

## 1: Distance Education Journals and Magazines

*The linking of research and action, basic methods of social research, and the uses of research in distance teaching are examined, with examples drawn from the Lesotho Distance Teaching Centre and other distance teaching programs. Ways in which research can be useful and early stages of research.*

TA Consulting, Illinois, USA Abstract The literature related to online learning programs for K students dates to the mids and builds upon a century of research and practice from K distance education. While K online learning programs have evolved and grown over the past decade, the amount of published research on virtual schooling practice and policy is limited. The current literature includes practitioner reports and experimental and quasi-experimental studies, both published and unpublished. This paper reviews open access literature in K online learning and reports on a structured content analysis of the documents. Themes in the literature include steady growth and a focus on the benefits, challenges, and broad effectiveness of K online learning. In addition, newly developed standards for K online learning are emerging in descriptions of effective practices. A fundamental challenge in this relatively new educational field for program developers, managers, and instructors is locating guidance from successful practice and from research and literature. Online learning is a form of distance education whose central defining characteristic is the separation of teacher and learner Keegan, Many K online learning programs in North American are referred to as virtual schools. The authors reviewed the existing open access literature in K online learning and report on a structured content analysis of selected documents. These reviews were limited to dozens of studies and reports, compared to recent reviews of the literature on adult online learning, which included hundreds of studies e. As an example of the growth in the published literature in K online learning, of publications that were reviewed for this paper and published since , 29 were published during the first three years of that period and 69 were published since The findings of the previous reviews were limited to generalizations about broad effectiveness because insufficient data were available to substantiate analysis of factors that contributed to effectiveness. However, the picture is changing as data from the first ten years of virtual schooling have become available. This paper moves beyond the blanket endorsements of the effectiveness of virtual schooling to examine the themes that are prevalent in the open access documents published online from through July Examining these themes revealed the emphases in virtual schooling research as well as the needs for future study. In many ways, this is indicative of the foundational descriptive work that often precedes experimentation in any scientific field. In other words, it is important to know how students in virtual schools engage in their learning in this environment prior to conducting any rigorous examination of virtual schooling. Expanding upon his definition of a virtual school, Clark indicated that there were different types of virtual schools, which he categorized in seven ways see Table 1. Watson, Winograd, and Kalmon offered a slightly different classification consisting of five types of virtual school, which were summarized by Rice see Table 2. In the full description, Barker et al. Powell and Patrick found that while many other countries operate some form of Web-based or online curricular support program for students and teachers e. In fact, Australian Glenn Russell is one of the few scholars outside of North America who has written about virtual schooling e. Barbour and Reeves classified virtual schooling literature as outlining the benefits of virtual schooling or describing the difficulties or challenges of virtual schooling. They argued that the benefits could be divided into five main areas: However, whether these benefits are realized through virtual schooling remains in doubt in the minds of some critics, and the research to support these conjectures is limited. Along with the benefits, there were a number of challenges associated with virtual schooling. Barbour and Reeves described these challenges as the high start-up costs associated with virtual schools, access issues surrounding the digital divide, the approval or accreditation of virtual schools, and student readiness and retention issues see Table 4. The literature that reports research on virtual schooling tends to fall into one of two categories: Over the past decade, several studies have shown that the only students who were typically successful in online learning environments were those who had independent orientations towards learning, who were highly motivated by intrinsic sources, and who had strong time management, literacy, and technology skills Cavanaugh, These characteristics are consistent with traits that

are typically associated with adult learners. The problem with this focus is that adults learn differently from children and adolescents Bright, ; Cavanaugh et al. This supposition has led to the call for more research into the factors that account for K student success in online learning. The authors used a type of metasynthesis called template analysis, which entailed designing a template for the coding of the literature Au, For our metasynthesis, the literature about K virtual education was collected from systematic searches of refereed conference proceedings, refereed journals, dissertation indexes, and reports in the education press. A significant portion of the research and reporting on K distance education had been conducted by public and private research centers e. Search terms included but were not limited to the following: Our analysis was based on both the general literature on virtual schooling and the research on virtual schooling. A systematic review of the literature in K online learning provides a history of this new field of inquiry as well as a context for decision-making. Content analysis is also used to study distance education at the level of the course, across programs, and within the literature. Recent studies have analyzed the content of titles, authors, and abstracts of distance education articles e. This metasynthesis commenced with a description of the literature base and its purposes. Template construction afforded both a classification of the literature and its meanings and messages. The categories for the template were drawn from current emphases within the field. The broad themes were the models of virtual schooling seven categories , the roles of professionals in virtual schools seven categories , benefits and challenges of virtual schooling ten categories , adopted standards for virtual school courses six categories , and adopted standards for virtual school teaching thirteen categories. Documents were coded according to whether they address each category. This coding matrix was consistent with the broad to narrow classification used in template analysis. The categories revealed patterns of an emerging and maturing field of educational study. An inductive process was applied to the categories to draw inferences about the body of literature and about practice in the field Merriam, From an initial sample of over literature sources, documents met the inclusion criteria of relating directly to K online learning and being openly Internet-accessible. The documents included refereed journal articles and conference papers, books and chapters, evaluation reports, dissertations, and online publications. The decision to use only open access documents was made for two reasons. The initial search of literature revealed that individuals outside of the academy authored the majority of documents; thus, the authors may not have regular or free access to subscription-based publications. Also, because the authors were interested in presenting this paper to the practitioner community, we wanted to ensure that this audience was able to access the documents on which our metasynthesis was based. An additional consideration in reviewing the literature of a rapidly-changing field like K online learning was to account for effective practices that emerged from practitioners and evaluators before they were studied and published by the researcher community. Although the literature describing K distance education reached back to the s, the first uses of online learning and virtual schooling only began to appear in The pace of research and other documentation of K online learning rose steadily from through across all document types. Each document was reviewed by two of the three coders. The individual coder used an MS Excel spreadsheet to indicate the presence or absence of a particular theme in the document. After the three coders completed their coding, the spreadsheets were compiled. The emergent categories and inferences from this body of work follow. Results The results of our metasynthesis were organized according to the five thematic areas that we identified in the methodology. The first theme of analysis that we considered was the type of virtual school. The literature reflected a great deal of variety in the types of virtual schools that operated in North America; there was likewise a sizeable quantity of literature about each category of virtual schools. A smaller percentage of literature focused upon university, private, and for-profit provider virtual schools, which we attributed to the fact that these categories of virtual schools make up a smaller percentage of the virtual school community. Since then, Wyoming has announced plans to implement a state virtual school, and several other states have expanded their virtual school. The lines between public and private virtual schools has blurred as public online schools choose to become franchises for private course vendors. Virtual schooling has also been growing in Canada as more rural districts in Western Canada and more districts throughout the populous province of Ontario become involved in consortium like the Ontario Learning Consortium see [http:](http://) The literature has not yet addressed the relative efficacy of teacher-developed, school-developed, and

