

## Learning from Distance

Dr. Lalit Kumar  
Faculty of Education  
Patna University, Patna

### Abstract

*The concept of distance learning may not be as old as the human civilization, but its birth can be claimed from the day any body communicated to the some body from distance, either through whistle or any other mode of message sending (Sound or Symbol). Invention of word gave more defined look to distance communication and advent of print media made it possible to educate the mass even from distance. Postal service to satellite based communication tell the development history of distance education. Correspondence education took the form of distance education as the media integration crept into the sphere of distance learning. Universities providing education from distance are open, but some scholars are of the opinion that distance learning may not be open every time. Scholars applied many concepts to represent distance learning as correspondence education, independent study, home study, distance education, open education and many more. Educationists, philosophers and practioners of distance education like Wedemeyer, Moore, Peter, Holmberg, Baath, Sewart, Dohmen and many others developed the field of distance learning to the peak it is standing today. Peter focused on management aspects of distance education and emphasized on the quality learning material and its proper production. Academic aspects were focused by Wedemeyer, Moore, Holmberg and Sewqrt. Dohmen emphasized self-study and effective utilization of media Wedemeyer favoured independent study, besides independent study of Wedemeyer Moore addressed nature of communication and the degree of dialogue for effective learning, peter's idea of industrialized nature of distance education suggested division of labour among distance education workers, Holmberg emphasized conversation essential for learning and talked of "Guided Didactic Conversation", John Baath found distance study essentially individual study, Sewart claimed incorporation of more and more human element essential for distance learning and Dohmen recognized the use of media – print & electronic and oral face-to-face programmes for distance learning. Approaches and principles of learning have widely influenced distance learning. Distance learning has not been planned in the light of any one approach of learning, but have received insight from them all – Behaviourist, Cognitivist and Constructivist Distance education has provided an alternative channel of learning to the world, but still has to go a long way to overcome its short comings like – largely dependent upon formal system, second to formal education, poor quality of learning material, lack of inter-personal communication, application*

*related short-comings, more involvement of poor & junior faculty members, high drop out, costly in some cases, largely dependent on print media, etc. Despite its short-comings it is a better option of learning and has really made the process of learning life long & continuous.*

## **Keywords**

Distance Learning, Distance Education, Open Universities, Constructivism, Behaviorism and Cognitivism

## **Development of Distance Open Learning**

### **Distance Education: Symbol to words to mass learning**

It is difficult to trace out the exact period of time when the distance education started. Some scholars argue that the distance education can be seen in the period when the written word was used and the language started to communicate. Bhoj-patra were used to send messages and this may be said to be an act of learning from distance. During ancient period messages were also sent through pigeon and this may be seen as an act of distance learning. Some scholars say there is nothing new about the concept of distance learning per se Students have always studied and learned things in places geographically separated from their teachers and teachers have always provided them the means to do so, even if they warned that this is not the best way to go about acquiring education. The technology that made this possible was the written word. The first significant use of the new technology to make course materials available to students came with the Plato's publication of Socrates Dialogues. Ironically it is in the Dialogues that we find the first murmurs of the faculty rear-guard action to try to slow down or stop the inevitable.

Socrates acknowledges that writing does serve some useful functions in poetry, speech writing and the writing of laws, but he insists, it is not the medium for instruction, and for those who seek truth through philosophy. Plato believed that his own writing served some useful instructional purposes, but he realized how his own writing undermined and subverted his roles as teacher & administrator. Students were escaping his classes, depending on the lecture notes Plato had written to make for what they missed. After all, why should a student attend the academy when the best teachings are already written down ? The primary fault Socrates finds in the written word, and what distinguishes it from good teaching practice, is that it is fixed, it says the same thing to all who reads it. Socrates was of the opinion that the best learning does not come from a fixed presentation, but from an interactive and dynamic dialogue. During gurukul system learners and teachers were near to each other to discuss in a face-to-face situation, but education took many turn. Universities were established, institutions were opened, but it was British who made the nature of education formal in India.

With passage of time education changed, learning became more important than that of teaching and learners replaced the teacher from the centre of teaching – learning process. The concept of learning today has become infinitely wider as it has evolved due to the growth of science, computer education, information technology, psychology and education. It is rightly claimed today that learning is basically not formal rather it is a non-formal activity and so it cannot be brought under any normative restrictions. Failure of formal system to cope up with the changing & extending educational needs of the society has popularized the non-formal education and subsequently distance open learning. Dodds, T (1999) has talked three elements of distance teaching – correspondence education, broadcasting and face-to-face tuition. He has also told about three way teaching and has concluded that National Extension College, Britain and the University of Wisconsin Extension Service in Madison, USA have combined correspondence courses and radio and television with occasional face-to-face tuition. He has further identified five major categories of distance-teaching programs – University – level distance teaching, secondary-level distance teaching, teacher education at-a-distance, Non-formal and basic adult education at-a-distance and distance teaching in the education of refugees.

Distance education is a system of education that de-emphasizes teaching, but emphasizes learning and makes the learner truly autonomous. Distance education is a socio-educational movement in the sense it is a whole new way of learning. The traditional concept of learning keeps learning tied down to the teacher, rather than to the learner. Distance education can be viewed as a significant device that attempts to raise the actual educational attainment of adult populations of a civilized society without insisting upon any formal requirements. In distance education the learner is being treated as autonomous and in the same time they are viewed as a person whose reason is sufficiently developed. The learners are capable to make a conscious choice with regard to their respective course of study. Distance education can be seen as a powerful and potent social weapon for the transformation of society.

