

Impact of Distance Learning Education System on Education Standards

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Abstract: Conventional Learning & Distance based learning are the two systems prevailing in higher education. These systems affect the level of education standard. This research was conducted to highlight the impact of distance learning education system on education standard. The education standards were Institutional support, Course development, Learning Process, Student support, Faculty support, evaluation and assessment. A well-developed questionnaire was administered and distributed among 206 faculty members of Virtual University of Pakistan. Data was analyzed through correlation and regression analysis. Results confirmed that there is a significant relationship and impact of DLE system on education standards. The research further helped to evaluate Distance learning education (DLE) system with reference to higher education standards. The study will also add value in better understanding of standards and its pre-requisites. This will also provide baseline for future research. It will add value in existing body of knowledge.

Key Words- Distance Learning Education, Higher Education, Education Standards

1.Introduction: Traditional ways of education are not accurately meeting the needs of relatively large population in developing countries where resources are not sufficient. Even it has same situation in developed countries. After primary level, it becomes really a dream in developing countries to get higher education if same conventional methods area adopted. In order to cater the needs of a large population, developing countries are exploring alternative solutions for advance education. One solution to control the problem is decentralization of educational institutes but its existence is subject to many economic conditions. So the only way remain is introduction of distance education. (Khan, Khan, & Al-Abaji, 2001).

Among these entire resources internet is a cheap and accessible way to get distance education. Even many poor countries have high speed internet facilities. The current trend is not limited to developed countries. China is an example. The central radio and television university of China (CRTVU) is the famous higher education institution which is directly working under the control of state education commission of China. It is dealing many multimedia distance courses with the help of radio and television buy using the printed and audiovisual education materials. It was established in 1979. Currently it has status of head of the modern distance education system. It comprises of "CRTV, 43 Provincial, Autonomous Regional, and Municipal TV Universities (PRTVUs), 654 branch schools at prefecture and city level, 1500 work stations at the county level, and more than 10,000 teaching classes that cover China's rural and urban areas".(Knight,1994).

Likewise China, Ramkamhaeng University (RU) was established in Thailand in 1971. It is an open institution. It was planned as an "academic market". For example, in tis Open University admissions were unlimited. Students were not bound to attend classes. Fee was reasonable. To qualify for admission, no exam was mandatory. The fundamental teaching and education material required for learning was text books, handbooks and guidelines sheet which was printed by same university press. The main teaching mode was lecture method with the help of closed circuit television used in large speech gallery or conventional class room set up. The university was also offering laboratory and equipment facilities to the students. Ramkamhaeng University (RU) started operating distance education system in 1995. (Ruksasuk, 1999).

Open and distance learning education system is emerging mode of education now-a days. It is increasing day by day in Pakistan also. Higher Education Commission of Pakistan (HEC) is also focusing the education institutes to develop their distance learning courses also apart from conventional education. On the other hand, education standards are also of vital importance. HEC has made maximum education standards for conventional learning system. Virtual University of Pakistan and Allama Iqbal Open University are good examples of distance education in Pakistan.



This study was e on Virtual University of Pakistan. Virtual University is a Government built public sector and non-profit organization, which has a mission to spread cheap, affordable and world class education to all ambitious students of the country. It was opened in 2002. It has a federal Charter. Its degree is accepted nationally as well as overseas. It is operating in sixty cities of the country. It has more than hundred institutions' network that is providing full organization and infrastructure support to the students. The study was aimed to measure the impact of distance educations system on education standards.

Distance Learning Education System (DLE System): Distance education is defined as the system where the learner interacts with the instructor through a system in which modern technologies are used. Like internet etc. (Lee Ayers Schlosser, Michael R. Simonson - Education - 2009 - 258 pages).

In this system the students don't have any direct contact with their instructors. They can't ask any question at the spot. They usually need to send through email.

Distance education and open learning are new system of education, if compared with conventional and traditional education system. It came in practice since 19th century. From that period a lot of improvements were done in order to flourish Distance education system. And still the improvements are not stopped rather they are still continued in order to develop it. The most challenging and noteworthy improvements came into being with the growth of information and communication technologies. (Sultana & Kamal, 2002).

DE is the learning system where students don't have any class room facilities. Students are away from teachers. Students are having abilities to learn by themselves in absence of traditional system of education. A wide range of media and internet is used to offer degree programmes to the students. (Sultana & Kamal, 2002).

American Council on Education (ACE) defines distance education as a system and a series of processes which connects distance leaners each other having circulated learning resources. (Chute, P. 220).

Students who learn through distance education system usually interact with each other and with instructors through some media. (Sultana & Kamal, 2002).

Students at distance learning system always have edge to choose place and time of their own choice. However this edge also depends upon the availability of media and students' access to it. This flexibility also varies from place to place in distance education. It is strongly evident that distance education system must be flexible than traditional and conventional system. (Sultana & Kamal, 2002). It is also obvious that student must have sufficient knowledge of technologies available for distance education. Students must have an idea about their usage also. So we can say that selection of media and technology is an important issue in distance education.

Education Standards: online education which permits to use various substitutes for teaching objectives mainly allows institutions having distance education to prepare and plan a comprehensive procedure for further quality. In this regard it can be identified that distance education and online education both have a close relationship (Uysal and Kuzu, 2009). Thus, this study gives emphasis on research on quality standards in distance education. In order to define the quality standards and to escape the doubts in internet-based distance education, the case study organized by the IHEP (2000) was based on three reasons. "First, Internet-based distance education is becoming the predominant technology in distance education. Internet-based distance education will be a growing avenue for technology mediated learning in the future. Second, Internet-based distance education allows the teaching/learning process to occur "at any time and any place. Third, because of these features, Internet-based distance education is, in many ways, fundamentally different than traditional classroom-based education. Among other things, it is this distinctly different concept of time that engenders concern and skepticism from many in the higher education community". (Uysal and Kuzu, 2009)

Most people, especially those who don't have any familiarity with distance learning, remain doubtful about distance education and are in view distance education has poor standards.