vendor-developed courses. These categories originated in the virtual school professional preparation and development spectrum and continua developed for Professional Development for Virtual Schooling and Online Learning available at <http://> As noted earlier, the literature about virtual schooling largely focused upon descriptive work that often precedes experimentation in most new fields. The high percentage of literature related to the roles of teachers and administrators supports this belief, as much of this literature concentrated on the practice of virtual schooling and its implementation within the K context. Indeed, the success of any school hinges on the educators who are in direct contact with students and on the administrators who support them Darling-Hammond, Therefore the roles of teachers and administrators received the majority of the scrutiny, while the impact of other professionals was just beginning to be explored. The third thematic area pertained to the benefits and challenges that had been identified by Barbour and Reeves in their review of the literature. Based upon this analysis, much of the literature about the benefits of virtual schooling was focused upon the promise of virtual schooling and its initial rationale for implementation i. On the other hand, the literature related to the challenges of virtual schooling was focused upon largely administrative issues i. The promise of virtual schooling as the focus of the benefits-related literature was noteworthy because the literature about the advantages of online learning generally was mixed. For example, there was no agreement in the education community or the public that online learning provides high quality learning experiences at any level. Reeves concluded that there is almost no evidence to support the claim that instructors who adopt new and emerging technologies also adopt new pedagogy. Further, Herrington, Reeves, and Oliver concluded that commercial course management systems restrict most instructors to the delivery of information rather than to the provision of engaging, authentic learning experiences. So although virtual schools may facilitate better instruction than the traditional classroom, there is no guarantee that this will occur. Rather than using the individual standards as variables, we chose to code the standard areas. For example, the standard area of content included the following specific standards: We coded whether the document addresses the following online course standard areas: While it may be revealing to explore the presence of each individual standard in the literature, the body of literature appeared too limited for such examination at this time. Unlike the majority of themes we analyzed, this theme had a considerable percentage of literature distributed across each of the categories. The amount of literature concentrated on the technology standard area was clearly dominant, understandably so for an educational enterprise mediated entirely by technology. Apart from technology, approximately one half of the literature touched upon the standard areas related to course content and design. The lower percentage for the 21st century skills standard area may be related to the fact that the Partnership for 21st Century Skills see <http://> Across virtual schools, course-level decisions are not made in uniform ways or in ways that resemble such decision-making in physical schools. A continuum of course development responsibility is evident in virtual schooling. At the other end, vendors make all content and design decisions, and the role of the schools is to purchase and distribute courses to students. Schools select their level of involvement in course development based on personnel, funding, time, and other factors Cavalluzzo, As with the previous theme, we coded for the broad standard topic and not the individual standards within each area. The most frequently referenced teaching standards in the literature related to the core behaviors of online student-teacher interaction: These standards were followed in frequency by the three that are related to policy and compliance: The next group of three standards addressed materials and technology, followed by two standards that addressed professional behavior: Providing frequent meaningful feedback to students and preparing active learning experiences were accepted as critical elements in both distance and face-to-face teaching Jonassen, et al.

### 2: Practical research in distance teaching: a handbook for developing countries - CORE

*We undertook many, mostly small, research projects to guide our distance teaching, and it was on this aspect of our work that I was asked to write. The book is about doing practical research. It is not a summary of research findings on distance teaching, nor is it a digest of the literature on educational research and evaluation.*

Suggestions for planning and organizing a distance delivered course include: Begin the course planning process by reviewing the literature on distance education research. Before developing something new, check and review existing materials for content and presentation ideas. Make sure you understand the strengths and weaknesses of various delivery systems audio, video, data, print, etc. Hands-on training is critical for both teacher and students. Consider a pre-class session in which the class meets informally using the delivery technology and learns about the roles and responsibilities of technical support staff. At the start of class, hold a straightforward discussion to set rules, guidelines, and standards. Once procedures have been established, consistently uphold them. Make sure each site is properly equipped with functional and accessible equipment. If course materials are sent by mail, make sure they are received well before class begins. To help students keep materials organized, consider binding the syllabus, handouts, and other readings prior to distribution. Start off slowly with a manageable number of sites and students. The logistical difficulties of distant teaching increase with each additional site. Assist students in becoming both familiar and comfortable with the delivery technology, and prepare them to resolve the technical problems that might arise. Focus on joint problem solving, not placing blame for the occasional technical difficulty. Make students aware of and comfortable with new patterns of communication to be used in the course. Be sensitive to different communication styles and varied cultural backgrounds. Remember that students must take an active role in the distance delivered course by independently taking responsibility for their learning. Use Effective Teaching Skills To maximize your teaching skills at a distance, pay special attention to the following: Realistically assess the amount of content that can be effectively delivered in the course. Because of the logistics involved, presenting content at a distance is usually more time consuming than presenting the same content in a traditional classroom. Be aware that student participants will have different learning styles. Some will learn easily in group settings, while others will excel when working independently. Diversify and pace course activities and avoid long lectures. Intersperse content presentations with discussions and student-centered exercises. Humanize the course by focusing on the students, not the delivery system. Consider using a print component to supplement non-print materials. Use locally relevant case studies and examples as often as possible to assist students in understanding and applying course content. Typically, the earlier in the course this is done, the better. Use short, cohesive statements and ask direct questions, realizing that technical linkages might increase the time it takes for students to respond. Develop strategies for student reinforcement, review, repetition, and remediation. Towards this end, one-on-one phone discussions and electronic mail communication can be especially effective. Participants will quickly grow comfortable with the process of distance education and the natural rhythm of effective teaching will return. Improving Interaction and Feedback Using effective interaction and feedback strategies will enable the instructor to identify and meet individual student needs while providing a forum for suggesting course improvements. Research findings on the need for interaction have produced some important guidelines for instructors organizing courses for distant students: Learners value timely feedback regarding course assignments, exams, and projects. Learners benefit significantly from their involvement in small learning groups. These groups provide support and encouragement along with extra feedback on course assignments. Most importantly, the groups foster the feeling that if help is needed it is readily available. Learners are more motivated if they are in frequent contact with the instructor. More structured contact might be utilized as a motivational tool. Utilization of on-site facilitators who develop a personal rapport with students and who are familiar with equipment and other course materials increases student satisfaction with courses. The use of technologies such as fax machines, computers, and telephones can also provide learner support and interaction opportunities. To improve interaction and feedback, consider the following: Use pre-class study questions and advance organizers to encourage critical thinking and