### **Journey from Correspondence Education to Distance Education**

Distance Education has its roots in the correspondence courses which simply mean study material, usually lecture notes sent by tutors to the students by post. The idea originated in the 19<sup>th</sup> century in England. The modern history of correspondence instruction began in 1840 with Issac Pitman's shorthand course for distance students through the Penny post, when uniform Penny postage was introduced in the UK. Some researchers have traced the forerunners of the distance education of today to 1833 when a private teacher of English taught composition by post, providing two-way communication, which is the predominant characteristics of distance education. In 1856, a school of modern languages established by Langenscheidt and Toussaint started teaching foreign languages through correspondence. In the USA, the first efforts to organize correspondence instruction were made in 1873. Later on, the idea of a land grant college with a campus extending to the state boundaries resulted in the establishment of correspondence course

in some universities in 1890. The International Correspondence School, the Oldest Correspondence education institution of UK was established in 1880. A number of correspondence education institutions came up during the 20<sup>th</sup> century in UK. These institutions mainly helped the external degree students who studied at home with the help of correspondence courses. However, for various reasons these institutions did not have equal status of affiliated colleges or an university. It worked more extensively in USA than any other country. In Europe, pioneering work was done in Germany and Sweden in 1890 with the establishment of Fern Lehrinstitut in Berlin and Hermods in Sweden. With the Onset of the 20<sup>th</sup> century, a number of correspondence instruction schools were set up throughout Europe. In Russia, correspondence study became the main form of university level studies by early 1960s – more students studied through correspondence courses than through the regular classroom instruction in colleges and universities. In Japan, over a million students started studying correspondence courses. In Australia and New Zealand, correspondence instruction came to be used in the compulsory school system to teach children who had never been to a classroom. In England a number of private correspondence colleges were set up to coach students for various school and university examinations. With the establishment of open university of UK in 1969 followed by establishment of open universities in different countries across the world the distance education grew at a faster rate and assumed a gigantic position at international level.

Varied names such as “home study”, “postal tuition”, “correspondence courses”, “independent study”, etc. were given to the earlier forms of distance education programs throughout the world. Even today terms like “off campus studies”, “external studies”, “non-formal education”, etc. continue to be in use. Of these, the term “correspondence education” has widely been accepted. Correspondence studies took formal shape in Bath, England in 1840 when Isac Pitman started offering course in shorthand via the New Penny Post. All the above mentioned terms – home study, Postal tuition, correspondence courses, etc. were essentially associated with non-traditional teaching – learning program, which had many similarities. They very often, embodies the phenomenon of teachers linked with varied learners through the printed word and later on with the development of science and technology, through various kinds of electronic media as well. The names of some such institutions symbolized the link media, i.e. “University of the air”, “tele-university, etc. In due course of time the progressive institutions brought in the multi-media approach in their teaching/learning system. The development raised doubts in some minds about the appropriateness of the term “correspondence education and generated thinking for finding a broader and more appropriate term for this innovative and non-traditional teaching/learning system. The issue was finally clinched at the 12<sup>th</sup> world conference held in Vancouver in 1982 under the presidency of Prof. Bakshish Singh and the International Council for Correspondence Education (ICCE) was renamed as International Council for Distance Education (ICDE). In this conference it was also decided to include promotion of research and scholarship on distance education among the objectives of the ICDE.

Jenkins, J and Kaul, BN (1999) has rightly concluded, “The term “distance education” is relatively new, although Tony Dodds shows that people were teaching and learning at a distance long before the term was invented. Although it has now been current in English for over twenty years, there is still debate about what distance education is, and still some fluidity about how it, and all the vocabulary associated with it, are used.”

### **Development of International Council and Other Distance Education Associations**

The credit for establishing the International Council for Correspondence Education (ICCE) in 1938 goes to Mr. J.W. Gibson who was for many years the Director of High School Correspondence Instruction at Victoria, British Columbia and in Canada. The first world conference of this council was held in Victoria B.C. in August 1938, and 87 delegates, mostly from Canada and the US attended the conference. Australia, New Zealand and Scotland were also represented. World War II delayed the second ICCE conference which was ultimately held in 1948 and since then it is held continuously at the gap of one or two years. As stated earlier in 1982 International Council for Correspondence Education (ICCE) was renamed as International Council for Distance Education (ICDE). ICDE has established various interest groups and ICDE Women’s International Network provides women aspiration for open distance education to undertake their educational concern. ICDE has close working relations with many associations working in the field of open distance learning. Some of them are Association of Asian Open Universities (AAOU), European Distance Education Network (CDNE), United States Distance Learning Council (USDLC), open and Distance Learning Association of Australia (ODLAA), Distance Education Association of New Zealand (DEANZ), Distance Education Association of South Africa (DEASA), Canadian Association of Distance Education (CADE), etc. ICDE has its permanent international headquarters at Oslo, Norway.

The Commonwealth of Learning (COL) is another important body related to open distance learning. It was established in 1988 after the meeting of heads of governments in 1987. Its headquarters are in Vancouver. India is a member of COL through STRIDE, IGNOU. Its main objective is to create and widen access to education and modernize & level of distance learning system to help member countries. Expansion and development of distance education during 1960 to 1985 is vital, though between 1985 to 1995 the system got stability. Europe has witnessed rapid growth of distance education and countries like England, Norway, Sweden, Germany, Spain, Netherlands, etc. have enriched its distance education system.

### **Distance Education in India**

The development history of distance education in India starts with the start of correspondence courses at the Delhi University in 1962, much before the establishment of first open university in England in 1969. During 1970s around 20 universities started correspondence courses. 1982 witnessed the first open university in India which is called Dr. B.R. Ambedkar Open University in Andhra Pradesh. The Indira Gandhi

National Open University started in 1985 and now India has so many state open universities. Distance Education Council (DEC) was established in 1992 under the aegis of IGNOU to regulate open distance learning in India. COL has recognized IGNOU centre of excellence for training in distance education. IGNOU has also developed Staff Training and Research Institute of Distance Education (STRIDE) which is partly funded by the COL. IGNOU is among very few universities which offer a program in distance education as a discipline. IGNOU is one of the mega open universities of the world.

### **Establishment of Open Universities**

The establishment of the first open university at Milton Keynes, in England in 1969 is one of the biggest event in the history of distance education and its development. This event of starting an open university led to the establishment of many open Universities across the globe. A good number of Open Universities were established in Spain, Pakistan, Israel, Germany, Canda, Venezuela, Costa Rica, Iran, Thailand, China, Sri Lanka, South Korea, Nigeria, Japan, Netherlands, Indonesia and Netherlands between 1973 and 1984. IGNOU was established in 1985 and in the same year an open university was established in Amman followed by Iran in 1987. From 1987 to 1994 Kota Open University in Rajasthan (1987), Nalanda Open University in Bihar (1987), Yaswanta Rao Chavan Maharastra Open University in Maharastra (1989), M.P. Bhoj Open University in Madhya Pradesh (1992) and Ambedkar Open University in Gujrat (1994) were opened. Dr. B.R. Ambedkar Open University in Andhra Pradesh was already opened as the first open University of India in 1982.

