains the challenge of engaging with those who don't possess the skills. So, although we embrace a new 'architecture for participation' the university must always strive to create the most inclusive environment for students.
Tim Green et al, (2009) made a study on “The Retention of Experienced Faculty in Online Distance Education Programmes: Understanding Factors that Impact their Involvement”. The study sought to determine factors that affect faculty decisions regarding their involvement in teaching online distance education courses. A survey was administered to online distance education faculty across the United States to determine those factors that encourage or discourage them from continuing to teach online courses. The factors were examined and reported from the standpoint of each of four faculty groups: (1) tenured, (2) tenure-track, (3) full-time non-tenured/fixed term, and (4) part-time/adjunct. From the survey responses ($N = 135$), a list of retention strategies that university administrators may use for retention of online distance education faculty are offered. This study explored that Institutions will have to develop a systematic plan for recruiting, hiring, and developing online distance education faculty. To be successful, there must be a commitment to educational quality as well as a commitment from all levels of an institution. Based on the survey results the following strategies are recommended as part of an overall system to develop and retain experienced faculty.

- Provide an institutional support system that includes the following:
  - Faculty should be compensated at a level that they feel is fair based on the perceived (and often real) increased workload associated with developing and teaching an online distance education course.
  - Determine how online distance education courses fit into the retention and promotion process for full-time tenure-track faculty.
  - Ensure that online distance education students are adequately supported. Faculty should be able to focus on teaching and not have to be the frontline support for students facing technical issues.
  - Develop a sense of community with online distance education instructors. It is important to help instructors (especially adjunct instructors who may only teach at a distance) feel connected to the university.
An expansion of the data gathered through an additional survey would allow additional elements to be identified, such as gender of faculty participants, university enrollment, online distance education enrollment, and technology resources. These data could then be used to conduct more robust statistical analyses. Furthermore, with a larger sample, statistical comparisons of the various subgroups would be more robust and helpful in making stronger generalizations. Finally, interviews with individuals or focus group studies addressing the same or similar factors as those addressed in the survey may provide greater insight into those factors that affect educators’ approaches to teaching in an online distance education environment.

Dilek Altunay et al (2008) made a study on “Distance English language teacher training programme in Turkey: e-learning opportunities for the right to education”. This study presents the Distance English Language Teacher Training Program at Anadolu University in Turkey and how distances education; particularly e-learning opportunities offered in the program contribute to the right to education. The programme has contributed to solve the English language teacher education problem in the country and contributes to the right to education mainly in two ways: Firstly, it gives the ones who would like to become English language teachers the right to achieve their aim. Secondly, by increasing the supply of teachers of English, it allows students who want to learn English but cannot learn because of lack of teachers to learn English. The program also includes many applications contributing to the right to education. This practice is important in that it might bring new insights to foreign language teacher education and will be of value to other countries facing with similar problems. Distance English Language Teacher Training (DELTTE) Program at Anadolu University in Turkey contributes to education for all in different ways. Firstly, it gives a large number of people in both genders, living in both urban and rural areas in Turkey who want to become English language teachers but who cannot receive on-campus education for different reasons the chance to become
teachers. Secondly, it helps cover the gap between the demand for and the supply of teachers of English, and hence many students who cannot find teachers of English will have those teachers and receive foreign language education. Using Internet-based courses, or e-learning applications in other words, as a support system rather than as a must helps students to learn better, but it is not a disadvantage for the ones who do not have Internet access because students are responsible what is written in the course books for the examinations. Using Internet-based courses may have a benefit for those students in the long run in that since they are learning through the use of technology, they may easily use technology while teaching when necessary in the future. It is hoped that this article gives an idea about how use of distance education, particularly, the e-learning opportunities offered to students in the programme contribute to the right to education in the field of English language teacher. It is hoped that this article gives an idea about how use of distance education, particularly, the e-learning opportunities offered to students in the programme contribute to the right to education in the field of English language teacher. It is hoped that this article gives an idea about how use of distance education, particularly, the e-learning opportunities offered to students in the programme contribute to the right to education in the field of English language teacher.

Gerasimos Koustourakis et al. (2008) made a study on “A Contribution to the Hellenic Open University: Evaluation of the Pedagogical Practices and the Use of ICT on Distance Education”. This study examines a) the methods used to structure the pedagogy necessary to underpin distance education delivery used by the Hellenic Open University (HOU); b) the adoption of pedagogical and epistemological conceptual systems HOU uses for the development of its pedagogical practices; and c) the role of information and communication technology (ICT), and the degree of ICTs incorporation into distance education delivery at HOU. This study shows that: a) in terms of providing rigorous course contents, strong framing exists between HOU’s various learning modules; b) in terms of pedagogical practices, there is a strong hierarchical relationship and framing between HOU’s academic staff and tutors, while conversely, framing is weaker between its tutors and students; c) in terms of ICT usage HOU, in general, uses technology for
administration, while conversely, and depending on the program of study, it currently only has limited use for student learning. The majority of Hellenic Open University’s (HOU’s) students are busy adults juggling family and work responsibilities, while studying part time. HOU’s role of the tutor, which is based on the British Open University exemplar, currently shows weak framing in terms of students-tutor relationships. This is why the development and deployment of ICT is helpful for the success of HOU’s students. Such technologies not only help build working relationships between tutors and students, but also help students to help themselves to the panoply of online resources and educational materials that can help them learn at a distance. Unfortunately, HOU currently lags behind many other open and distance education institutions in the world, specifically in terms of incorporating and using ICT to support and aid students in their learning. The lack of suitable online educational (digital) materials, coupled with the reality that computer and Internet usage in Greece-primarily due to high cost of access – remains low, means that HOU faces significant challenges in terms of supporting students using ICT. The good news, however, is that this is slowly changing, as reflected in the high-level use of ICT by the HOU for administrative purposes. The Hellenic Open University is a higher educational distance learning institution that has been working to incorporate ICT into its administrative and learning processes. To this end, HOU has been proactively developing its ICT capacity. Educational practices, aimed at supporting students and their learning processes, have been developed – and will continue to be developed- using the latest technological advancements.

Timothy Olugbenga Ajadi, et al (2008) made a study on “E-Learning and Distance Education in Nigeria”. This study discusses the relevance of e-learning in the position of distance education in Nigeria. It commences by discussing the meaning of e-learning and distance education. It also discusses the historical background of distance education in Nigeria as well as the operations of National Open University of Nigeria (NOUN) as the first
federal University in Nigeria dedicated to the provision of education through
distance mode. The survival of tertiary education institutions in the
21st century will increasingly rely on various forms of electronic delivery
and communication inside a market place that requires education to be
flexible. E-learning is now widely used in most of the developed countries to
promote distance education (DE) and life-long learning in an effective way.
In Nigeria, the recent developments and awareness of the Government on
ICT have opened an opportunity to adopt e-learning to deliver distance
education for educating mass of its uneducated or less educated peoples.
Considering the recent expansion of ICTs in the country, NOUN could
introduce some modern ICT like e-mail, web-based learning (e.g. open
course wares), CD-ROM for delivering its course materials through
e-learning for its learners. However, before going to introduce an advanced
ICT in NOUN, it is suggested that enough research be conducted on
learner’s access, cost and other related parameters essential for it.