informed participation on the part of all learners. Realize that it will take time to improve poor communication patterns. Early in the course, require students to contact you and interact among themselves via electronic mail, so they become comfortable with the process. Maintaining and sharing electronic journal entries can be very effective toward this end. Arrange telephone office hours using a toll-free number. Set evening office hours if most of your students work during the day. Integrate a variety of delivery systems for interaction and feedback, including one-on-one and conference calls, fax, e-mail, video, and computer conferencing. When feasible, consider personal visits as well. Contact each site or student every week if possible, especially early in the course. Use pre-stamped and addressed postcards, out-of-class phone conferences, and e-mail for feedback regarding course content, relevancy, pace, delivery problems, and instructional concerns. Have students keep a journal of their thoughts and ideas regarding the course content, as well as their individual progress and other concerns. Have students submit journal entries frequently. Use an on-site facilitator to stimulate interaction when distant students are hesitant to ask questions or participate. At the same time, politely but firmly discourage individual students or sites from monopolizing class time. Make detailed comments on written assignments, referring to additional sources for supplementary information. Return assignments without delay, using fax or electronic mail, if practical. Draft and revise questions; change if necessary. Make use of follow-up probes. Alternate between instruction and interaction. Sequence your questions for best effect – go ahead and ask for suggestions for improvement before asking for what is good. This will help convey sincerity for seeking improvements. Place open ended questions after quick answer questions. This gives students built-in thinking time. On summative evaluation, assure anonymity. This can be accomplished by having all questionnaires sent to a neutral site where they would be removed from their envelopes and forwarded to the instructor without a postmark. Establish rapport by being interested and supportive. Adapt to the student in degree of formality and pace of communication. Use evaluation as a method for understanding teaching and learning. Try to get both positive and negative feedback. It is important not only to know what is not working, but also what is working. The Student The primary role of the student is to learn. Under the best of circumstances, this challenging task requires motivation, planning, and the ability to analyze and apply the information being taught. In a distance education setting, the process of student learning is more complex for several reasons: Many distance-education students are older, have jobs, and families. They must coordinate the different areas of their lives which influence each other and their families, jobs, spare time, and studies. Distant students have a variety of reasons for taking courses. Some students are interested in obtaining a degree to qualify for a better job. Many take courses to broaden their education and are not really interested in completing a degree. Heightened need for support: In distance education, the learner is usually isolated. The motivational factors arising from the contact or competition with other students is absent. The student also lacks the immediate support of a teacher who is present and able to motivate and, if necessary, give attention to actual needs and difficulties that crop up during study. Distant students and their teachers often have little in common in terms of background and day-to-day experiences and therefore, it takes longer for student-teacher rapport to develop. In distance education settings, technology is typically the conduit through which information and communication flow. Until the teacher and students become comfortable with the technical delivery system, communication will be inhibited. Improving Distance Learning Beginning students may have some difficulty determining what the demands of a course of academic study actually are because they do not have the support of an immediate peer group, ready access to the instructor, or familiarity with the technology being used for delivery of the distance-education course. They may be unsure of themselves and their learning. Morgan suggests that distant students who are not confident about their learning tend to concentrate on memorizing facts and details in order to complete assignments and write exams. As a result, they end up with a poor understanding of course material. Brundage, Keane, and Mackneson suggest that adult students and their instructors must face and overcome a number of challenges before learning takes place, including: Instructors can help motivate distant students by providing consistent and timely feedback, encouraging discussion among students, being well prepared for class, and by encouraging and reinforcing effective student study habits. They also need to understand their learning goals and objectives. Providing opportunities for students to share their personal learning goals and objectives for a

course helps to make learning more meaningful and increases motivation. They are balancing many responsibilities including employment and raising children. Often their involvement in distance education is unknown to those they work with and ignored by family members.

## 3: Behaviorism Applied to Distance Education

*distance education takes place when a teacher and student(s) are separated by physical distance, and technology (i.e., voice, video, data, and print), often in concert with face-to-face communication, is used to.*

March 2003 The Comparative Instructional Effectiveness of Print-Based and Video-Based Instructional Materials for Teaching Practical Skills at a Distance Francis Donkor University of Education, Winneba, Ghana Abstract Print-based instructional materials have been more popular than any other medium for teaching practical skills during the delivery of technical and vocational education and training via distance learning. However, the approach has its shortcomings and in recent times alternatives have been sought. The comparative instructional effectiveness of one such alternative is the focus of this paper. An experimental design was used and participants were randomly assigned to two treatment groups: Users of video-based instructional materials or users of print-based instructional materials. A researcher-designed performance test and an achievement test of 20 multiple-choice items were used to collect data from 34 participants who used print-based instructional materials and 35 participants who used video-based instructional materials to learn practical skills. The instruments were based on the instructional objectives of lessons on mortar and wall finish. Descriptive statistics and t-test at a 0. The results indicated that the two instructional materials were pedagogically equivalent in terms of theoretical knowledge acquired. Practical skills acquired, however, were significantly higher among users of video-based instructional materials. Finally, users of video-based instructional materials displayed significantly superior craftsmanship. Achievement test; block-laying and concreting; instructional effectiveness; open and distance learning; open schooling; performance test; practical skills; print-based instructional materials; technical and vocational education and training TVET ; video-based instructional materials Teaching Practical Skills to Distance Learners Distance education as a delivery mechanism has been relatively more successful in the academic field than in the field of technical and vocational education and training TVET. The practical nature of TVET disciplines mostly accounts for the situation. For the open and distance learning ODL environment, the teaching of practical skills poses considerably more difficulties than the teaching of knowledge and theory Hampton, Examining the future of open schooling, Ferreira , p. The teaching of practical skills requires the use of precise instructions to enable learners to follow the process and thereafter repeat the skill, whether within a conventional educational institution or via distance learning. In a typical conventional classroom-based educational institution, an instructor provides such instructions in workshops and laboratories using the appropriate materials and equipment. For open and distance learners who are separated from the instructor much of the time, the most frequently used method for teaching practical skills, according to Hampton , is the use of print-based illustrations of step-by-step procedures. This approach has its shortcomings and, therefore, in recent times alternatives have been sought. The use of video in the delivery of practical lessons is acknowledged in the literature. For example, Mishra observed that video is useful to show practical and real life activities and that video can be used to capture hazardous and costly experiments for presentation and for repeated use. Tooth also observed that video resources are expensive to produce but are very useful where practical demonstrations of skills are required. For Jung , however, cost-savings are expected from reuse of video resources. The decision of ODL practitioners to use video-based instructional materials to teach practical skills in spite of the relatively high cost will to a large extent depend on the assurance of their guaranteed instructional effectiveness. Empirical research into the effectiveness of video-based instructional materials for the teaching of practical skills at a distance may be necessary to provide reason for their use or otherwise. Accordingly, PSI-DL began broadcasting television lessons on state television, which has nation-wide coverage, on July 23, The lessons are based on the Ghana Education Service syllabus for the junior and senior high schools. Subjects covered include English, mathematics, physics, chemistry, biology and integrated science. The subjects selected for the pilot are Block-Laying and Concreting and Catering. Worldwide, open schooling is a response to the rapidly increasing demand for secondary education, both as an end itself and as a route to tertiary education and training Daniel, Two different approaches to open schooling have been identified by