Seventeenth World Conference of the International Council for Distance Education (ICDE) was organized at Birmingham, UK. During this conference ten open Universities were categorized as mega-open university. Those open universities having more than 100000 ( one lakh) learners were indentified as mega-open universities of the world. Anadolu University, Turkey; Central National Enseignement Distance (CNED), France; China Central Radio and TV University (CCRTVU), China; Indira Gandhi National Open University (IGNOU), India; Korea National Open University (KNOU), Korea; Open University (OU), United Kingdom; Sukhothai Thammathirat Open University (STOU), Thailand; University National Education Distancia (UNED), Spain; University of South Africa (UNISA), South Africa and Universitas Terbuka (UT), Indonesia are the ten mega-open universities of the world.

### **Distance Education as Parallel system**

All the continents of the world, except Antartica provide distance education to a good number of students. Developed countries of the world use print material, audio-video cassettes and electric media in their teaching – learning process; developing countries, though, largely dependent on print material also use electronic media and cassettes; whereas under developing countries are largely dependent upon print material only. Some developed open universities like OUUK & IGNOU are engaged in research work



in distance education and help through their learning material to other open learning institutions of the world under consortium mode. Distance education worldwide has undergone a long way from mere home study, independent learning, correspondence courses to a multi-media teaching-learning system. Integration of new and innovative media has given the communication power of open institutions a wide range. Use of technologies like satellite, tele-conferencing, audio-video text, etc. has given the open institutions to held, compliment and supplement each other. Their collaboration and rapport at regional, national and international level have not only opened their many gates of research, but have extended the range of course offerings & teaching-learning methodologies. Education has become a life-long & continuous process in true sense as education is open to all irrespective of place, age, sex, formal entry qualifications, pace of learning, time to be taken to complete the course. As an alternative channel of education it has also challenged the formal system of education, but it has to go a long way to cope up with the educational demands of the world. Media, faculty, other socio-cultural and socio-economic challenges are also before these institutions.

From postal service to satellite based tele-communications and from correspondence course to application of the devices like voice mail, CD-ROM, e-mail, internet, Audio-video conferencing, telephone mediated instructional link, etc. the distance education has grown rapidly. Media revolution has given new impetus and wings to the distance education to blossom all-round and fly high. IGNOU (2009) has rightly concluded the present position of the distance education, “The virtual classrooms and the virtual universities have freed the students from the obligation of sticking to particular timings and places even within the campuses. Today both the campus based learners and the distance learners can, if they have access to technology, enter any library of their choice through internet. Of course, the library must have its website ! If “Communication technology” can be defined as “anything that helps interaction, then the modern communication technologies such as the satellite based tele-communications and the computer technology are the most interactive media that the world has ever seen. If these technologies can be appropriately combined with cognitive sciences, then what Eisenstadt calls the “knowledge media’ emerges.” To explain the journey of distance education it is worth while to quote CFFTE (1996), “originally designed to provide alternative avenues for higher liberal education, distance education now has developed as an almost parallel system from elementary to tertiary sectors including professional and technical education. Initially, it focused its attention on the education of those who could not avail the benefit of the formal system of education for a variety of reasons. Of late it has become a system by its own right having distinct objectives and programm.”

### **Distance Education: Concept and Philosophy**

It is quite evident from the name itself that distance education is a type of education in which teaching-learning takes place from distance. Distance education provides a type of communication (non-continuous) in which teacher and learners are not face-to-face or near to each other at times. Kumar, Lalit (2013) through his paper has reflected the

types of communication. Explaining contiguous and non-contiguous communication he has explained, “In contiguous communication, there is proximity between the sender and the receiver... In non-contiguous communication large number of dispersed learners is connected with the help of different media such as radio, television, internet, computer, etc. In non-continuous, communication the sender (teacher) is not in direct touch with the receiver (learners). Learning from print material is also an ...of this type of communication.”

Need of the life long education and demand of the flexible nature of education made platform for non-formal education, a type of education not rigid like formal system in terms of admission procedure, age of learner, time & space of study, etc. There are other non-traditional forms of education like extension programs, adult programs, etc. Distance education is also known as non-formal education, correspondence education, independent study, home study, open education, etc. No doubt, distance education started in the form of correspondence education and generally is open in nature, but now independent study and home study are not in use. Distance education is an improvement over the correspondence mode as it uses many media for educational delivery besides correspondence mode. Distance education is open in nature as it uses open methodologies, but every distance education may not be open in nature, in the same time openness is not absolute but relative. The German Open University at Hagen may not come under open education category as the university is open in a limited sense only. Distance education is said to be distance as it does not require contiguity or proximity between the teacher and the learner, except at certain planned period of time. Explaining the scope of open learning system NCFSE (2000) has stated, “The Mission statement of the open learning system is to take education to the doorsteps of the learner, enhance social equality and create flexibility for lifelong learning.”

Twelfth World Conference of the International Council for Correspondence Education accepted distance education as extension of correspondence and replaced the word Correspondence by Distance. Distance education is an extension of correspondence education in the sense it utilizes multimedia and human contact besides delivery of print materials. Distance education does not impose restrictions like formal system of education in terms of admission, time, entry qualification, mechanism of evaluation, regular presence of teacher, etc. and so is open in nature, and is also known as open education. Most of the university providing education in distance mode are called open universities. Now-a-days distance education and open education are synonymously or interchangeably used, but correspondence education has its limited use. Directorate of distance education of universities providing education through formal mode are still largely dependent on correspondence education mode. Many distance universities are closed, rigidly structured, but educational technology plays vital role in making them open and open. Educational technology and its development have made the distance teaching-learning more scientific, open, dynamic and exciting. The recent developments in the telecommunication and computer technologies have increased the interaction among the ends of communicators/receivers vastly. Different audio-visual aids, the



computer and the mass media, etc. have given distance education a new definition and modern look. Through internet facilities, e-mail, telephone-mediated communication, etc. collaborative learning has become a reality today, and rich countries, advanced universities are employing many media to make teaching-learning more and more collaborative. Distance education is a form of education which provides education from distance, uses multi-media, is open in terms of restrictions imposed, learner autonomy is in practice, is learner-centered & learning focused, occasional tutor/counselor interaction is provided and apply several type of access devices to make the learners access the learning material. Dodds, T (1999) has tried to define distance education in a very simple way, “To my mind, a satisfactory definition of distance teaching – though no such phrases or their definitions are really satisfactory all the time – is any form of organized educational experience in which teaching and learning take place with the teachers at-a-distance from the learners for most of the time.”