Guohua Pan & Curtis J Bonk, (2007) made a research paper on
“The Emergence of Open-Source Software in North America”. This paper
reviewed the definitions and connotations of open source and the bazaar
model of software development. In contrast to software development,
acquisition, and use in the past, the two most striking features of the
open source development model are distributed development of software
and free redistribution of the software copies. As a result, Linux, an open
source operating system, is seen as a viable alternative to Microsoft’s
Windows system. Equally significant, the Internet appears to have been shifting
from being a medium for information transmission and consumption to that of
a platform through which content is created, shared, remixed, repurposed, and
passed along by its participants to potential users (Downes, 2006b). Like many
open source advocates, we discuss uPortal, Sakai, and Moodle, three popular
open source projects that are being undertaken by higher education institutions
in North America in response to their dual challenges of developing
sustainable economics and advancing innovation for application software
and other related products in higher education. Given these open source trends of the past decade, and especially the past few years, there are many exciting opportunities for research and development within higher education across the human reaches of this particular planet and beyond. The ‘gift culture’ and distributed development enable the success of open source software, such as Linux, and help to build and consolidate a community of practice of open source software developers. This gift culture and distributed development can, and may have already been, mirrored in open and distance learning practice, while they may also help to build and reinforce a community of open and distance learners. The spontaneity and expanded possibilities of the open source model can also impact open and distance learners adversely. Also included are brief analyses of the Linux operating system, and two open source course management systems, Sakai and Moodle, as well as the uPortal. A timeline of major open source projects of significance in North America is provided. The paper concludes with a discussion of the potential for applying the open source software development model to open and distance education.

Melinda Dela Pena-Bandalaria, (2007) made a study on “Impact of ICT on Open and Distance Learning in a Developing Country Setting: The Philippine Experience”. The influence of the information and communication technologies (ICTs) in open and distance learning (ODL) in a developing country, the Philippines, is critically evaluated in this paper. Specifically, this paper examines how ICTs have influenced or shaped the development of ODL in this country. Also examined are the different stages or generations of distance education (DE) in the Philippines, which are characterized mainly by the dominant technology used for the delivery of instructional content and student support services. The different ICTs being used in ODL and their specific applications to the various facets of this mode of delivery are also described. Also included is an examination on how quality of education is ensured in a technology-driven system of teaching and learning, which includes, among others, the employment of the ‘quality circle approach’
in the development of courses and learning packages, and the provision of appropriate technologies to perform academic processes and achieve institutional goals. Experiences of the various universities in the Philippines are also cited in this paper. Lessons have been drawn from the ODL experience to guide educators from other developing countries. This study recommended that those seeking to deploy DE must ensure that any technology used is both pedagogically sound and socially-driven. In other words, it is not wise to use technology simply for technology sake, it must be ‘relevant.’ ‘Relevance’ in this case has two dimensions: the first is process and the second is substance. Kling (2001) asserts that design and implementation processes must be relevant to the actual social dynamics of a given site of social practice, and that the substance of design and implementation-specifically the actual designs and the actual systems – must be relevant to the lives of the people in which they affect. Research and evaluation is important. As with any new initiative, the research component of DE projects must inform the selection and subsequent use of any new technology. Projects, therefore, must set goals, means to meet those goals, which must be monitored to ensure their effectiveness and efficiency in meeting those goals. Introducing innovations always have cost implications. UP’s Open University, like most universities, has limited resources upon which to research, design, implement, and support DE. Moreover, any innovation – including DE – has a corresponding cost on some other part of the organization. Often there is simply not enough money to go around. As such, organizations like UP’s Open University must beware of reinventing the wheel (i.e., embarking on costly, custom designed systems) and instead seek to creatively use technologies that are already readily available.

Jessica N. AGUTI, (2006) made a study on “Integration of Information Communication Technologies (ICTs) in the Distance Education Bachelor of Education Programme, Makerere University, Uganda”. This paper reports on the problems experienced by the Department of Distance Education, Makerere University, Uganda with the B.Ed. (External) programme with specific
reference to the technology needs and expectations of the programme. With a total enrolment of nearly 3,500 students in 2003, this programme was one of the largest distance education programmes for teachers in the country. It was therefore important to establish what technologies the stakeholders of this programme had access to, what technologies they believed could be used for the programme and for what purpose, and finally what prerequisites should be put in place for this technology to work. The article reports on the availability of and access to ICTs, access to telecommunications and sources of funding for ICTs in the distance education programme. The authors also looked critically at a number of prerequisites thought to enhance the effectiveness of ICTs in the B.Ed. (External) programme from an African perspective hoping that the integration of ICT in the programmes would lift the distance education mode of delivery of these programmes from a classical first and second generation, to a third generation level of operation. Integration of ICTs is absolutely imperative in distance education. This article has shown that ICTs have a huge potential in meeting a number of teaching/learning functions in the B.Ed. (External). However, in Uganda, access to the ICTs, which is one of the prerequisites for the integration, is still a huge problem to students and staff of this programme. Personal ownership of the video, TV, computer and Internet is limited so programmes that presuppose personal ownership of these ICTs cannot work effectively and efficiently. Alternative ways of ensuring access would have to be utilized and in this study, collaborative ventures, use of centers and government subsidies are some of the strategies that have been suggested. The same applies to financing of the integration; alternative sources of funding have to be solicited since the existing tuition fee funding is inadequate. This should all be done bearing in mind the fact that technology should not be chosen and used simply because it is available, but because of what it can add to the teaching/learning experience. It should be based on the tasks it will be expected to perform and the outcomes expected from the programme.
Mohammad Habibur Rahman (2006) made a study on “Developing Course Materials for Open and Distance Learning: BOU Perspective”. Developing course materials for Open and distance learning is a continuous process. A variety of staffs with a wide range of expertise are involved in producing a distance education course. That means a team of academics involved in distance education will be responsible to develop each program. The material development strategies for each subject is centered on the team approach to compare teaching techniques for traditional and distance learning and emphasize the need for planning and the role of each team member. Coordinator, authors, referee, instructional designers, editors (structural and style editor), graphic artists, and media specialists are included in the team. Sometimes times they meet together and to discuss and finalize the ultimate layout of a course book. This study discusses how to design and develop distance learning course materials and how Bangladesh Open University (BOU) adopted a team approach in developing its formal programs. Writing is an art and writing for open and distance learning is even more difficult because you need to use certain styles and technique that are so different from traditional writing. In designing and developing distance learning course materials we have to ensure that writers are aware of learning theories and techniques. In fact, without some sort of training the writer cannot develop instructional course materials for distance education. Developing and designing instructional design and course materials for ODL involves more research, commitment, planning and evaluation. Bangladesh Open University should give more emphasis on learning approach regarding its course materials development process. If the course materials development techniques are properly followed and implemented BOU will surely able to produce the best quality of text books for distance learners.
Kimberly C. et al (2004) made a study entitled “Distance learning, virtual classrooms, and teaching pedagogy in the Internet environment”. This study revealed that the Internet and distance learning have created a new business and a new teaching pedagogy. The purpose of this paper is to show how data communication technologies have affected distance learning and pedagogy, and help teachers and students in virtual classrooms. In particular, the study addresses the history of distance learning, current issues, the federal government’s role, and four specific areas of improvement: curricula change, new patterns of interaction, changes in organizational structures, and the roles and activities of participants in both business and academic distance-learning environments. Distance learning must have a delivery mode that uses some form of telecommunication. This means that a course must be delivered via television, videocassette disc, film, radio, computer networks or other devices that use some audio-video format. In the early applications of distance learning, the major forms of communication between a student and a remote location were television, video cassettes, or audio tape cassettes. With the growth of the Internet and large networks, students now have an opportunity to utilize asynchronous and synchronous communication tools, as well as to choose the time, place, and pace of their education. Oblinger and Kidwell assert that distance education allows states and universities to achieve four principal goals: to expand access, to alleviate capacity constraints, to capitalize on emerging marketing opportunities, and to catalyze institutional transformation. The growth of, and the interest in, distance learning is great, but the question remains how distance learning will impact education. Some of the more pressing issues such as curriculum, faculty/student interactions, and choice of applications often take precedence over the creation of an appropriate pedagogy. Distance learning has undeniably changed the way people are educated. It will continue to change the way business is conducted and it will continue to change the global market place. While universities, corporations, and governments are rapidly embracing this tool for learning, many issues remain. This study has attempted to identify some of these issues. It is
imperative that the pedagogy continues to evolve and grow as technologies change. The biggest concern is how distance learning and technology will change the educational system in the long-term. As Roger Crawford so eloquently stated: A generation of children is emerging already immersed in a multimedia “data storm”. Their understandings and expectations of the world are mediated through their experiences of multimedia and ICT’s and these differ from those of preceding generations nourished on linear technologies. Educating these children using models of teaching and learning that are grounded in concepts of knowing and understanding that are linear and finite will not help them succeed in a technological global factor where multi-disciplinary, holistic approaches predominate.