Rumble and Koul , one complementary to the conventional school system and the other alternative to the conventional school system. The PSI-DL Open Schooling in TVET operates as a complementary system offering the same curriculum for the youth and young adults who, for a variety of reasons, miss the formal, classroom-based school system. Similar to their counterparts in the conventional classroom-based school system, the distance learners are prepared to take the same Intermediate Craft Examination organised by the Technical Examinations Unit of the Ghana Education Service. Rationale TVET has been identified as crucial to the achievement of the Millennium Development Goal of eradicating extreme poverty and hunger by It has the potential to make huge gains in poverty reduction and wealth creation. Additionally, the aspiration of Ghana to become a middle income earning economy depends largely on the ability to equip her citizens with knowledge and skills to produce quality goods and services on a continuous basis for income. The acquisition of skills is also a way of sustaining the socio-political stability of the nation. Based on these realisations, the PSI-DL Open Schooling in TVET was initiated to enable unemployed youth to have the opportunity to acquire skills for sustainable livelihoods and to enhance their chances in the labour market. The program seeks to equip the learners with skills to enable them to do the following: During face-to-face sessions that take place fortnightly at learning centres established in existing conventional technical and vocational institutions, the learners also get local personal support in the form of tutorials, counselling, access to practical lessons, self-help study group activities, etc. The learning of theory is through print-based instructional materials. Regarding acquisition of practical skills, learners initially use either print-based illustrations of step-by-step procedures or video-based practical lessons. In the case of the latter, the practical aspects of the course are converted into production scripts then shot, edited, and dubbed onto VCDs. The learners access the practical lessons using computers or VCD players in their homes or at the learning centres. The Problem Statement For the teaching of practical skills to open and distance learners, Hampton , p. This void in literature needs to be filled in order to increase our understanding of the relative effectiveness of the various approaches used in teaching practical skills via distance learning. As already indicated above, PSI-DL has produced practical lessons on VCDs and print-based materials for teaching practical skills to its distance learners. However, there has not been any assessment regarding their relative instructional effectiveness. In view of this, the present study was undertaken to provide feedback regarding the comparative instructional effectiveness of the two approaches to teaching practical skills to distance learners, while at the same time attempting to fill the identified gap in literature. Specifically, the study was designed to compare the level of learning in terms of theoretical knowledge and practical skills acquisition between learners using video-based instructional materials and those using print-based instructional materials in relation to the instructional objectives of the lessons on mortar and wall finish. Research Questions The following research questions guided the study: How do learners using video-based practical lessons and those using print-based practical lessons compare in practical skills acquisition? How do learners using video-based practical lessons and those using print-based practical lessons compare in theoretical knowledge? How do learners using video-based practical lessons and those using print-based practical lessons compare in their craftsmanship? Methodology Research Design The study used experimental design. As the study sought to compare the level of learning in terms of knowledge and practical skills acquisition and craftsmanship between learners using video-based instructional materials and those using print-based instructional materials, the experimental design was deemed appropriate. The main variables involved were level of learning as the dependent variable and instructional materials video-based and print-based as the independent variables. Generally, there are three ways to assign participants to experimental conditions: Each of the learners selected for the study participated in only one of the two experimental conditions making the study a between-subjects design. They were all males. This is consistent with male dominance in Block-Laying and Concreting in the formal, classroom-based school system, owing to gender stereotyping. The learners from each selected study centre were assigned randomly to two treatment groups as indicated in Table 1: Instruments The study used two instruments to collect data to answer the three research questions posed. The two instruments were based on the instructional objectives of lessons on mortar and wall finish. The first instrument was an achievement test that sought to measure the level of theoretical knowledge acquired after learners had been exposed to theoretical lessons from print-based

instructional materials manuals and the practical lessons from either the video-based or print-based materials. It consisted of 20 objective test items with 10 items on mortar and 10 items on wall finish see Appendix A. Each item had four options of responses. The second instrument was a performance test that sought to measure the level of practical skills acquired by learners after exposure to the practical lessons from either the video-based or print-based materials. The participants were instructed to perform certain tasks so as to demonstrate certain skills acquired see Appendix B. The marking schemes for scoring both tests appear in Appendix C. Content validity of the instruments was established by a panel of four Block-Laying and Concreting tutors out of 12 research assistants recruited for the study. The questionnaire was pre-tested using a sample of 20 randomly selected full-time students from one of the institutions that constituted the population but was not selected for the study. The sample size of 20 for the pilot study was based on the observation of Borg and Gall that for a pilot study it is rarely necessary to include more than 20 subjects. The researcher personally administered the achievement test to the 20 students after they had completed the lessons on the two selected topics that formed the scope of the study, namely mortar and wall finish. Before administering the test, the purpose of the study was explained to the students and they were asked to underline words they did not understand. To ensure anonymity, the participants were asked to write only their index numbers but not their names. Additionally, they were advised to do independent work. At the start of the exercise, the time was recorded. In all, the participants spent between 23 and 38 minutes to complete the test. As and when the participants completed the achievement tests and handed them in, the tests were scrutinised to ensure that they had been properly completed. After the administration of the achievement test, four out of the 20 students were selected randomly to participate in the piloting of the performance test. One student at a time undertook the exercise and all four research assistants involved in the validation of the instruments scored them independently. After assessing the four students, the researcher and the four research assistants met to discuss the scoring in relation to the marking scheme. For all four research assistants, the scores for each competency as specified in the marking scheme were discussed. After the discussions, we agreed on common strategies that could help to reduce subjectivity during the scoring process and thus minimise variability. The achievement test was scored by awarding one mark for each correct response and zero for incorrect alternatives. After scoring, item-analysis was carried out to determine the difficulty level of the items, the discriminating power of the items, and the effectiveness of the options of responses distracters. The item analysis indicated that the difficulty level and the discriminating power of each of the 20 test items were acceptable. Additionally, the analysis of the distracters indicated that for all 20 items, the options appeared plausible to the respondents, i. Thus, it was concluded that there were no ambiguous test items or flawed options that needed revision. Against the background of the observation by Johnson and Larry , p. Beside the item analysis and the reliability test, words that participants did not understand were identified and revised accordingly. Data Collection Procedures The scoring of any performance test requires converting qualitative indicators of competencies into numeric quantitative values for each indicator. Such an exercise is generally subjective, and there could be variability and lack of reliability across different scorers. In the present study, therefore, each participant was assessed by three research assistants and any two scores with the lowest variability were averaged to produce a composite score for the participant. In furtherance of measures to minimise variability in the scoring, the 12 research assistants first met to discuss the performance test and the scoring process using the marking scheme Appendix C as a uniform standard of measurement. The four research assistants who participated in the pilot study facilitated the discussions. The data collection took three days, with a day at each of the three participating learning centres. The participants were assigned index numbers for use in both tests.

## 4: Conducting Distance Education Effectively - InformED

*Note: Citations are based on reference standards. However, formatting rules can vary widely between applications and fields of interest or study. The specific requirements or preferences of your reviewing publisher, classroom teacher, institution or organization should be applied.*

Is the medium accessible? Accessibility can be defined by factors such as: Is the necessary infrastructure available to facilitate distribution e. Is it easy to get fixed? Does everyone know how to use it? Is it an established standard used around the world? Does it facilitate distribution? They therefore conclude that in Mongolia, radio is the most suitable medium to provide distance education access. Is it convenient to use? Such restraints apply to television, for example, whether via open broadcast, cable, or sophisticated microwave systems p. The importance of convenience is also illustrated by the increasing popularity of the Internet. The Internet is giving students quick and convenient access to information that before was unavailable to them. They no longer have to trek to the library to research material in an encyclopedia. New technology is often met with stiff resistance. This resistance is greater in developing nations because they have less experience with advanced technology and are more likely to perceive even simple solutions as complex.

**Humanization** – To make technology more user-friendly, attach real names to student email accounts, welcome them by their name when they logon, and thank them personally for visiting when they logoff.

**Multilingual Design** – Not all equipment can be taken off the shelf and used to serve minority groups. In many international settings, to be user-friendly, both hardware and software have to handle languages other than English. The management and development team have to be committed to this principle so that every element of input, transmission, output, and feedback can operate seamlessly in more than one language. An equivalent capacity has to be built in to new modes of delivery.