Contributors in distance education has given more dimensions to the concept of distance education and distance education thinkers have made the area of distance education ever extending. Wedemeyer, Moore, Peter, Holmberg, Baath, Sewart, Dohmen have enriched the field of distance education through their thinking and practice in distance education. Among these thinkers Peter’s focus is on management aspects of distance education and he puts emphasis on the quality of the teaching material and its production. Wedemeyer and Moore focus on academic aspects of distance education, emphasize learners roles and talks of learner’s autonomy. Holmberg’s concern is academic aspect but he emphasizes teacher & institutional roles through his Didactic Conversation. Baath focuses on academic aspect, teachers roles and suggests two-way postal communication for effective teaching-learning. Sewart who advocates for strong human element in the process of distance education, has academic concern in focus and emphasizes the role of institution & teacher for better teaching – learning. Dohmen puts emphasis on self-study and effective utilization of media to enable distance education to reach out to the learners.

Charles Wedemeyer was a professor of education and was associated with distance education at the university level in the USA for more than ten years. Wedemeyer has contributed the field of distance education with his thought. He advocated for autonomy of the learner and said that distance learners have more autonomy than the conventional face-to-face learners. He found distance between teacher and learner evident for the distance learning system and suggested that the distance education needs a change in teacher as well as learner culture. He argued that the learners of the distance education system have to take more responsibilities of learning than face-to-face system. Wedemeyer seen clear distinction between conventional and distance education system. Formal education system is structurally different from the distance education where learners are physically at a long distance from the teacher and use non-contiguous educational communication. Wedemeyer has used the terms open learning, distance education and independent study in his works, but favors the last term consistently. Independent study of two types – off – campus and on-campus, have been suggested, but

in USA (work place of Wedemyer) independent study is being used for correspondence and distance education.

Michael Moore received first hand experience working with British Open University as a senior counsellor. His idea of distance education is close to Wedemyer as he has also used the term independent study. According to him all educational transaction which allows distance and autonomy are forms of independent study. Teach yourself program, external degree programs, correspondence courses or open university programs are independent study as they allow distance and autonomy in their educational transactions. Moore finds distance teaching a family of instructional methods in which the teaching behaviors are performed apart from learning behaviors. Communication between the teacher and the learner is to be facilitated by print, electronic, mechanical or other devices and so Moore talks in terms of correspondence courses (teaching and learning behaviors are separated), contact programs (face-to-face teaching and learning) and use of audio-video media (devices to be used). Moore focuses that effectiveness of education depends on the nature of communication and the degree of dialogue. Moore is of the opinion that two characteristics of distance education differentiate it from traditional education, i.e. dialogue and individualization. Dialogue is academic interaction which may take place in many modes – face-to-face, through telephone, through correspondence and even through print or electronic devices. If the material talks to the learner there is dialogue and if teachers are not motivating & communicating properly to the learners there is no dialogue. Formal system of education is highly structured and so there is little scope of individualization where as individualization in distance education system can be practiced as its objectives, methods, materials and evaluation are planned in the way individual learner could adapt these parts of the system. Moore suggests spatial distance between teacher and learners is immaterial, what matters is the degrees of dialogue and individualization offered by the academic programs. If two-way communication methods are used by the program there are more dialogue and more opportunity for individualization, Independent reading of self-directed kind has less dialogue and less scope for individualization. Radio and TV type programs have less dialogue, but more individualization factor. A tutorial program has less scope for individualization, but more dialogue. No doubt, Moore finds program using two-way communication better than all form of distance teaching – learning.

Otto Peters worked with Fern open university and focused on industrialized nature of developed societies. He, on the basis of his studies, concluded that distance teaching-learning is an industrialized form of teaching and learning and serves the demand of industrial societies as they have generated a vast variety of needs for education. He found nature of division of labor in distance as in industrial set up. Claiming distance education as highly industrialized form of instruction peters, O (1999) himself concludes, “In the Berlin studies the instructional process of correspondence instruction was compared with the industrialized production process and many surprising parallels could be diagnosed : Neither process can start without a previous period of careful planning by experts, and without specialization by division of labor, that is, by dividing the many

functions of the teacher or the worker and assigning them to a number of specialists or machines. Both processes rely on the use of technical devices, machines, and even computers, both apply the principles of the assembly line and of mass production, both need and use scientific methods of control in order to improve the teaching or production process while in operation.” He finds distance education different from conventional education as distance education is more focused towards cognitive domain and less focused towards psycho-motor and affective domains. There are other differences in terms of media selection, less choice of vast and varied content and personal characteristics and socio-cultural backgrounds of the learners. Production of learning materials is an industrialized process and division of labor is involved in the system. Subject experts do not do the same work as the design experts, language experts or counselor do, they all have their task defined & even their price is decided. Mass production of learning material is also like that of industries. Peters concludes that of all forms of education, distance education is the most industrialized where communication is not of interpersonal type (like conventional education) rather communication is largely through various print and electronic media. According to Peter distance education utilizes artificial communication whose components are – print, audio, video, etc and is of mechanical nature.

Borje Holmberg started as a lecturer in English, worked with Swedish correspondence institution at Malmo where he became director and later he became professor of distance education at Fern Universitat, Hagen. Holmberg is of the view that distance education is meant for individual learning and individual learners should be provided every facility of learning whether it is through radio, TV, audio-video cassettes, telephone, computer or face-to-face contact programs. Individual learner is responsible for his/her learning so achievement of academic objectives is the responsibility of the Learner. Learners, in the process of self-study or independent study, is not a loner as he/she has a team with him – writers, administrators, counselors, evaluators, media experts, and many others. A distant learner is not like a private external candidate who does not have any such team behind her/his learning. He considers a type of relationship among learners and the team essential for distance education and further suggests that the institutions of distance learning must develop the personal relationship with the learners to support them to learn & motivate to learn. Holmberg talks the relationship in terms of “Guided Didactic Conversation.” Conversation may be made through learning material, suggestions, involving the learners emotionally, using personal and possessive pronouns. Warm language, talkative style of presenting learning material and use of different access devices can make the distance learners learned. Holmberg identifies two types of didactic conversation – Real and Simulated. Real like correspondence, telephone mediated, personal contact programmers. Simulated means conversation through text in talking style and use of other indirect techniques to make the learner access the learning material. Holmberg suggests that the stronger characteristics of guided didactic conversation yields feeling of personal relationship between the learners and the supporting organization. Personal involvement has its bearing on distance learning. He