2.3 STUDIES CONDUCTED IN INDIA

Ashish Kumar Awadhiya and Gowthaman, K (2014) made a study on, “ICT Usage by Distance Learners in India”. Open Universities across the world are embracing ICT based teaching and learning process to disseminate quality education to their learners spread across the globe. In India availability and access of ICT and learner characteristics are uneven and vary from state to state. Hence it is important to establish the facts about ICT access among learners, their ICT usage patterns and their readiness to use ICT for educational purpose. In view of this, a study was conducted with the objective to find out the access level of ICT among distance learners. The analysis indicates that maximum learners have desktop/laptops and most of them are accessing internet very frequently from their home. The analysis also indicates that maximum respondents are browsing social networking sites followed by educational and e-mail service providing websites. Findings suggest that there is a need to generate ICT based tutorials complemented with social networking tools and mobile applications. Study also shows that learners are equipped with mobile phones and they are browsing internet through it and also availing support services offered by the university. Hence possibility of integrating mobile phone services may be used for providing learner support services.
and content delivery. Most of the learners were equipped with one or more computer devices; hence ICT infrastructure is not a problem for them. They are digitally literate and in sync with the upcoming technologies. Learners have inclination towards using internet based applications like e-mail, downloading Audio/Video, rather than applications like word processing, spreadsheet and presentations which do not need any internet connectivity.

Similar finding were also reported by Khan et al., 2011. Respondents actively used social networking and educational websites for connecting to people and gathering information. This survey also indicated that majority (≈80%) of the respondents were below 30 years of age. It is important to cater to this large number of learners’ population through ICT based quality educational opportunities to attract more and more learners and survive in the global competition. Therefore, there is a need to generate ICT based tutorials and complement them with social media tools for learning and teaching process. Kishore, (2013) made a study on, “Value-Addition for Empowerment and Employability through Intervention of ODL Mode of IGNOU”. In the developing country like India, the output of graduates from higher educational institutions is high. But, the major concern is that majority of graduates are not employable, especially from rural areas for want of skills expected by the employer. The soft skills, communication skills and multidisciplinary knowledge are essential to become employable. In this context, the short-term six months courses of Indira Gandhi National Open University (IGNOU) delivered through the ODL mode is an alternative intervention to the graduates towards empowerment.

This article analyses the benefits of self-learning though ODL mode of IGNOU. The IGNOU Regional Centre, Madurai has made a pilot attempt in enrolling formal mode college going students in a few specific certificate programmes of IGNOU for enrichment and empowerment. The certificate level programmes of IGNOU which match the discipline of study at the graduation level as a value added course are also explored in this
work. Self-study through ODL promotes the many skills and builds confidence to link learning to real-life situations and as well as ability to understand the changing demands in the world of work. Also, ability to manage information is a significant dimension of self-learning. Thus, the short-term programmes of IGNOU extend value-addition to the graduates in the form of transferable skills and the value-added outputs are expected to be employable or self-employable, thus contributing to the growth of the nation. The flexible strategies in-built in ODL mode of IGNOU are to include the excluded and have impact and implications for the society. Also, ODL mode of IGNOU offers a plenty of opportunities to gain competencies such as employment skills, entrepreneurship skills and avenues for self-enrichment. Against this background, the regular college going students can simultaneously study a short-term certificate programme through IGNOU and get value-addition to the Bachelors’ degree at the end of college life. In the light of current worldwide globalization, privatization and liberalization (GPL) trends, requirements in every field are fast changing. Everyone including those already educated is expected to continuously improve knowledge and skills to cope with their future. In this context, it is not possible for anyone to remain complacent with knowledge, skills and attitudes in single field/area. It is necessary to continuously update knowledge and information in a multi-disciplinary domain and must be able to manage information about the recent trends in tune with the steady changing world of work. In the 21st century for instance, one cannot afford to ignore disciplines like environment, energy, agriculture, health, sociology, rural development, business skills, entrepreneurship, sustainable development and social sciences as they form an integral part of societal transformation.

Therefore, in absence of entire gamut of understanding about our societal and national needs, it is beyond ones capacity to succeed in life and work. For this to happen, there is certainly a compulsion for self-learning, continuous and life-long learning for acquiring skills and need
for transfer of knowledge and skills beyond the scope of formal graduation. Thus, the contribution of short–term programmes of IGNOU gains importance towards empowerment, employability as well as for the human resources development of the country. Also, the nation is also able to benefit in enhancing Gross Enrolment Ratio (GER) in higher education and helps in creating a learning society with basic skills capable of nurturing the productivity and development.

Kishore, S., (2014) made a study on, “Academic Counselling in ODL: Information System for Capacity Building of Academic Counselors in IGNOU”. Indira Gandhi national Open University (IGNOU) is an apex body for open and distance learning (ODL) system in India. The university has nation-wide operation and pioneer in distance education. IGNOU has an hqrs, 67 Regional Centres and about 3400 Study Centres throughout India. The study centres are the academic contact point for distance learners and the university engages around 54,000 academic counsellors for giving learner support to the heterogeneous distance learners. In IGNOU, the academic counsellors are mostly drawn from the formal higher educational system and the exposure towards ODL system therefore, is minimal. However, the academic counsellors are the pivotal link between the ODL institution and isolated distance learners in IGNOU. Their role in handling face-to-face academic counseling sessions at the study centre is very important. The academic counsellors in IGNOU are drawn from the conventional system of higher education. Though, periodical training is given to them by IGNOU, it is a difficult task to train such a massive number of counsellors across the country. In fact the role of an academic counsellor is multifarious and requires both tutoring and counseling. For maintaining quality in academic counseling, the accumulation of multi-dimensional skills, attributes and information is essential on the part of the counsellor in ODL. Among these, possessing information at various levels about ODL system is an enabling factor to effectively support isolated distance learner. Therefore, a comprehensive Information System is felt the need of the hour for the
capacity building of the academic counsellors in supporting distance learners and for the quality assurance process. This work explores and builds a comprehensive information system for the academic counsellors in an ODL system, keeping IGNOU as the context.