**User Support** – A user-friendly system is able to offer users different levels of help depending on their literacy levels. Thus, more and more, distance educators are being asked to design distance learning systems to suit local environments in an effort to solve the social, political, and economic problems unique to each nation. Does its use coincide with social and political agendas of governing bodies? Distance education initiatives must carefully work under the social, political and economic policies of existing governments. Trillo, as cited in Guy, reports on interference in the preparation and use of distance materials by the Peruvian government. However, political and social organizations within the nations may be concerned about globalization as a threat to their way of life. They are faced with the dilemma: This impact is particularly evident in the Middle East region where information going in and out of the country, including Internet access, is highly restricted. Numerous researchers support the importance of understanding a culture and ways of learning, before implementing a solution: These types of learners are doomed to failure in unstructured environments. Media can be defined as being open and flexible if, among other things, it fosters collaboration and different ways of teaching. Does it foster collaboration? What this suggests is that media that facilitates collaboration is preferable to media that does not, especially for developing nations where it is economically advantageous to adopt the distance education structures of more advanced nations. High technology solutions, such as Internet based CMC and email, foster collaborative efforts. Not only is communication faster, but timely contributions to program development from experts around the world is feasible. Convenient collaboration allows conventional and domestic education systems to more readily share scarce physical and human resources, reduce duplication, and agree on the areas of education each can best address. Does it foster different ways of teaching? Interaction is an important part of all forms of learning. It was decades before the automobile became an entity unto itself, developing according to its own potential. Distance education may require a similar aging period to evolve out of preconceived notions of what education should be p. Barker, Frisbie and Patrick go as far as to assert that interaction legitimizes distance education. The use of new and emerging technologies in distance education that foster live, teacher-student and student-to-student interactivity will enable distance education to assume its rightful and respected role in the educational process p. Does it promote learner-learner and learner-instructor interaction? Keegan stresses the importance of learner-learner and learner-teacher interaction in distance

education as a way of recreating the teaching act. The separation of the teaching acts and the learning acts that is characteristic of distance education brings about a weak integration of the student into the life of the institution and this has been linked to dropout. It is hypothesized, therefore, that distance students have a tendency to drop out in those institutions in which structures for the reintegration of the teaching acts are not satisfactorily achieved. According to Keegan, the reintegration of the teaching act is attempted by distance systems in two basic ways: The Bangladesh Open University has successfully followed through on the first part of this advice by developing a handbook for textbook writing, that describes among other things, how to make distance education materials easier to read and locally more relevant. Haque Does it facilitate timely and quality feedback from instructors and tutors? Feedback is a particular type of learner-instructor interaction that bears recognition in distance education. The importance of timely feedback is supported by data collected from the Darling Downs Institute of Advanced Education Barker et al. Although the DDIAE study concludes that in other institutional contexts, no such patterns emerged, findings in the DDIAE context suggest that some students may have been disadvantaged by the relatively tardy return of assignments. The fact that we learn through education and experience to prefer some media or to attribute varying levels of difficulty, entertainment value, or enjoyment to media might influence instructionally relevant outcomes. In an international setting however, it is important to distinguish between technology that is intimidating and technology that is motivating. What is motivating to a Westerner, such as an interactive multi-media CD, might be threatening to a Papua New Guinean, who has never seen a TV, let alone a remote control. Does it encourage learners to study harder and longer? The increased attention paid by students sometimes results in increased effort or persistence, which yields achievement gains. If they are due to a novelty effect, these gains tend to diminish as students become more familiar with the new medium. Regardless, of who offers the better hypotheses for the achievement gains, it is apparent that new exciting media has considerable motivational power. Any media, that has the potential to extract more effort out of a student, even if the results dissipate over a longer period of time, is media worth considering. In other words, when it comes down to making a decision, the effectiveness of a medium as an educational tool is a minor consideration in the selection process. A common theme in distance education research is to compare two or more media in relation to their effectiveness: Of course the problem may not be in the research itself, but in the definition of what effectiveness truly means. But that is another paper. Does it help students learn content faster and develop new ways of thinking? This approach grew out of earlier research done by psychologist Georgi Lozanov in Bulgaria. Simpson submits that it may be possible for new media to actually be responsible for new ways of thinking. Establish your need-then choose the technology. Will the students be comfortable using it? They should be part of your team, but remember, they are seeing the technology with a different set of values to educators. Accessibility includes availability and attitudes toward the technology. Cost per learner, including fixed and variable costs. Novelty may help launch an innovation, but cannot sustain it. Speed how fast the innovation can be mounted. Conclusion - top - The ability to see the big picture and extract the right details to summarize that big picture has always led to clarity and progress. Einstein summarized the universe in the modest formula: He saw the truth before any one could prove it. But in education, if only solutions could be that simple. Koumi argues that: These guidelines may not provide distance educators with easy answers to the problems of media selection in both domestic and international distance education settings, but at least it will point us in the right direction and get us asking the right questions. These attributes are listed in relative order of importance. Although these valuation assignments are somewhat arbitrary, they do provide a more functional tool than if all criteria were valued equal.

*distance programs, whereas in recent years distance education has employed many other technologies, including computer conferencing, the World Wide Web, and CD-ROMs.*

Summary Behaviorism Applied to Distance Education Davidson-Shiver and Rasmussen purport that there are several key concepts of behaviorism that have been applied to the educational environment and that you may find important in designing and implementing a distance education course or program. Please note that these are a few selected concepts; there are many more.

**A Reinforcing e-mail or Text Message Practice.** Write a reinforcing e-mail or text message. Dear students, I appreciate all of your hard work on this assignment. Please see the attached file with your grades and my notes. Keep up the great work. Your Instructor Practice - Research demonstrates that repetition via practice can strengthen learning. Providing learners with opportunities practice after the presentation of material or reading may allow learners to strengthen a specific skill. In the e-learning environment, an instructor may use Second life, a virtual world, to deliver a lecture and engage his or her students in a role-play. **Modeling -** Modeling is defined as a demonstration of the desired behavior or response. For example, a course designer may encourage an instructor to provide instructions for an assignment and then post exemplarily work of previous students as examples. Another example is an instructor modeling the writing of desired discussion board responses when interacting on discussion forum. **Reinforcement -** Theorists purport that learners learn or exhibit desired behaviors when provided with positive or negative reinforcement. For example, in the e-learning environment, an e-mail from the instructor providing results and explanation of those results on an assignment may serve as a positive reinforcement. In the mobile environment a reinforcing text could be sent. For this to be a positive reinforcement the learner must view the e-mail as pleasant. **Active Learning -** Behaviorist purport that learners should be active in that they should respond to stimulus in order for learning to occur. In the e-learning or mobile environment, instructors may require students to require students to answer questions in a discussion forum or via text messaging. The instructor may require learners to share documents in a collaborative workspace such as a wiki or other collaborative workspace. The purpose of this is so that instructors may observe students understanding of the material; thus, making this different than active learning described in constructivism. Write an assignment that requires active learning. In the discussion area of the content management system, post the following assignment. This week in class, you learned how to write a research question and hypothesis. Based on what you have earned, develop a research question and hypothesis for a research study of your choice. **Think About It 2.** How is behaviorism applicable to the distance education environment? What concepts of behaviorism do I see as useful to distance education instructional design? What are some concrete examples of behaviorism aside from the ones listed in this module? Consider posting your reflections about this on your blog.