considers distance education as an organized, systematic way and suggests effective dialogue between the learner and the teacher or the institution. Present development of distance education to provide more interactive educational media strengthens Holmberg's view of conversation and its impact on the learning of distance learners. Holmberg, B (1999) himself has explained the need of conversation for better learning, "Thinking aloud is frequently occurring form of text elaboration which has been studied in different contexts. Elaborative processing of text, i.e. the interaction of the text content with the prior knowledge of the reader, has, in fact, proved conducive to retention whereas a student who does very little elaborating does not secure the new learning matter sufficiently, those who do a lot of broad elaborating seem to risk difficulties in retracing the text information in the multitude of connections they have established. Thus moderate use of text elaboration seems profitable."

John Baath worked at Hermods in Malmo and his views are similar to Holmberg. Baath considers distance education as means of mass education, believe in industrializing education and is of the opinion, (like Holmberg) that distance study is essentially individual study. Baath's main focus is on two-way communication. His emphasis is on constructive tutor criticism and to seek personal involvement of the learners. Tutor comments and counseling have received maximum attention of Baath. Criticizing industrialized kind of academic support he finds tutors comments missing in it and argues that assignment submission is second link of two way communication followed by tutor assessment as third link and questions & doubts to be raised by learners as the fourth link. He criticizes that tutor functions as examiner and third link is sacrificed if constructive criticism is missing. His third and fourth links are associated with improvement of learners performance not mere grading or organizing counseling sessions for the sake of organization only. Pedagogical significance of tutor comments is the real focus of Baath besides pre-enrolment counseling. He suggests two way communication in the learning material by incorporating self-check exercises, model answers, glossary, etc. Purpose of pre-enrolment counseling are identification of learning goals, selection of suitable material to achieve identified goals and resolving learners academic difficulties & promoting or sustaining their motivation. In this connection his two suggestions are important-to make learning material self sufficient by managing for two-way communication between learner & teacher and arranging for two-way communication either by email & telephone or by face-to-face contact programs.

David Sewart worked with British open university and is greater admire of more and more human factor in the process of distance teaching – learning. He considers continuity of concerns for student learning in distance education as crux of distance teaching. He finds distance education industrialized form of education if human element is missing. Distance education is a means of mass education and mere production of particular package of material cannot serve the purposes of students. He also argues that learning material cannot perform all the functions of a teacher or tutor. Without advisory and tutor support distance education institutions cannot address the continuity of concerns for learners learning from distance as non-contiguous teaching-

learning & infinite varieties of problems cannot be managed without the proper support of human agency. He finds distance education a powerful tool to democratize education and suggests to use communication technologies & human element to develop distance education. According to him distance education must address & incorporate infinite learner problems, immediate feedback and peer group interaction. Critics of Swart view argue that if more human factor will be utilized what will be the difference between distance and face-to-face education. They again talk of operational complexities to occur due to more human factor and find it costly affair. Swart counters these aspects in their own words by saying to consider face-to-face elements as constituent of distance education like other media constituents and claims operational complexities & expenditure obligatory (mass education). He further explains that the joint cost of material and human support is less than cost incurred by conventional system for equally large number of learners.

Dohmen worked in Germany and talks of self study and use of media for communication as vital components of distance education. He also puts emphasis on student support and recognizes the use of print, electronic media and oral face-to-face programs for distance learning. No one can claim that there are not more related concepts to distance education other than the above discussed. Keegan brings together various thoughts on distance education and finds some characteristics of distance education. Separation of teacher and learner, industrialization mode, separation of learner from peer group and the learner two-way-communication, use of technical media and form of educational organization are characterized by the distance teaching-learning as per the view of Keegan. It is worthwhile to quote Rumble, G (1999) to understand the concept of distance education in a comprehensive manner, "Perhaps the most comprehensive general definition of distance education is that first proposed by Keegan in 1980 and subsequently modified in 1986. Keegan's definition is based inter alia on an analysis of the definitions proposed by Holmberg (1977), Peters (1973), and Moore (1973). Keegan (1986 : 49-50) identifies seven principal characteristics which he regards as being essential for any comprehensive definition : the separation of teacher and student the influence of an educational organization the use of technical media the provision of two-way communication the absence of group learning, with students taught largely as individuals (while retaining the possibility of occasional seminars) participation in the most industrialized form of education the privatization of learning (in that learning occurs away from the group)."

### **Learning Approaches and Principles**

Psychology got a well defined direction when it was defined in terms of behavior. Terms like soul, mind and consciousness could not make the scope of psychology extended, but behavior gave psychology many dimensions of growth and development due to its nature as a term or concept. Behavior can be seen, it can be evaluated and it can be modified and so learning too was defined in terms of behavior – Learning is a relatively permanent change in behavior. We can write a simple equation to represent learning as Learning outcomes = Terminal Behavior – Entering Behavior. Psychologists argue that behavior

and its relationship with learning is as per Behaviorist school of thought, but a question arises here if behavior is the affair of Behaviorist school of thought why psychology is the science of behavior? Psychology takes behavior in more broader perspectives than the behaviorist – this may be an answer, but it leaves behaviors relationship with learning intact. Learning takes place as per Behaviorist, Cognitivist and Constructivist approach of learning, but in all the cases some learning is added in the stock of previously learned knowledge or concept. It is also evident that the learned knowledge can be reflected only through the behavior. Learners may learn due to Behaviorist, Cognitivist or Constructivist approach, but its reflection has only way to come out, i.e., through the behavior of the individual who has learned some task or some concept. Learning is not limited to cognitive aspect rather it is extended to affective and psychomotor aspects and so learning may be of a concept, theory or principle; it may be related to interest inculcation, attitude development; and it may be a kind of certain type of training making the learner capable in some task or in some field of knowledge. Behaviorist defines learning as a change in behavior due to experiences. Cognitivist thinks learning is acquisition of knowledge, comprehension, skill, etc. Constructivists like Piaget (Personal Constructivist) says learning is a process of knowledge construction, and constructivist like Vygotsky (social constructivist) concludes learning is a social process of knowledge construction. NCF (2005) states, “In the constructivist perspective, learning is a process of the construction of knowledge. Learners actively construct their own knowledge by connecting new ideas to existing ideas on the basis of materials/activities presented to them (experience)”. Let us try to understand how learning takes place and what are the common factors in all types of learning or learning is like a concept which can be kept as a watertight compartment of knowledge or meaning. We can try to understand learning in three specified perspective – Behavioristic, Cognitive and Constructivist.