Manoj Ray, V (2013) made a study on, “Electronic Media Learning Materials of Indira Gandhi National Open University, India: An Analytical Study”. The establishment of the Indira Gandhi National Open University (IGNOU) in 1985 has been a milestone in the growth of higher education in India. A very special feature of the University is that a composite of several instructional methods in practice are aimed at giving effective support to distance learners. Self-instructional print materials are the mainstay of the courseware. Besides this, at the support centres, the learners attend a few face-to-face counselling sessions and get access to audio-video materials stocked in the library. Gyandarshan and Gyanvani, the educational television and radio channels broadcast programmes with academic content. The curriculum-based audio-video programmes developed by the University are supplementary in nature. This blending of traditional printed self-learning materials with electronic courseware is a conscious decision of the University which is intended to enhance the quality and effectiveness of learning. Over the years, audio and video cassettes have made way for digital compact discs. Resultant development in information and communication technology heralded virtual campus initiatives of IGNOU, conspicuous among them being the creation of eGyanKosh, the digital repository of the learning materials of IGNOU. Nevertheless, majority of the academic programmes are not being provided audio video supports. The paper analyses the application of electronic media in IGNOU’s course delivery platform. IGNOU has completed 25 years of its existence. The University has achieved a few milestones, especially in introducing a large number of academic programmes. It is highlighted that the repository of electronic learning materials stacked in the libraries of IGNOU learner support centres should be revised and updated timely. Accessibility of the electronic media through the
libraries should be strengthened considering the fact that all learners do not have access to eGyanKosh available online. India has just 13% internet penetration (Singh 2013). The obsolete audios and videos should be pulled down from eGyanKosh. There is as well an urgent need to improve the quality of presentation of self-learning materials in electronic form. Another aspect is launching of distance education programmes by Schools of Studies of IGNOU, without providing adequate learning support in the form of audio and video materials. And finally there is the urgent need to popularise electronic media use among distance learners. Like newspapers are made available online and in printed form concurrently, the learning materials of distance education institutions should be made available in dual formats - print and electronic.

Bhagwan Shree Ram, (2012) made a study on “Impact of Computer Based Online Entrepreneurship Distance Education in India”. This study investigates on the impact of computer based online entrepreneurship distance education in India. Liberalization could not be suppressed, but globalization has to be faced. Globalization has resulted in the needs to reform online entrepreneurship distance education for the production of quality human capital. Human capital is the key national asset to ensure that India can compete and survive in the era of liberalization. The implementation of generic skills is in line with the second thrust of the Indian National Mission, where India needs to produce human capital with first class mentality in order to face challenges in the knowledge based economy and the innovation field. This is in line with the National Higher Education Strategic, in an effort to transform higher education to produce human capital with first class mentality, online entrepreneurship distance education and entrepreneurial skills afford to develop human capital to achieve Vision 2020 and challenges of globalization. Online Entrepreneurship Education and entrepreneurial skills can raise awareness and open the students’ minds towards entrepreneurship as a career choice. Entrepreneurship can encourage
people in the economic, social, cultural change, integration of society and increase social mobility. The increase in the number of graduates in the field of entrepreneurship are expected to assist India in fulfilling the main thrusts outlined in the National Mission for achieving greater success in order to building Civilization and Raise Country’s Economy and Engaging in entrepreneurial activities and to co-operate with successful entrepreneurs to support entrepreneurship acculturation among graduates. Prior to designing the online entrepreneurship distance education course, educators should consider what online teaching material content requires. Educators may want to participate in various online entrepreneurship distance educational course design workshop and complete self-assessments computer and information technology (CIT) tools to determine whether their teaching styles are compatible with online methods.

David W. Moffett, (2012) made a study on “Traditional Teacher Education Programmes’ Survival and Success”. The purpose of this study is to identify the many challenges currently faced by traditional teacher education programmes and to identify what they can do to survive and succeed. This phenomenological study is the result of the Investigator’s journey as the longest serving member of a state’s teacher education association and his involvement in state and national teacher education policy making, combined with experiences as a teacher education division chair, school of education associate dean, unit accreditation director, and assessment director. The Investigator identifies 10 areas challenging traditional teacher education programs and applies his personal journey as a teacher education association leader, policy maker, and teacher education administrator, along with relevant articles and stories, to each of them. Beyond discussion in each of the 10 areas the Investigator offers recommendations for each, regarding how traditional teacher education programmes can survive the challenges and succeed. The Investigator’s recommendations in response to the 10 identified areas:
i. Changes in Accreditation  
ii. Race to the Top and Initial Certification  
iii. Advanced Degree Pay  
iv. Changes in Financial Aid  
v. Alternative Certification Programs  
vi. Shifts in Student Populations  
vii. Scrutiny from National Organizations  
viii. Criticism from Education Researchers  
ix. Pressures from College Administrations  

It is the investigator’s intent for traditional teacher education programmes to consider the provided recommendations and to apply them to their programmes for review, analysis, reflection, and action. It is likely some teacher education programmes will synthesize the recommendations in such a manner as to create plans for implementing needed changes in their programmes. In any case, it is highly likely that all of the recommendations will somehow be applied across teacher education programmes. A perfect storm is brewing in teacher education. Traditional teacher educations are under siege. Those teacher education programs that take necessary actions now will thrive and survive. Those teacher education programmes that avoid taking immediate, needed action will either lose substantial numbers of students or disappear. Being teacher education programmes, colleges and universities must transform as well.

Hanlie Liebenberg et al, (2012) made a study on “Student Access to and Skills in Using Technology in an Open and Distance Learning Context”. This study highlights and confirms that digital access is nuanced and that we should not only understand, irrespective of context, how digital access and skills amplify and perpetuate existing societal inequalities within and between countries. As the cumulative effects of
globalization and information-flows on higher education become more apparent (Barnett, 2000b), the digital divide becomes not only a concept germane to developing world contexts, but one that increasingly shapes and impacts all societies where global and local trends and forces interact, displace, exclude, and include. Among the many challenges facing higher education and ODL provision in developing world contexts, the questions rose by the continued prominence of the digital divide need to be taken seriously, but also reflected on critically. Constructs such as the digital divide can be used to sustain an unwillingness by faculty (Panda & Mishra, 2007) to accept that technology is shaping higher education and that the way we see and understand knowledge and knowledge creation and validation has changed forever (e.g., Barnett, 2000a, 2000b). On the other hand, we cannot negate the fact that we should understand the issue of access to technology in the wider societal context of exclusion and inclusion (Castells, 2009). This research provides evidence that the construct of the digital divide as a “bipolar societal split” (Warschauer, 2002) has very little, if any, empirical basis in the context of Unisa. Access to technologies and the skills to use these technologies vary and refuse to fit neatly into a binary model of “haves” and “have-nots.” Authors such as Brown and Czerniewicz (2010), Czerniewicz and Brown (2005), De Haan (2004), van Dijk (2006), and Warschauer (2002) provide findings to support an understanding of access to technology as a multifaceted, dynamic construct embedded in broader socioeconomic, political, environmental, and technological realities.

Lalit Lalitav Mohakud et al, (2012) made a study on “Encouraging Higher Education through Open and Distance Learning (ODL): Some Aspects”. Higher Education system of a country enhances the human resources potential and gives the country the right niche in global scenario. Due to wide scattered and overwhelming population and an increasing demand, it is not possible for country like India to provide
higher education to all who really need through formal mode. Open and Distance Learning (ODL) is one of the best alternatives to satisfy the growing demand for education of a variety of learners. The present writing deals with the role of ODL in the promotion of higher education in India. Open and Distance Learning system is an emerging field in higher education, particularly in India. It is definitely going to play a bigger role in the times to come. But it has its own barriers. However, if these are sorted out, then, certainly this system will emerge as one of the effective modes of propagating higher education in India.