## 6: E-Learning Academic Journals | eLearners

*Practical research courses are an important component of the psychology curriculum. This article presents an approach to teaching one such course that emphasizes an experiential orientation to.*

See Article History Alternative Titles: Distance learning traditionally has focused on nontraditional students, such as full-time workers, military personnel, and nonresidents or individuals in remote regions who are unable to attend classroom lectures. However, distance learning has become an established part of the educational world, with trends pointing to ongoing growth. An increasing number of universities provide distance learning opportunities. A pioneer in the field is the University of Phoenix, which was founded in Arizona in and by the first decade of the 21st century had become the largest private school in the world, with more than , enrolled students. It was one of the earliest adopters of distance learning technology, although many of its students spend some time in classrooms on one of its dozens of campuses in the United States, Canada, and Puerto Rico. A precise figure for the international enrollment in distance learning is unavailable, but the enrollment at two of the largest public universities that heavily utilize distance learning methods gives some indication: Students and institutions embrace distance learning with good reason. Universities benefit by adding students without having to construct classrooms and housing, and students reap the advantages of being able to work where and when they choose. Public-school systems offer specialty courses such as small-enrollment languages and Advanced Placement classes without having to set up multiple classrooms. In addition, homeschooled students gain access to centralized instruction. Characteristics of distance learning Various terms have been used to describe the phenomenon of distance learning. Four characteristics distinguish distance learning. First, distance learning is by definition carried out through institutions; it is not self-study or a nonacademic learning environment. The institutions may or may not offer traditional classroom-based instruction as well, but they are eligible for accreditation by the same agencies as those employing traditional methods. Second, geographic separation is inherent in distance learning, and time may also separate students and teachers. Accessibility and convenience are important advantages of this mode of education. Well-designed programs can also bridge intellectual, cultural, and social differences between students. Third, interactive telecommunications connect individuals within a learning group and with the teacher. Most often, electronic communications, such as e-mail, are used, but traditional forms of communication, such as the postal system, may also play a role. Whatever the medium, interaction is essential to distance education, as it is to any education. The connections of learners, teachers, and instructional resources become less dependent on physical proximity as communications systems become more sophisticated and widely available; consequently, the Internet, mobile phones, and e-mail have contributed to the rapid growth in distance learning. Finally, distance education, like any education, establishes a learning group, sometimes called a learning community, which is composed of students, a teacher, and instructional resources. Social networking on the Internet promotes the idea of community building. Early history of distance learning Correspondence schools in the 19th century Geographical isolation from schools and dispersed religious congregations spurred the development of religious correspondence education in the United States in the 19th century. For example, the Chautauqua Lake Sunday School Assembly in western New York state began in as a program for training Sunday school teachers and church workers. From its religious origins, the program gradually expanded to include a nondenominational course of directed home reading and correspondence study. Its success led to the founding of many similar schools throughout the United States in the chautauqua movement. It was the demand by industry, government, and the military for vocational training, however, that pushed distance learning to new levels. In Europe, mail-order courses had been established by the middle of the 19th century, when the Society of Modern Languages in Berlin offered correspondence courses in French, German, and English. Most nonreligious mail-order correspondence courses emphasized instruction in spelling, grammar, business letter composition, and bookkeeping, but others taught everything from developing esoteric mental powers to operating a beauty salon. The clear leader in correspondence course instruction in American higher education at the end of the 19th century was the

University of Chicago , where William Rainey Harper employed methods that he had used as director of the Chautauqua educational system for several years starting in 1880. Early educational theories and technologies Behaviourism and constructivism During the first half of the 20th century, the use of educational technology in the United States was heavily influenced by two developing schools of educational philosophy. Behaviourism , led by the American psychologist John B. Watson and later by B. Skinner , discounted all subjective mental phenomena e. Constructivism, whose leading figure was the French developmental psychologist Jean Piaget , asserted that learning arises from building mental models based on experience. These theories led to different techniques for the use of media in the classroom, with behaviourism concentrating on altering student behaviour and constructivism focusing on process- and experience-based learning. Technological aides to education One of the first technological aides to education was the lantern slide e. By the start of the 20th century, learning theories had begun concentrating on visual approaches to instruction, in contrast to the oral recitation practices that still dominated traditional classrooms. The first significant technological innovation was made by the American inventor Thomas Edison , who devised the tinfoil phonograph in 1877. This device made possible the first language laboratories facilities equipped with audio or audiovisual devices for use in language learning. After World War I , university-owned radio stations became commonplace in the United States, with more than 100 such stations broadcasting recorded educational programs by 1920. Edison was also one of the first to produce films for the classroom. Many colleges and universities experimented with educational film production before World War I, and training films were used extensively during the war to educate a diverse and often illiterate population of soldiers in a range of topics from fighting technique to personal hygiene. While the most artistically acclaimed propaganda production may have been *Triumph of the Will* , one of a series of films made by Leni Riefenstahl during the 1930s for the German Nazi government, similar films were produced by all the major belligerents. In the United States the army commissioned Hollywood film director Frank Capra to produce seven films, the widely acclaimed series *Why We Fight* (1942-45) , in order to educate American soldiers on what was at stake. Instructional television courses began to be developed in the 1950s, first at the University of Iowa. By the 1960s community colleges all across the United States had created courses for broadcast on local television stations. Much of the early research was conducted at IBM , where the latest theories in cognitive science were incorporated in the application of educational technology. The next major advancement in educational technology came with the linking of computers through the Internet , which enabled the development of modern distance learning. Modern distance learning Web-based courses By the beginning of the 21st century, more than half of all two-year and four-year degree-granting institutions of higher education in the United States offered distance education courses, primarily through the Internet. With more than 10,000 different online courses to choose from, about one-quarter of American students took at least one such course each term. Common target populations for distance learning include professionals seeking recertification, workers updating employment skills, individuals with disabilities, and active military personnel. Although the theoretical trend beginning in the 1980s seemed to be toward a stronger reliance on video, audio, and other multimedia, in practice most successful programs have predominately utilized electronic texts and simple text-based communications. The reasons for this are partly practical—individual instructors often bear the burden of producing their own multimedia—but also reflect an evolving understanding of the central benefits of distance learning. Similarly, self-paced software educational systems, though still used for certain narrow types of training, have limited flexibility in responding and adapting to individual students, who typically demand some interaction with other humans in formal educational settings. Both proprietary and open-source systems are common. Although most systems are generally asynchronous, allowing students access to most features whenever they wish, synchronous technologies, involving live video, audio, and shared access to electronic documents at scheduled times, are also used. Shared social spaces in the form of blogs , wikis Web sites that can be modified by all classroom participants , and collaboratively edited documents are also used in educational settings but to a lesser degree than similar spaces available on the Internet for socializing. Web-based services Alongside the growth in modern institutional distance learning has come Web-based or facilitated personal educational services, including e-tutoring, e-mentoring, and research assistance. In addition, there are many

educational assistance companies that help parents choose and contact local tutors for their children while the companies handle the contracts. The use of distance learning programs and tutoring services has increased particularly among parents who homeschool their children. Many universities have some online tutoring services for remedial help with reading, writing, and basic mathematics, and some even have online mentoring programs to help doctoral candidates through the dissertation process. Finally, many Web-based personal-assistant companies offer a range of services for adults seeking continuing education or professional development.