Behaviorist school of thought has been influenced by Ivan Pavlov, who contributed classical conditioning, E.L. Thorndike for Trial & Error, B.F. Skinner for operant conditioning. Watson is considered as the father of Behavioristic school and puts maximum emphasis on environment and behavior. They have interpreted learning in terms of connection or association between the stimulus and response. Behaviorists think learning causes behavioral change, sensory exercise is the cause of learning, learning environment shapes learners behavior and finds associationism responsible for learning i.e. two sensations that occur contiguously in time and space get associated. For behaviorism, learning is the acquisition of new behavior through conditioning. Behaviorists contribution to understand learning is related to improvement through trial & error and chance success; law of readiness, effect & exercise, shaping of behavior; conditioning; generalization of stimulus and response, etc. Reinforcement is the discovery of the behaviorists, that have given birth to programmed learning & teaching machines and ultimately to distance learning. Emphasis on defining objectives in behavioral terms is one of the major contributions of behaviorists to education. They



argue that if learning objectives are specified in behavioral terms (Overt behavior) learning can be observed and measured.

Cognitivism school of thought is related to Gestalt psychology and cognitive psychology. Koffka, Kohler and Wertheimer are associated with Gestalt psychology where as Piaget, Bruner and Tolman are said to be cognitive psychologists. Cognitivists consider behavioristic approach as mechanical and conclude that learning is due to insight not due to practice or connection. They find perception and learning experience essential for the learning of a new task. Learning is due to perceiving comprehending and conceptualizing. Perception thinking, attention, memory, understanding, concept formation, language use, problem solving are the activities that lead towards learning. Wertheimer and his associates represented perception through different laws as *pragnanz*, proximity, closure, similarity, continuity, etc. and explained that as soon as the different elements of a learning situation gets a holistic form learning takes place. Cognitivists argue that perception takes place due to previous knowledge and conclude that people grasp things as a whole. They are of the opinion that learning is a question of both insight formation and of successful problem solving. Reason, according to them, is the source of learning. They argue that sensory experience provides raw data as source of information which is interpreted in mind through the process of reasoning. They find reason as the source of knowledge and consider three types of memory responsible for the entire episode of learning - Sensory Memory, Short-term Memory and Long-term Memory. They sensory memory receives information either through audio source or visual source. The received information is organized, stored and accessed in the short-term memory. The long-term memory allows to happen the mental process by which the information is integrated with previously stored information in short-term memory. Learning as per cognitivists is an intelligent and active process and the individual learns through his interaction with the learning situations or learning environment. Piaget thinks that learning is a process in which new information is shaped to fit with the learners existing knowledge, and existing knowledge is itself modified to accommodate the new one. His cognitive process include – Assimilation, Accommodation and Equilibration. Cognitive structuralists believe that schemata are significant to cognitive learning.

Constructivists think that learners construct his knowledge by his own action. According to constructivist school of thought learning is a process of knowledge construction. Piaget is a constructivist besides a cognitivist. Vygotsky redefines learning concept of Piaget by putting social factor responsible for knowledge construction. Lev Vygotsky stated that learning is influenced by sociocultural set up of the child. Jean Piaget, John Dewey, Edmund Husserl, E.V.Glaserfeld, Lev Vygotsky and Joseph Novak are some of the contributors to the constructivist school of thought. There are two groups of constructivism as Trivial Constructivism Vs Radical Constructivism and Personal Constructivism Vs Social Constructivism. Two principles related to constructivism have been identified (i) the learner is an active not passive being and (ii) the function of cognition is adaptation rather than representation. Trivial Constructivism agrees to the

first principle only, as it considers learner as an active individual in the process of knowledge construction. It focuses on the issue that learners themselves construct mental structures on the basis of his learning experience. Trivial constructivism does not find learning impersonal as it considers it as someone's knowledge. Radical constructivism follows both the principles of constructivism that the child is an active learner and adaptation as the function of learning and cognition. There is another dimension of classification of constructivism in terms of individual and social construct. Personal constructivism regards knowledge construction as an individual process where as social constructivism puts emphasis on the social environment. Personal constructivism finds cognitive development in terms of structures like individual schema and mental processes like organization and adaptation (assimilation and accommodation). Social constructivism finds social processes central to learning and cognitive development. It regards knowledge as a social construct and puts emphasis on social aspects of learning like culture, language, inter-personal interaction with environment, peer interaction, etc. It concludes no knowledge constructions are asocial or acultural. Joseph Novak talks of Human Constructivism and he differs from Glaserfelds radical constructivism and Vygotsky's social constructivism. Human constructivism, not fully developed, pronounces that developing and constructing knowledge is an active process and new pieces of knowledge are integrated with already constructed knowledge to get another form of knowledge and the process goes on. In brief, constructivism is centered on the idea that knowledge and learning are actively constructed not passively received. Pradhan, Nityananda (2008) has also concluded that, "The emphasis of the constructivist theory is on the process, rather than the product of learning. A constructivist approach would have the student determine how much they have learned as well as the process by which they have come to know."