Manas Ranjan Panigrahi, (2012) made a study on “Capacity Building of Teachers through Distance Mode using Teleconferencing as an Innovative Tool”. Sarva Shiksha Abhiyan (SSA) is a national programme to the goals of Universalization of Elementary Education in India. Distance Education Programme (DEP) plays a major role in providing technical support to the states in building capacity among institutions and people at national, state, district and sub-district levels to design, develop, produce and deliver distance learning inputs and materials in a recurrent manner. Rajasthan Council of Primary Education, Jaipur and DEP-SSA, IGNOU, New Delhi has organized 07 content based teleconferences during the period January, 2005 to October, 2005 for the capacity building of elementary school teachers. The main Objective of the study was to find out the effectiveness of the capacity building of teachers through distance mode using teleconferencing as an innovative tool. The researcher was used survey method under descriptive research for investigating the impact of teleconference programmes organized on different topics and areas. The sample consists of 4775 elementary school teachers as participants from the different learning ends of the Rajasthan were selected for the study. The DEP-SSA, IGNOU developed structured opinionnaire/feedback format to know the effectiveness of teleconference programme. The collected data were tabulated and analyzed with the percentage techniques. The major finding revealed that Most of the teacher
respondents agreed on the positive contribution of teleconferencing towards capacity building of teachers. The major findings of the study were as follows:

- The majority of the teacher respondents pointed out the teleconferencing programme were an innovative tool.
- The majority of the teacher shows their positive responses towards duration of the session, use of visual to make the presentation interesting, pace of presentation, and appropriateness of teaching-learning inputs of teleconferencing programme.
- With regard to teachers perception towards the interaction aspects of teleconferencing was found that more than 92.1 per cent teachers expressed their satisfaction.
- Almost 68.3 per cent of respondents viewed that teleconferencing sessions motivated them to develop teaching-learning materials.
- About 42 per cent of the respondents felt that teleconferencing enable them to attend to the individual differences in classroom.
- Effectiveness of the teleconference on increasing the level of knowledge and enhancing the level of understanding of participants is appreciated.

**Raymond Schroeder, (2012)** made a study on “Emerging Open Online Distance Education Environment”. Massive Open Online Classes (MOOCs) emerged rapidly, fueled by Internet connectivity, technology, and societal need for affordable access to learning. It seems likely that the underlying pressures will continue: affordability considerations, technology advances, and increasing Internet ubiquity are likely to be relevant for some years to come. The early responses have evolved from disparate individual efforts into an array of larger initiatives, including some that are well organized and coordinated. It seems most likely that some of these open online learning initiatives will merge or fall out as others grow in size and acceptance. Still others will enter the field in the coming months and years. Credentials, assessments, and validation of learning that may replace or bridge to traditional universities are now in formative stages. Based on prior experiences, we cannot
rely upon federal or state policymaking and regulatory bodies to anticipate these changes and take proactive moves. Historically, policy and regulations trail the innovations in education rather than leading them, at least in this country. In the coming years, we can anticipate that this approach will become truly disruptive in higher education. We will see refinements in deployment, assessment, and credentialing. While these initiatives are unlikely to fully replace the traditional university, they will fill an important role in accessible and affordable learning opportunities. Universities will need to adapt to the changing environment. No longer do public and private universities have a virtual monopoly in higher education. Continuing education departments have the opportunity to lead change by offering just-in-time and career-oriented learning opportunities capitalizing on the new badges and certificate initiatives. An exciting future awaits inter-connected, international learning opportunities through Internet delivered massive open online classes.

*Sangeeta Malik, (2012)* made a study on “Challenges Encountered by a Distance Learning Organization”. Distance learning as the name indicates is a learning, learner gets from distant places. In this learning system, learner and educators are separated by space & time. Lots of distance learning organizations are spreading to meet the increased demand of current & future needs of adult education. The rapid spread of these organizations doesn’t mean that these organizations are easy to open and run. There are various challenges faced by these organizations. They are:

- Interaction & Motivation
- Learning Material
- Limitation of Software
- Examination
- Student Training
- Quality
- Discipline
- Staff Development
Distance learning is not a new field, but still it didn’t receive much importance in the field of education. The rapid growth of the adult learner population is increasing the demand of distance learning techniques. The demographic study of the learners will help target the adult learner population and proper training will help organizations to develop course materials and techniques appropriately. Evaluation at each stage of programme (planning, designing, implementation & evaluation) in distance education will help overcome problems encountered by students and faculty. Understanding the technical problems is important, especially with the rapid expansion of technology.

**Santagata & Jody Guarino, (2012)** made a study on “Preparing Future Teachers to Collaborate”. In this study, the researchers argue that teacher education programmes should equip future teachers with skills for engaging in productive collaboration focused on improving instruction. Because little is known about pre-service teachers’ beginning conceptions of collaboration and the ways in which collaboration skills can be developed, we conducted a study to investigate these issues. The findings can be summarized as follows:

- Pre-service teachers’ initial conceptions of collaboration do not necessarily match with the kind of collaboration expected of them in professional development settings such as lesson study or professional learning communities.
- With support, pre-service teachers can learn to collaborate and find collaboration useful. Guided analysis of artifacts of teaching, such as video of classroom lessons, student work, or transcripts of teacher-student interactions can assist pre-service teachers in learning to analyze and interpret student thinking and learning and to consider instructional improvements.
Collaboration in fieldwork settings can further develop collaboration skills. Pre-service teachers can begin to test out instructional improvements in their own teaching, first by revising lessons, then by incorporating improvements in the midst of teaching. In addition, pre-service teachers can begin to use evidence of student thinking and learning to reason about teaching in a cause-effect manner.

Thus, although study findings suggest that providing pre-service teachers with opportunities to engage in collaborative analysis of teaching across university and school settings contributes to the development of important collaboration dispositions and skills, the findings also highlight the need for a system of support that guides pre-service teachers’ development. If pre-service teachers were to engage in productive collaboration early on, the most sophisticated levels of collaboration could perhaps be reached by the majority of them by the end of the teacher education programme. In our future work, the researchers will investigate specific factors that contribute to the development of the various collaboration skills or that hinder their development. The results of this analysis will guide the design of a system of support for the deliberate development of specific skills.

Shane Pill, (2012) made a study on “Rethinking Sport Teaching in Physical Education: A Case Study of Research Based Innovation in Teacher Education”. This study focuses on the significance of Physical Education Teacher Education (PETE) in the diffusion of ‘new’ thinking about sport teaching in physical education. It explores issues arising from a case study investigation that sought to respond to the critical commentary about the form and substance of sport teaching in physical education by supporting innovation in school curriculum and pedagogy through pre-service teacher education. The study was designed to challenge PETE pre-service teachers’ thinking about sport curriculum and pedagogy in physical education, introduce them to new thinking about models and specifically, the sport literacy model (Drummond & Pill, 2011; Pill, 2009, 2010).
Details of the research design are presented and the insights that the data have provided in relation to challenges and opportunities that teacher educators and teacher education courses confront in seeking to promote and support curriculum and pedagogical innovation are discussed. The results from this study suggests that while PETE course work can impact PETE pre-service teacher curriculum and pedagogical understanding of sport teaching, the practicum experience is fundamentally influential. In this instance that experience highlighted the conservatism of much sport teaching in schools and consequently, was not complementary to pedagogical innovation. Rather, it presented the PETE pre-service teachers with tensions and dilemmas in relation to physical education curriculum and pedagogy. Portraits of the possible for sport teaching became stymied by institutionalized patterns of relationships within a community of practice (secondary physical education teaching) that do not encourage pedagogical progressiveness as it is outside the norm of experience and expectation (Wheatley, 1997). Thus it is apparent from the analysis that a new model for the relationship between PETE course work and PTP placement is necessary if PETE is to play the particular and crucial role in securing the conditions for the radical reform (Kirk, 2010) that he suggested is needed to transform sport teaching in physical education.