**Open universities** One of the most prominent types of educational institutions that makes use of distance learning is the open university, which is open in the sense that it admits nearly any adult. Since the mid-20th century the open university movement has gained momentum around the world, reflecting a desire for greater access to higher education by various constituencies, including nontraditional students, such as the disabled, military personnel, and prison inmates. The origin of the movement can be traced to the University of London, which began offering degrees to external students in 1969. In the University of South Africa, headquartered in Pretoria, began offering correspondence courses, and in 1974 it was reconstituted to provide degree courses for external students only. By the end of the 1970s the university had 25,000 students, and it has since grown to annual enrollments in the hundreds of thousands. As one of the most successful nontraditional institutions with a research component, the Open University is a major contributor to both the administrative and the pedagogical literature in the field of open universities. The university relies heavily on prepared materials and a tutor system. The printed text was originally the principal teaching medium in most Open University courses, but this changed somewhat with the advent of the Internet and computers, which enabled written assignments and materials to be distributed via the Web. For each course, the student is assigned a local tutor, who normally makes contact by telephone, mail, or e-mail to help with queries related to the academic materials. Students may also attend local face-to-face classes run by their tutor, and they may choose to form self-help groups with other students. Tutor-graded assignments and discussion sessions are the core aspects of this educational model. The tutors and interactions between individual students are meant to compensate for the lack of face-to-face lectures in the Open University. Academic issues and future directions

From the start, correspondence courses acquired a poor academic reputation, especially those provided by for-profit entities. As early as 1911, as a study commissioned by the Carnegie Corporation found, there was widespread fraud among correspondence schools in the United States, and there were no adequate standards to protect the public. While the situation was later improved by the introduction of accrediting agencies that set standards for the delivery of distance learning programs, there has always been concern about the quality of the learning experience and the verification of student work. Additionally, the introduction of distance learning in traditional institutions raised fears that technology will someday completely eliminate real classrooms and human instructors. Because many distance learning programs are offered by for-profit institutions, distance learning has become associated with the commercialization of higher education. Distance learning, whether at for-profit universities or at traditional ones, utilizes two basic economic models designed to reduce labour costs. The first model involves the substitution of labour with capital, whereas the second is based on the replacement of faculty with cheaper labour. Proponents of the first model have argued that distance learning offers economies of scale by reducing personnel costs after an initial capital investment for such things as Web servers, electronic texts and multimedia supplements, and Internet programs for interacting with students. However, many institutions that have implemented distance learning programs through traditional faculty and administrative structures have found that ongoing expenses associated with the programs may actually make them more expensive for the institution than traditional courses. The second basic approach, a labour-for-labour model, is to divide the faculty role into the functions of preparation, presentation, and assessment and to assign some of the functions to less-expensive workers. Open universities typically do this by forming committees to design courses and hiring part-time tutors to help struggling students and to grade papers, leaving the actual classroom instruction duties, if any, to the professors. These distance learning models suggest that the largest change in education will come in altered roles for faculty and vastly different student experiences. The emergence of Massive Open Online Courses (MOOCs) in the first and second decades of the 21st century represented a major shift in direction for distance learning. MOOCs are

characterized by extremely large enrollments—in the tens of thousands—the use of short videotaped lectures, and peer assessments. The open-online-course format had been used early on by some universities, but it did not become widely popular until the emergence of MOOC providers such as Coursera, edX, Khan Academy, and Udacity. Although the initial purpose of MOOCs was to provide informal learning opportunities, there have been experiments in using this format for degree credit and certifications from universities.

## 7: Online Certificates – Educational Technology

*Practical Research in distance teaching: a handbook for developing countries. 2. Practical Research in distance teaching: a handbook for developing countries.*

Effective Teaching in Distance Education. For over years, distance education has served as an alternative method for delivering academic course work to students unable to attend traditional campus-based classes. The format of distance education varies from correspondence-style courses to technologically based courses using the Internet. Distance education offers students considerable benefits, including increased access to learning, lifelong learning opportunities, and convenience of time and place. Distance education may be essential for learners who are truly place-bound because of factors such as employment, child-care demands, disability, or remoteness of the location where they live. This digest presents information on the many forms distance education can take and keys to successful teaching with distance education. Distance education is a method of education in which the learner is physically separated from the teacher and the institution sponsoring the instruction. It may be used on its own, or in conjunction with other forms of education, including face-to-face instruction. In any distance education process there must be a teacher, one or more students, and a course or curriculum that the teacher is capable of teaching and the student is trying to learn. The contract between teacher and learner, whether in a traditional classroom or distance education, requires that the student be taught, assessed, given guidance and, where appropriate, prepared for examinations that may or may not be conducted by the institution. This must be accomplished by two-way communication. Learning may be undertaken either individually or in groups; in either case, it is accomplished in the physical absence of the teacher in distance education. Where distance teaching materials are provided to learners, they are structured in ways that facilitate learning at a distance. Individualized study has been a method of reaching the remote student for some time. Detailed course instructions are sent to the learner who performs the assigned tasks and returns the completed work to the teacher for evaluation and reassignment if necessary. Technology has raised the quality of individualized distance instruction. The use of various forms of electronic media increases time effectiveness and improves the delivery of information. Video, audio, and computer-based applications may enhance the product received by the independent learner. Electronic delivery can occur using synchronous communication, in which class members participate at the same time, or asynchronous communication where participants are separated by time. The most widely used format is broadcast and cable television. However, developments in satellite and fiber optic systems have produced other successful programs. The interactive capability of many of these networks has produced a distance classroom that is nearly identical to a regular classroom. Teachers and students can interact through both two-way video and one-way video with two-way audio systems. The recent development of Desktop Video Conferencing (DVC) which brings interactive video capability to the desktop computer, further enhances learning opportunities. The linking of computer technology through the use of the Internet or CD-ROM with television transmission provides a potentially new dimension to distance education. This technique can link university professors to high school teachers, or to physically disabled students, in a distance setting. Another form of interaction is the use of computer conferencing. This method utilizes asynchronous communication in such forms as an e-mail list group, an Internet discussion group, or other types of conferencing software. Asynchronous methods of communication are especially appealing to the learner who has difficulty scheduling specific time- and place-bound course work. For example, several institutions of higher education already have developed certificate programs, undergraduate programs, and graduate programs in health and physical education that are delivered using distance education methods. Traditional programs that are heavily based in skill development and demonstration or require laboratory work can be offered in a distance education framework using interactive video interfaced with computers to facilitate a hands-on learning approach at a distance. Classes that use lecture and laboratory experiences are easily adapted to a distance education situation. Course materials, including animals for dissection, are sent to class participants with video and written instructions and assignments. The successful student develops persistence