Robert M. Gagne talked of eight types of learning also known as eight conditions of learning. He combined learning views of behaviorist and the cognitivist to present a hierarchical model of different types of learning. The eight types of learning identified by Gagne are signal learning, stimulus response learning, chaining, verbal association, multiple discrimination, concept learning, rule learning and problem solving. Besides eight conditions of learning Gagne also identified nine stages of cognitive processing essential to learning and suggested that these stages are to be executed in a sequential order. Gaining attention, informing the learner of the objectives, stimulating recall of prerequisite learning, presenting the stimulus material, providing learning guidance, eliciting the performance, providing feedback about performance correctness, assessing the performance and enhancing retention and transfer. These sequential phases of learning are related to preparation for learning, acquisition & performance and transfer of learning. Gagne's mode of instruction focuses on five varieties of learning such as verbal information skill, intellectual skill, motor skill, cognitive strategies and attitude. Gagne's approach of human learning is the result of interaction between the learner's internal variables and the external ones. Gagne has very successfully attempted to synthesize the basic principles of cognitivism and behaviorism. His learning approach

has focused on hierarchical and sequential learning. Gagne is of the view that the learner has to develop prerequisite capabilities before acquiring the targeted knowledge, for learning learner's characteristics (individual differences, motivation, etc.) have to be considered and the skill of learning should be developed among the learners so that they could know how to learn. Bruner, a cognitivist and at times constructivist, finds learning as a goal directed activity which not only satisfies drive only (as behaviorists think), but also answers the curiosity of the learners. For Bruner learner is a discoverer, a problem solver and so he advocates for autonomy in learning. The modes of cognitive development described by Bruner are hierarchical as learning goes from simple to complex. Enactive, Iconic and Symbolic modes are related to the developmental stages of the child or the learner. Enactive mode is related to knowledge through actions. A learner who enactively knows how to ride on an elephant may not explain it. Iconic mode is dependent on internal imagination power of the learner. A learner who draw a triangular figure may not explain the concept of triangularity. Symbolic mode is related to symbolic representation which is based on an abstract, arbitrary and more flexible system of thought. Mere pronunciation of a concept like triangle may provide figure in mind along with so many characteristics of the concept triangle. Bruner ultimately suggests to present the learning content enactively, iconically and symbolically before the learners for their better understanding. He is also of the view that these stages are the reflection of learning activities to be identified for the learners in the light of their developmental stages. All the three domains of educational objectives – Cognitive, Affective and Psychomotor, discussed earlier, have their bearing on learning and implication for education system. Learning must not be focused on learners cognitive development only, rather affective & psycho-motor aspects also be given optimum weight age. What Kumar, Lalit (2015) has said is applicable for both face-to-face and ODL. As without displacement we cannot say that work has been done in the language of physics, in the language of education we can say if learning has not taken place teaching has not been done (either by self instructional material or by counseling or by any other face-to-face mode) .

### **Distance Learning and Implications of Learning Approaches & Principles**

Distance learning started with learning from distance in many form. Writing dialogue and dispatch of learning material for the learners took place to shape the learning from distance, but it was B.F. Skinner's learning theory of operant conditioning & behaviorist school of thought that gave birth to the concepts like programmed instruction, teaching machine. Reinforcement as a concept became the creator of programmed learning and ultimately of distance learning in modern age. Distance education operates through print and electronic material. Learners are supplied learning material, know as self-instructional material, for self learning either in print medium or electronic medium or in both. Learners of developing and under-developing countries are largely dependent on print media, they are given some cassettes or other media as supporting material. Technological advancement has widely influenced almost all the aspects of distance

learning, but the learners still are vastly dependent on printed learning material. Self Instructional material of today has also received impact of technological development in its external and internal both aspects. Learning material may be in electronic form in some cases, but the mode of learning is very similar in every related cases. Besides print or electronic form of learning material there are other means of students learning as counseling, workshop, assignment, evaluation and application of different access devices facilitating learning of the distant learners. Access Devices is a concept directly related and frequently applied in the process of distance teaching-learning to manage the impact of teacher absence. Access devices also support the distance learners in the way they could access the learning material as their own. Glossary, unit structure of the distance learning material, application of self-evaluation schemes in the different part or section of the unit, warm language, talkative style of content presentation, answer to self-check exercises, etc. are some of the examples of access devices being utilized in the process of distance learning. These access devices are incorporated and utilized purposefully with defined planning and are powerful devices of students learning. Distance learners are taught and advised to apply many skills like study habits, planning for study and most importantly Reading skill. SQ3R is the reading skill which is related to Survey, Question, Read, Write and Recite. Learners are suggested to survey the reading materials to know the every related aspects of reading material to question their needs and demands. After making survey and questioning their learning demand they should start to read, write and recite. Counseling is arranged at study centre allotted to the learners to put their individual difficulties during the organized counseling session to get their related difficulties solved by the expert of the content for the session. Work-shops are also organized by the study centre to provide some first hand experiences to the learners to increase the horizon of their theoretical knowledge. Assignment has evaluation or certification its secondary purpose, its primary purpose is to teach either through tutor marked assignment or through computer marked assignment. Comments written on the assignment is a learning source for learners and tutors are supposed to know about the types and nature of the comments to be written on the assignment. It may be negative, positive, hollow, etc. but the most important comment is global comment which needs justification of given grade. The tutor teaches the learner that why she/he has been given B and not C, what more to be added to get A. In the process the tutor has to mention the strength and weakness of the written material and the learner as well. Evaluation is another source of learning as the learner gets feedback from evaluation in the hand and motivation of learning in another. Distance learning system utilizes three tier evaluation system through learning material, through assignment and through term-end-examination. All these three aspects of evaluation yields learning for the distance learner either in the form of access devices or in the form of self-motivating act (which is also an access device in distance learning). All these means of learning are not self-generated by the system, rather principles and approaches of learning have widely influenced their mechanism of teaching learning and evaluation.

Behaviorists gave birth to the concept of reinforcement and the concept is called as the itself creator of programmed instruction. Programmed instruction is a type of self-learning mechanism and ultimately an example of distance learning. Reinforcement, programmed instruction and teaching machine are important contributions of behavioristic approach of learning widely employed in distance learning. Writing objectives in behavioral terms, which is an integral part of every distance learning unit, is the vital contribution of behaviorism to distance learning. Measuring outcome keeping in view specified learning objectives is another contribution of behaviorism to open distance learning. Introduction of the unit structure before the presentation of the content is based on the law of readiness as defined by behaviorist. Open learners are advised to develop habit of study and are suggested to internalize reading skill to get more from the text. Habit formation, behavior shaping, development of reading & study habits are associated with the learning contributions of the behaviorists. Reinforcement through assignments, use of machine to study at their own pace and division of subject matter into small steps, related to behaviorist school of thought are largely helpful in distance learning.