Zaidatun Tasir et al (2012) made a research paper on “Relationship between Teachers’ ICT Competency, Confidence Level and Satisfaction toward ICT Training Programmes: A Case Study among Postgraduate Students”. In this study, there are three main variables that would make the integration of ICT tools as an easy process. Those three variables are teachers’ ICT competency, teachers’ confidence level in using ICT, and teachers’ satisfaction on ICT training programmes. This study investigated the relationships among these three variables and measured the levels of the correlation among them. In order to do that, this study used questionnaire method to collect the needed data from the teachers. The targeted sample was
the postgraduate students, who are currently teachers in Malaysian schools, from Faculty of Education in one of the universities located in Johor State. A total of 184 questionnaires have been collected and analyzed. This research finding revealed that Malaysian teachers had a high level of ICT competency (mean = 3.95), confidence level in using ICT (mean = 4.01), and satisfaction towards ICT training programmes (mean = 4.02). The findings also showed that the correlation coefficient between teachers’ ICT competency and teachers’ confidence level in using ICT was high (r = .749). However, both correlation coefficients between teachers’ ICT competency (r = .496) and teachers’ confidence level in using ICT (r = .571) with teachers’ satisfaction toward ICT training programmes were moderate. The findings show that teacher’s competency, teacher’s confidence level, and teacher’s satisfaction toward ICT programmes are correlated among each other. Malaysian teachers have a high competency level toward using ICT tools where they know how to use most of the ICT tools (such as computer, internet, designing home pages, projectors etc.) an how to integrate these tools and knowledge in their teaching process. The findings also show that Malaysian teachers have a high confidence level toward using ICT and they trust that they can use ICT perfectly without any fear or anxiety. In terms of their satisfaction towards ICT training programmes conducted by the ministry, the study found that most of them highly satisfied toward the programmes. They believed by attending the training programmes, it would be able to increase their capabilities toward using ICT and their productivity. These research findings also indicate that teachers’ satisfaction toward ICT training programmes is a very important factor that can increase the levels of the competency and confidence. Thus, ICT training programme s’ decision makers must pay a great attention to this factor. Therefore, they must formulate strategies that not only may increase teachers’ satisfaction but also exceed their expectations of the acquired knowledge that they may gain at the end of the course.
Abdul Gafoor, K, (2011) made a study on “Integrated Model of Teacher Preparation: An Alternate Representation”. This paper focused that the requirements of future teacher education are:

- The framework of teacher education that is presented below, for the most part agreeing to the constructivist perspective of education and teacher education is formulated bearing in mind that the new model needs to cater to remedy the following areas of weaknesses of present teacher education.
- Teacher education should assist novice teachers to deal with uncertainties in their practice, especially tensions between fitting in and experimenting
- Desirably, teacher education programmes need be more coherent than at present with more school experience and more academic content courses
- Emerging system of teacher education must possess organizations and practices to do away with hierarchical triads that coexist during student teaching creating impediments in the free development of future teachers
- Teacher education for the future, that one can foresee, must be based on constructivist principles that integrates relevant, non-mutually exclusive views in a flexible way

While elaborating upon the above requirements, this paper assumes the following:

- All teacher-education institutions can be required to possess their own demonstration or experimental school, as recommended by many of commissions and committees on education reforms.
- Teacher education will cease to be “cash cow” in universities and educational organizations to fund other activities; and, that required resources will be generated, allocated and utilized by all concerned for building up a viable and efficient system of teacher education across the country.
• Schools of education will resist pressures to water down teacher-preparation, which ultimately undermines the preparation of entering teachers, the reputation of schools of education, and the strength of the profession.

Teacher education of future needs to be long drawn and allowing student-teachers to be re-oriented appropriately to the new profession. Teacher education must help among them create awareness of pre-conceptions about knowledge, society, education and teaching-learning process. Teacher education instead of being linear must be a learning process proceeding in cycles. There must be ample opportunities for learning through inter and intra institutional and personal exchange and co-operation of ideas. Teacher education must encourage future teachers to make informed choices about the content, methods, values and practices. The above discussion in no way has set aside the other aspects and issues of education and their implications for teacher education such as multi-grade teaching, children’s language and cultural backgrounds, building teacher attitudes for addressing plurality and diversity in the classroom, education for sustainable development. Special issues that emerge in relation to education of girls, scheduled caste and tribal children have also to be accounted for. It is a further challenge to address such issues in teacher education programmes.

Bhattacharjee D.S., (2011) made a study on “Teacher Education in Northeast India- Status, Weaknesses and Alternatives”. This study highlights the features of existing teacher education programmes in the region and examines alternatives. Northeast India comprises of a cluster of eight states- Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland, Sikkim and Tripura. The region is usually stereotyped as underdeveloped. Geographically, the region is surrounded by international border with part of Nepal, Bhutan, China, Myanmar and Bangladesh. Prevalence of insurgency and terrorism is often regarded as major deterrent for over all progress of the region. It is also felt that to accelerate the process of development, it is necessary to utilize the potential of human resources that are available in the
region. For this, human resource development initiatives need to be strengthened. Education, being one of the important inputs for human resource development, assumes priority. Providing basic education of minimum quality to children has been an obligation of the state since long. The state governments have been making attempts to provide free, compulsory and universal primary education. Particularly after the SSA (Sarva Shiksha Abhiyan) (education for all) has been launched in the 2001-2002, a large number of children have been brought under ambit of school education. However, as far as quality is concerned, much needs to be done, particularly in the area of teacher education. Teacher training scenario in Northeastern states presents a complex and complicated picture. The backlog of untrained teachers is so high that clearing it in conventional approach appears to be very remote. There is no single solution for the problem. It has to be a combination of multifarious models and delivery modes. Also governmental agency cannot solve the issue singly. It has to be a concerted effort of all the players in the field including universities, voluntary organizations, NGOs (non government organizations), etc. However, while involving all these agencies, it is necessary to be cautious about quality of training that is imparted which is to be authenticated by regulatory body like NCTE.

**Mumthas NS & Anju Krishnan K, (2011)** made a study on “Yash Pal Committee Report on Higher Education: Certain Reflections by Teachers”, Presented for National Seminar on Quality, Expansion and Inclusion in Indian Higher Education Organized by Department of Education On 3rd Feb 2011 University of Calicut. Education is a parameter which makes a difference between a man and a beast. It is this knowledge that makes one capable enough to earn living and live in a disciplined society. Over the years we have followed policies of fragmenting our educational enterprise into cubicles. Most instrumentalities of our education harm the potential of human mind for constructing and creating new knowledge. This is particularly vile at the university level because one of the requirements
of a good university should be to engage in knowledge creation— not just for the learner but also for society as a whole. The higher education institution in India are regulated by many statutory agencies such as the All India Council of Technical Education (AICTE), Bar Council of India (BCI), Council of Architecture (COA), Indian Nursing Council (INC), Medical Council of India (MCI), National Council on Teacher Education (NCTE), Pharmacy Council of India (PCI), Distance Education Council (DEC), University Grants Commission (UGC) and so on. In the present scenario, Indian higher education is expanding in quantity but compromising with quality.

The universal approach to knowledge demands that boundaries of disciplines be porous and scholars be constantly on guard against the tendency towards cubicalization of knowledge. In such a context, a committee viz., ‘The Committee to Advice on Renovation and Rejuvenation of Higher education in India’ headed by Prof. Yash Pal was formed to review the various regulatory bodies connected with higher education. Hats off to this Committee, which took this matter into account, worked on it and submitted a report on June 24, 2009 to the Human Resource Ministry. Major attributes of Yash Pal Committee Report are related with National Commission for Higher education and Research (NCHER), specialized university, vocational, professional and teacher education etc. Since the submission of this report, there raised different opinions regarding the various activities associated with the report from different sources like teachers, administrators, educationists etc.