and skills in self-directing work. The successful distance education teacher becomes conversant with new technology and develops new instructional styles, moving from creating instruction to managing resources and students and disseminating views Strain, Administrative and faculty support for distance education are critical to the success of this instructional method. Administrators should take note that the implementation of a distance education program may allow access to a greater number of students. However, the time and work associated with teaching at a distance exceeds the normal requirements of campus-based instruction. Students in distance education settings perform as well or better on assignments, class activities, and exams when compared to campus-based students St. Nevertheless, students must maintain persistence and a clear focus to succeed in a distance learning situation. Self-direction, a passion for learning, and strong individual responsibility are important influences on achievement. There are indications that distance education works best for more mature, motivated, well-organized, and already accomplished learners Rintala, Garrels describes five critical elements for successful teaching at a distance: This requires animation and comfort in front of the camera, or with the technology utilized. Faculty support and interest are critical to the success of distance learning endeavors. Teaching materials must be prepared in advance; timing, variation, and smooth transitions must be planned. Instructors should allocate from 3 to 5 hours of preparation for each hour of distance instruction. Great attention to detail is required long before the actual classroom activity occurs Summers, Strong commitment to student interaction. Whatever the modality used to teach at a distance, the instructor must encourage and facilitate ongoing communication between the students and the instructor. Familiarity with the technology used in the class format. Faculty development is important before beginning any distance activities, and instructors should be trained in video use, computer use, or other forms of instructional technology used. Production staff, graphic designers, and technical staff members will help the instructional setting produce successful teaching at a distance. Distance education is not a panacea for the difficulties and barriers encountered in traditional educational settings, but it does provide the potential for greater service to more individuals seeking learning opportunities. Journal articles EJ should be available at most research libraries; most documents ED are available in microfiche collections at more than locations. Five critical elements for teaching at a distance. Indiana Higher Education Telecommunication System [http:](http://) Use of computer-based technology in health, physical education, recreation, and dance. ED Parrott, S. Distance education in community colleges. ED Rintala, J. Computer technology in higher education: An experiment, not a solution. Quest, 50 4 , EJ Romiszowski, A. Telecommunications and distance education. ED St. Distance learning in physical education teacher education. EJ Strain, J. The role of the faculty member in distance education. American Journal of Distance Education, 1 2. Or, how I learned to love my "tv" class. Further, this site is using a privately owned and located server. This is NOT a government sponsored or government sanctioned site.

## 8: Practical Guidelines for Selecting Media: An International Perspective

*Implementing practical based courses under Open and Distance Learning (ODL) system is a very difficult and challenging task as the teaching of practical based courses involves intensive practical work. For removing the difficulties and challenges in implementing the practical based courses under ODL.*

E-Learning Academic Journals E-Learning Academic Journals These journals and magazines publish distance learning research, cover education technology news and developments, review course management systems, and offer best practices for e-learning use and integration. Distance education describes teaching-learning relationships where the actors are geographically separated and communication between them is through technologies such as audio and video broadcasts, teleconferences and recordings; printed study guides; and multimedia systems. Australasian Journal of Educational Technology ISSN X AJET is a refereed journal publishing research and review articles in educational technology, instructional design, educational applications of computer technologies, educational telecommunications and related areas. Canadian Journal of Learning and Technology [http:](http://) Topics may include, but are not limited to: Manuscripts may be submitted either in English or in French. Its Research section covers original quantitative, qualitative, or mixed methods studies on topics relating to applications of technology or instructional design in educational settings. Its Development section publishes research on planning, implementation, evaluation and management of a variety of instructional technologies and learning environments. Each issue also includes book reviews, international reviews, and research abstracts. E-Learning and Digital Media ISSN E-learning and Digital Media is a peer-reviewed international journal directed towards the study and research of e-learning in its diverse aspects: The journal explores the ways that different disciplines and alternative approaches can shed light on the study of technically mediated education. Electronic Journal of E-Learning [http:](http://) The journal contributes to the development of both theory and practice in the field of e-Learning. The journal accepts academically robust papers, topical articles and case studies that contribute to the area of research in e-learning. The journal focuses on the creative use of information technology IT to enhance educational processes in academic, commercial, and government settings. It is an interdisciplinary refereed scholarly journal aimed at promoting a deeper understanding of the nature, theory and practice of the instructional process and of the learning to which it gives rise. Papers published in recent years represent a wide variety of perspectives from the learning sciences. The journal covers learning by people of all ages, in all areas of the curriculum, and in informal as well as formal learning contexts. The emphasis is on providing a space for researchers, practitioners and theoreticians to jointly explore ideas in order to transfer best practice, policy development and theory creation. So it aims to bridge the gape between pure academic research journals and more practical publications. So it covers the full range from research, application development to experience reports and product descriptions. The purpose is to contribute and disseminate to practitioners and scholars worldwide scholarly knowledge in each of three areas: Journal of Asynchronous Learning Networks [http:](http://) Its aim is to promote and encourage scholarly work of an empirical and theoretical nature that relates to distance education in Canada and throughout the world. The Journal of Distance Learning [http:](http://) Journal of Distance Learning Administration [http:](http://) Journal of Instructional Science and Technology [http:](http://) The Journal is a multifaceted publication with content likely to be of interest to policy makers, managers, investors, professional staff, technical staff, and academics within education and training. The Journal of Interactive Online Learning [http:](http://) It is published by a joint effort of The University of Alabama, the University of Texas at Tyler, The University of Idaho, as well as other faculty from other institutions. Journal of Research on Technology in Education [http:](http://) Open Learning ISSN This is a leading international journal in the field of open, flexible and distance learning. Open Learning is widely subscribed to and read throughout the world by those in specialist distance education institutions, and also by those using distance, flexible and technology based forms of learning in conventional education and training contexts. Technological Horizons in Education T. The Technology Source ISSN The Technology Source was a peer-reviewed bimonthly periodical published between and , whose purpose was to provide thoughtful, illuminating articles that would assist educators as they face the challenge of integrating

information technology tools into teaching and into managing educational organizations. It is a leading publication for professionals in the educational communication and technology field. As such its major purposes are:

### 9: Effective Teaching in Distance Education. ERIC Digest.

*Teaching and Learning STEM presents a trove of practical research-based strategies for designing and teaching courses and assessing students' learning. The book draws on the authors' extensive backgrounds and decades of experience in STEM education and faculty development.*

*Dictionary of animal behaviour Anti-Methodist Publications Issued During the Eighteenth Century; A Chronologically Arranged and Annotate Language, context, and the imagination Using Internet primary sources to teach critical thinking skills in world languages Statistical summaries of selected Iowa streamflow data through September 1996 Whigs and Democrats, or, Love of no politics Agee and Actuality Changing styles of patronage : tourism and commoditization A Halfway Decent Girl My mother the sandwich maker and other tales of food The Theory of Curriculum Content in the USSR Thinking from the underside of history Boston-massacre-visual-analysis-steps-ws. flashcards The churchill factor how one man made history News from the birds Probiotics: new applications for old knowledge School principals handbook of evaluation guidelines Leadership and creativity The Marriage of Guenevere Pounders Marine Diesel Engines (Marine engineering series) Greek and Roman Necromancy The Moduli Space of  $N=1$  Superspheres With Tubes and the Sewing Operation 2006 toyota corolla ce owners manual Classic Cabinetry (Woodsmith Custom Woodworking) Steelheading for the Simple-Minded Sprinklers drip systems Pierre-Auguste Renoir (Art Profiles for Kids (Art Profiles for Kids) Pleasure and quality of life In the face of forgiveness : Steven Katzmans epiphanies : foreword A.D. Coleman Managerial accounting tools for business decision making 4th edition Fundamentals of Agribusiness Finance Groupoids and Smarandache Groupoids V. 8 The old curiosity shop. Lands effect on the wind 2011 chevrolet avalanche service manual Star wars figurative language worksheet Tales of Peter Rabbit Benjamin Bunny Above the Moon Earth Rises Motivation in principles of management Interview with Joss Whedon /*