Cognitivists generated holistic view of learning and explained that for learning perception and learning experiences are essential, the fact is largely utilized in unit structure and learning material presentation. Self learning, discovery approach of learning and learners autonomy are associated with the concept of distance learning and simultaneously are related to cognitivist approach of learning. Experience is the base of learning through insight and in the unit structure of the open learning expected learning experiences are specified. Problem solving is one of the important approach of learning advocated by cognitivist and in distance education problem oriented learning is planned for students maximum learning. Retention of learners is being checked through different types of evaluation - self-check exercises, assignment writing and term end examination, cognitivist information processing is applied in this connection. Sequential learning, hierarchical learning, recapitulation, learner's characteristics, choice of media are linked to Bruner's concept of learning and Gagne's synthesis of learning. Concept of transfer of learning is also being applied in the preparation of learning material for distance education. Intrinsic and extrinsic motivation is being used in the process of distance learning.

Constructivist approach is also widely applied in the teaching – learning process of the distance learning. The concept of media integration, widely applied in distance teaching-learning, is not beyond the basics of constructivist approach of learning. Learning material is being developed with the help of a team of experts from different field - subject expert, graphic expert, language expert, format expert, etc. This team of experts is an example of constructivist approach. Assignment, specially an assignment of practical nature, can be written only on the basic of the constructivist approach of learning. Human factor has been advocated in distance learning by Sewart, which is very near to Vygostky social constructivist approach. Content is integrated, unit structure is the combination of every possible aspect of learning and no doubt utilization of

constructivist approach. Concept of grading and evaluation to make learned are also related to constructivist approach. Tutor comment, specially the global comment, is the real testimony of the application of constructivist approach. Panigarhi, SC and Rajendran, M (2008) has widen the scope of constructivism, “Constructivism has a relativist ontology that collapses the distinction between knower and known and attempts to approximate local realities through a dialectical process.” Learning is comprehensive and so are the approaches of learning. In distance teaching – learning not only three approaches of learning are being used rather many other related learning concepts are also used. Transfer of learning, Gagne’s & Bruner’s approach of learning, Bloom’s taxonomy of educational objectives and several psychological facts have influenced and contributed the process of distance teaching – learning & the system of distance education.

### **Short Comings of Distance Learning**

Over the years distance education has developed itself as parallel discipline of education and has given many challenges to formal education, still it has to go a long way to be a form of mass education due to its certain shortcomings as

- \* distance education is largely dependent on formal education system specially in terms space and faculty,
- \* poor learners support services. What Sahoo, P.K. (2011) has suggested for B.Ed. program is true for all the related programs through ODL, “Learner support services for ODL B.Ed. programs must take care of course requirement as well as needs, expectations problems and participation of stakeholders at grassroots level”,
- \* very few distance educational institutions have appointed permanent faculty members as their own,
- \* at large quality of learning material is not satisfactory,
- \* poor and minimal face-to-face communication facilities are available for distance learners. Importance of face-to-face communication in distance learning has been admitted by Jena, SS and Menon, MB (1997), but in reality there is poor application of face-to-face mode in distance learning, “Face to face interaction has its own advantages which the distance mode may not have. But it may be noted that face-to-face interaction is one of the teaching-learning strategies followed through distance mode”,
- \* lack of proper learning environment for learners. Construction of learning environment for self learning is essential as Kumar, Lalit (2013) has perceived, “constructing learning environment means to create an environment where learning could take place properly”,



- \* mass considers distance learning only second to formal education,
- \* disciplines having practical components are difficult to manage through distance mode,
- \* dropout rate in distance education is alarming,
- \* learning approaches are not applied in the light of the nature of the distance learning as very few counselors understand the learning difficulties of the distance learner, they behave them as formal learners,
- \* in general there is poor quality of counseling, work-shop, etc.
- \* there is no demarcation of sessions to be engaged by senior faculty members and the beginners. Same amount is being paid to the experienced and the new faculty members and even to the outsiders,
- \* every time distance learning is not cost effective. IGNOU (2001) has rightly said, “cost effectiveness is concerned with both the quantitative and qualitative relationship between inputs and outputs”,
- \* minimal and poor quality of research through distance,
- \* mode what Kumar, Lalit (2012) has concluded for ICT related research is also useful for research in distance open learning, “In the development of ICT Human factor needs to be given some serious attention to explore the philosophical and Historical research,
- \* assignments, the main source of student learning, is being evaluated superficially and learners hardly get any useful feedback to learn. Kumar, Lalit (2009) through his research on IGNOU B.Ed. students have concluded, “most of the IGNOU B.Ed. students are of the opinion that evaluation of assignment is made very superficially.”,
- \* group centered methods of teaching is considered better for the development of human element, which is being sacrificed as distance learning is highly individualized,
- \* choices of courses are limited in distance teaching and there are limited number of course combination,
- \* number of good quality distance education institutions are less in comparison to average formal education institutions,
- \* academic input is largely supplied by print materials,
- \* media integration is minimal even in good quality distance learning centres,

- \* individual learner is a loner in most of the cases,
- \* tutors are more an evaluator less a distance teacher,
- \* there is little scope for inter-personal communication, essential for the development of affective aspect of human personality, and that to is not utilized properly,
- \* there is lack of coordination & cooperation among distance education institutions. Consortium facility is not utilized properly,
- \* lack of trained manpower to work with and support to distance learning. In fact distance learning is a team work and is influenced by team work. IGNOU (2001) states, “One of the important functions of academic staff is to develop, tryout and implement instructional programs packages including self instructional materials. They include curriculum designers, course coordinators, course writers, editors, evaluator, assessors, tutors, counselors, media specialists and so on”,
- \* course structure of most of the distance education institutions are similar to regular courses,
- \* there is inadequate library facilities,
- \* inadequate & ineffective personal contact programs hamper the solution of students learning difficulty,
- \* there is ineffective delivery & feedback system,
- \* there is unconscious culturally induced bias of academic world towards distance learning,
- \* inadequate financial support to grow and develop,
- \* there is little scope in distance learning to address psych-motor and affective domains of learning and so is of less importance for growing children.

No doubt distance learning has its limitations and good quality education is given by some open universities, but it a viable channel for the education of mass. Educational level of directorate of distance education in an university or colleges may not match the quality of open universities, even then it is the only means of education for the left out of formal system. It is worth while to quote Perraton, H (1999) views, “when the distance teaching is reflecting the better, rather than the worse, aspects of the regular educational system, its particular qualities suggest that it might have a continuing role to play, not merely in providing an alternative or second best system of education for hard-pressed countries and sorely tried educators, but in providing a better educational system for all.”

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Dr. Lalit Kumar  
C-1/5, Professors Colony  
Saidpur Complex of PU  
Behind Rajendra Nagar Stadium  
Patna-800016