The objective of the present study is to collect the Opinion of teachers of Higher Education on Yash Pal committee report on Renovation and Rejuvenation of Higher Education in India, 2009. The study was conducted on a sample of 100 college teachers in Kozhikode, Malappuram, and Palakkad districts using stratified sampling technique. The sample included teachers from Arts and Science Colleges, Teacher Education Colleges, Professional and Technical College. The technique used to collect the data was personal
Percentage analysis was used for interpreting the result. Success of any new venture in the field of higher education depends upon the opinion of teachers, who are the life blood of education. In this context the view of teachers play an important role. The investigator also felt that, as majority of teachers are unaware of the recommendations made in the report, this is also a humble attempt to make them go through the report and express their opinion on some of the recommendations in it. The recommendations of the committee were divided into five dimensions:

- Distance and disconnect between research bodies and universities
- Architecture of learning
- Structure, expansion and access
- Governance and autonomy, and
- Working of NCHER

Regarding the dimension ‘Distance and disconnect between Research bodies and Universities’, almost all the teachers agree with the recommendations ‘All universities must be teaching cum research universities’ (92%), ‘Researchers should get teaching opportunities in universities’ (93.2%), and ‘IITs and IIMs should given individual freedom’ (99%). But nearly one-third of the teachers disagreed with the recommendation ‘No single discipline or specialized universities should be created’. Thirty percent teachers disapprove to the recommendation that all universities should have under graduate programmes and all teachers in universities must teach at the under graduate level, which comes under the dimension ‘Architecture of Learning’. They opined that if such a system comes, university teachers can refresh their basics, but they have to go down to the level of the students. They should be aware of the techniques of teaching under graduates. Also their valuable time for extension works will be lessened. For the students, it will be beneficial as it is the age when their educational aspiration will be high, but the calm atmosphere of universities, where studies are done, will be gone. The findings of this study will be of interest to the authorities concerned with Yash Pal
Committee and may help the authorities to improve the quality of higher education and to rectify the defects that have crept into the system.

**Panakj Khanna & Basak, P.C., (2011)** made study on “Planning the Networking of ODL Institutions for Establishing Integrated Distance Education System in India”. An IDES (integrated distance education system) in India would be established by employing VPN (Virtual Private Networking) of all ODL institutions in the country. Since VPN model has been adopted, so IT infrastructure components such as communication lines, hardware/software and associated applications and services could be mutually shared among the member organizations of IDES. In addition such a system while providing excellent security features, broadband networking capability and global networking opportunities, would also improve productivity, extend geographical connectivity, reduce transit time and transportation costs for end users. As such the increase in user satisfaction from the added reliability and convenience of employing the VPN approach would be achieved. The IDES thus established would be involved in enhancing the quality of distance learning through the development of high quality e-contents, instructional process, course /programme content development, IT infrastructure and network systems. In addition to this all the associated ODL institutions would be able to share mutually on national basis the available physical and intellectual resources, evolving a common pattern and structure for high quality distance learning programmes all over the country. Thus, it is concluded that the networking of all the ODL institutions would pave the road to build an excellent Integrated Distance Education System in India which would provide equity and quality in distance education at national level.

**Sadegül Akbaba Altun (2011)** made a study on “Integrating ICT at the Faculty Level: A Case Study”. In this study, ICT integration is studied at macro level which covers the ICT integration both at administrative and instructional levels. The researchers recommended that professional
development planners use their five-step model of technology integration: planning, preparation, instruction, refinement, and evaluation (Hinson et al. 2005). Their model addresses the barriers that influence teachers’ decisions to use technology, such as school culture and personal beliefs about teaching with technology. With this study, a top down and bottom up ICT integration model is proposed. In order to benefit from this model effectively and efficiently, the objectives and implications should go hand in hand. ICT practice and integration efforts at the faculty and university level should be carried out in bidirectional communication. The faculty should benefit from what kind of services and opportunities that university provides. At the same time, the faculty may have certain practices that the whole university can benefit from. For those effective best practices, there could be bilateral interaction opportunities, which can be coordinated by the coordination unit. In addition, there should be a coordination unit working closely with (in) the university, faculty and across departments. Although each level is interrelated with each other, the aim of this study is to investigate how ICT is integrated at the faculty level in an institution. Since ICT integration is a multi-faceted process and related to many factors, a qualitative case study is applied in order to understand this process in a holistic way with different angles. Data were collected through observations, official documents, individual semi-structured interviews and focus group interviews. Data were analyzed by using content analysis. Finally an ICT integration model is suggested.

Sheila Saravanabhavan et al (2010) made a study on “Knowledge of Learning Disability among Pre- and In-Service Teachers in India”. The purpose of this study was to determine the knowledge level of learning disabilities (LD) among teachers in India. A survey was distributed among 144 teachers in two regular high schools, 38 teachers in two special schools, and 165 pre-service teachers in a teacher education college in a metropolitan city in a southern state in India. One-way analysis of variance (ANOVA) showed that the knowledge level of learning disabilities among teachers working
in regular schools was statistically different. Among the three groups, the pre-service teacher group scored the lowest ($M = 60.76$, $SD = 13.36$, $N = 165$) which was below the mean score for the entire group ($M = 66.32$, $SD = 13.37$, $N = 347$). Teaching experience and familiarity with persons with LD did not affect the knowledge level of the three groups of participants. The study makes recommendations on how to improve the knowledge level of learning disabilities among pre-service teachers in India, and the need to assess knowledge of LD among physicians, parents, paraprofessionals, educational administrators and other stakeholders. With SSA emphasizing inclusive education, it is encouraging to note that teachers working in regular schools and those working in special schools scored above average. Teachers working in regular schools who scored the highest may have acquired their knowledge from the training workshops that they attend at regular intervals. It is common practice in India to invite experts to schools and have them address their faculty on special topics. However, the difference in the knowledge level between teachers working in regular schools and teachers working in special schools needs further examination. It is natural to expect teachers in special schools to score higher than teachers in regular schools. However, this study showed different results. It is to be noted that only 26% ($n = 10$) of teachers in special schools had an undergraduate or graduate degree in education. Lack of the education component in the educational qualifications of teachers in special schools may have been one of the reasons for their low scores. Pre-service teachers scored below average and this may be accounted by the fact that the present curriculum in teacher education programs in India does not include a specific course on the curriculum and instruction of children with special needs. The results of this study reinforce what Rajakumar, Kumar, Uppal, and Devikar (2005) claim that pre-service teacher preparation in India does not address basic pedagogic skills. Therefore, teachers are unable to develop appropriate teaching strategies since they lack preparation in various instructional models and differentiated instruction (Tomlinson, 2003).
The study has limitations that should be considered before generalizing its findings. The sample of 144 teachers working in regular schools, 38 teachers working in special schools, and 165 pre-service teachers in a teacher education college was derived from only a single state in India. The sample was voluntary, not randomized, coming from only those schools that permitted collection of data. Future researchers may consider increasing the sample size of special education teachers. It is necessary that future research focuses on assessing knowledge of LD among parents, paraprofessionals and school administrators. In order for students with learning disabilities to succeed academically, all stakeholders involved in the education of this population of students should be knowledgeable of the characteristics of individuals with learning disabilities, diagnostic measures, accommodative strategies, differentiated instruction and grading system. Their knowledge will help them develop and implement plans that will enhance the quality of life for those with learning disabilities. Physicians’ knowledge level of LD is critical in India because a physician’s note, today, exempts a student with a learning disability from taking a second language and an advanced algebra class. When knowledge of LD increases among professionals, teacher education colleges might be pressured to look at adding special education competencies into their curriculum. Additionally, professional development activities in schools will focus on the characteristics and needs of students with LD, and school administrators will be forced to apply for additional funding to conduct training workshops for pre- and in-service teachers, and to have lab schools set up. The time is just right to look at increasing the knowledge level of LD among teachers in India because the SSA program is aggressively involved in implementing successful inclusive classrooms. The cornerstone of successful inclusion is a trained teacher who is prepared to handle the cognitive, social and emotional challenges presented by children with special needs.
Sutapa Bose, (2010) made a study on “Enabling Secondary Level Teachers to Integrate Technology through ICT Integrated Instruction System”. Institutions providing pre-service teacher education are responsible for preparing teachers capable of functioning in the knowledge society, which India aspires to be. Schools of a knowledge society would require teachers to integrate technology into the instructional system and they are to be prepared for it accordingly through teacher education programmes, especially pre-service ones. Despite the widespread take up of ICT by European schools, it has not had a transformative impact on teaching and learning in education and training institutions (Punie, et al, 2006). Similarly in India although schools are being provided with ICT facilities and teachers are urged to utilize it, teachers need to be trained not merely to use ICT but to integrate it into their daily teaching. Using technology occasionally to support the traditional lecture based methods may create novelty in the classroom and thus raise the level of attention among learners but it does not amount to technology integration as this approach keeps technology at the periphery of the instructional processes while the verbal exposition is central. The present practice of having a theory based course in the B.Ed. programme that teaches ‘about’ ICT prepares the trainees for such peripheral use. Hence, there is the need to shift towards a paradigm with ICT integration in the instructional system of the entire teacher education programme. It is time that B.Ed. institutions start differentiating between occasional use of technology for supporting traditional methods of teaching, which amounts to techno-centrism and integrating ICT for improving the standards of teaching and learning, if teachers are expected to integrate technology at schools. Teachers need to be prepared for communicating and teaching through various media, preparing software for different media, online teaching and learning, distributed learning, using web 2.0 technologies, open resources, Learner Management Services, tools for evaluation, conferencing through various modes and so on and also be aware of legal and ethical issues regarding the use of ICT. They also
need to have the experience of providing technology mediated instructions to their learners and ultimately become facilitators of learning while making their students collaborative learners. ICT integration will also help teacher trainees in developing abilities to become lifelong learners as they would be initiated in practices like using ICT for solving problems with the help of solutions emerging from information that has been accessed, processed and shared using ICT. A shift towards an instructional system that integrates these technologies would require revision of the B.Ed. curriculum along these lines. It would also necessitate extending the B.Ed. programme form the present one year duration.

Manoj Kiledar, (2008) made a study on “Effectiveness of Learning Process Using Web-Technology in the Distance Learning System”. Web is a globally distributed, still highly personalized media for cost-effective delivery of multimedia information and services. Web is expected to have a strong impact on almost every aspect of how we learn. ‘Total Quality’ is the totality of features, as perceived by the customers of the product or service. Totality of features includes stated as well as implied needs and expectations of all types of customers. No quality improvement is possible without its unambiguous measurement. But, ‘Total Quality’ of the learning experience in ‘Open and Distance Education System’ cannot be measured unless it is expressed in measurable clear terms which include complete spectrum of student support and educational services. A model for ‘Total Quality’ of an open and distance education system was used to measure impact of the “Web Technology” on the ‘Total Quality’ of the learning experience in ‘Open and Distance Education System’. Evidence indicates that application of the proposed model for ‘Total Quality’ and ‘Web Technology’ can simultaneously optimize quality, access and cost. Thus, a better learning experience can be provided even in open and distance education system, which can be comparable with the best. This study found that it was difficult for the subjects to decide the clear cut superiority regarding the effectiveness of
‘Traditional Classroom’ or ‘Virtual Classroom’. On the basis of results of the study the following suggestions are made:

- In order to make ‘Virtual Classroom’ approach more acceptable among students and teachers, extra efforts are necessary. Future research can indicate appropriate strategic approaches regarding this.
- Relevance and utility of ‘Virtual Classroom’ approach need further investigation in rural area with severe shortage of electrical power and other disciplines like social sciences or humanities. There is a need of more research in these areas.

Sanjay, L. Maharajan, (2004) conducted a study on, “Perspective of Interactive Multimedia Technologies in Distance Education”. This study discussed the nature and status of interactive multimedia technologies in Distance Education/Open Universities. In Distance Education, technologies are used primarily to improve the effectiveness of teaching and learning to individually tailored instructions and to provide specialized and variety of innovative programmes to large groups of learners which are generally not taught or impossible through conventional system of teaching-learning. Interactive Educational Technologies improve the effectiveness of Distance Education in the following ways: To enhance the general efficiency of distance education are provides a country with a pool of trained and skilled workers to meet the needs of the labour marked, To help overcome the cost and /or distance barriers and therefore, add a variety of view educational possibilities to conventional educational methods they furnish access to remote data bases, update the knowledge pool, supplement laboratory work modeling, simulation and experts systems, provide rapid feedback and enhance counseling and evaluation, to improve distance learning and thereby meet growing and previously unmet demand for education and provide and affordable quality education when resources and qualified personal are scarce and to improve the quality of teaching and learning through integrating several educational media, improving structure and organization of teaching units or lectures increasing interactively and a higher degree of
communication between students and teachers. Also, this study concluded that a decision on new technology should be taken very carefully. We should promote better relationship between teachers and students by adapting advance interactive multimedia technology. In India for Open Universities, the Multimedia technology is a great boon. If we enhance this technology and exploit its capacity to the full, it can broaden and fulfill professional aspirations. It is time to enhance these challenges to grasp the future and pull as forward.

2.4 INSIGHTS FORM THE REVIEW

- It is clear from the review that very few studies have been done in technology oriented teacher education programmes. Many studies were done to demonstrate the effectiveness of Information and Communication Technologies in Education. But, only few studies were done with the effectiveness of ICT in Open and Distance Learning / Education in general and Open and Distance mode teacher education in particular.

- It is important to know the perception of ODL student-teachers on Information and Communication Technology Enabled Learning Support System and attitude of ODL student-teachers towards Technologies are being used for their teaching-learning process or Distance Education Technologies so as to make the application of all available technologies in their field effectively in future. There is no such elaborate studies were done in the ODL mode learning context.

- It is very important to know the opinion/perception of teacher educators who are teaching for distance learners on Information and Communication Technologies in effective use of all the technologies in their teaching process. There is no such elaborate studies were done so as to make the utilization of all technological innovations in open and distance context.

- In addition to the tools constructed for this study the perception and attitude of student-teachers and opinion/perception of their respective teacher-educators, it is important to study the qualitative aspects of the mentioned area. Hence, Interview guides is being
important to get more precise information from the teacher-educators and to evaluate the entire process, also it is important to have site visit and observation and it will give direct experience to the investigator to make the study more effective along with the documentary analysis.

- Hence, above all insights received, the studies on Information and Communication Technology Enabled Learning Support System utilization in the field of teacher education programmes of Open and Distance mode were not done in Tamil Nadu State specifically.

2.5. RATIONALE OF THE PRESENT STUDY

It is clear that the review that Information and Communication Technologies is being used in Education in general, Open and Distance Learning/Education in particular with considerable success throughout the world. In some cases, for example open and distance mode in teacher education, the utilization of Information Communication Technologies has become unsuccessful to some extent. The reason is not with the utilization level, it is in selection of appropriable technologies based on the requirements of the target pupils. If the selection is done properly, due to other reasons, it may not be successful in reaching the pupils to the expected level.

In Indian context, majority of the studies in application of available technologies in distance education in general, effectiveness of applied technologies in distance education were done in large in number.

In order to enhance the level of utilization of Information and Communication Enabled Learning Support System (ICT – ELSS), the studies on perception and attitude of ODL student-teachers and opinion of teacher educators on Information and Communication Enabled Learning Support System for their study and teaching respectively in general and in Open and Distance mode teaching-learning process in particular. In this context, the present study becomes important and essential as endorsed by the specific concerns of earlier researchers both its aims and the procedures with the tools for this study particularly following with the respective procedures to meet the need of the concern field effectively.