Some of education experts are fundamental about distance education. They are in view that acquiring education is a vital social interaction. It must contain same time and place. Interaction is significant in learning process. (AFT, 2000). Therefore, comprehensive research is necessary about quality in online education (Twigg, 2001). NEA and Blackboard, in 2000 conducted a study – called Quality on the Line – It refers how quality can be assured in Internet-based distance education (IHEP, 2000). Quality On the Line initially identifies 24 standards which are most important to ensure excellence in Internet based distance learning. The benchmarks are further divided into seven categories of quality which are used nationwide. "These standards are shown into 7 subdomains below;

Institutional Support with 3 principles
Course Development with 3 principles
Teaching/Learning Process with 3 principles
Course Structure with 4 principles
Student Support with 4 principles
Faculty Support with 4 principles
Evaluation and Assessment with 3 principles"



Institutional Support: This standard addresses the activities by the institution that helps to confirm an environment encourages maintaining quality distance education, as well as policies that encourage the development of Internet-based teaching and learning. It also includes technological infrastructure issues, a technology plan, and professional incentives for faculty.

Course Development: This standard includes the entire yardstick related to for the development of course, which is designed by the individual or by any group. (Phipps et al, 2000)

Teaching/Learning Process: This includes the selection of activities related to pedagogy of teaching. It includes interaction mainly. (Phipps et al, 2000)

Course Structure: It includes the policies and guidelines related to above standard. It includes course objectives, availability o resources and student perception. (Phipps et al, 2000)

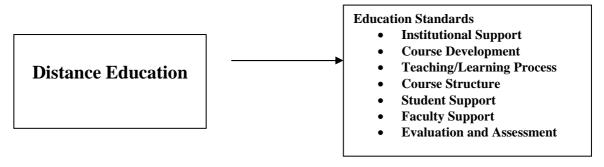
Student Support: It includes the activities related to student training, rules regarding admission and financial aid provided to the students. (Phipps et al, 2000)

Faculty Support: It includes activities related to faculty development, and throughout assistance provided to faculty during the teaching period. (Phipps et al, 2000)

Evaluation and Assessment: The benchmark in this category is related to activities used by institution to evaluate internet based learning. (Phipps et al, 2000)

It is for sure to what degree the standards determined abroad are practical in our country. The application of these standards in online courses in our country and the importance of these standards must be determined and quality standards should be evaluated.

2. Theoretical Framework



Hypothesis

This research is aimed to study the following hypothesis.

- H1 Level of Education Standards is positively associated with the level of Distance education.
- H2 DLE system has significant impact on educational Standards

3. Method

Area of Selection: Among a few distance learning organizations, Virtual University of Pakistan has been chosen as target organization. The logic behind choosing this organization was obvious. It is the pioneer and one & only organization in Pakistan which offered internet based distance learning. The faculty members were decided to choose as a sample as they are the only members of the organization who know the students well. Moreover they are equally involved in teaching as well as administrative activities.

Instrument for data collection: A well-structured close ended adopted questionnaire was used to get the response of respondents. It included all the variables of the study. 7 point likert scale was used as a rating scale .It was scaled as 7-Strongly Agree, 6-Moderately Agree,5-Agree,4-Neutral,3-Disagree,2-Moderately Disagree,1-Strongly Disagree. 45 questions were related to education standards whereas 8 questions were related to distance education system which was measured as one construct.

Sample: Probability sampling technique which further categorized as simple random sampling was applied. The rationale behind this technique will be that every single unit of population must have equal chance to choose as a sample. Sample size was 206. 206 faculty members from virtual university of Pakistan recorded their responses.. **Reliability of Measure:** The questionnaires were derived from Phipps, Ronald; Merisotis, Jamie. (2000). "Quality on the line: Benchmarks for success in internet based distance education'. and O'Malley, J., & McCraw, H. (1999). "Students perceptions of distance learning, online learning and the traditional classroom". All the measures have acceptable reliability.



4. Results and Discussions

Data collected was analyzed through Correlation and regression analysis.

Table-1 Correlations, n=205

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	-	ISV	FST	SST	CDV	TPR	CST	EVA	DLE
ISV	Pearson Correlation	1	.703**	.586**	.653**	.603**	.462**	.465**	.350**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
FST	Pearson Correlation	.703**	1	.583**	.682**	.570**	.447**	.538**	.340**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
SST	Pearson Correlation	.586**	.583**	1	.709**	.678**	.629**	.580**	.467**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
CDV	Pearson Correlation	.653**	.682**	.709**	1	.752**	.623**	.717**	.465**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
TPR	Pearson Correlation	.603**	.570**	.678**	.752**	1	.734**	.664**	.505**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
CST	Pearson Correlation	.462**	.447**	.629**	.623**	.734**	1	.687**	.560**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
EVA	Pearson Correlation	.465**	.538**	.580**	.717**	.664**	.687**	1	.520**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
DLE	Pearson Correlation	.350**	.340**	.467**	.465**	.505**	.560**	.520**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	

^{**.} Correlation is significant at the 0.01 level (2-tailed).

If analysis of the independent variable DLE system against Education Standards is examined, it is found that Course structure is the most important factor. It means course structure has the strongest impact on DLE system. Course structure has the highest value. The analysis of correlation depicts that there is moderately significant and positive(r=0.560**, p=0.000) relationship between DLE system and Course Structure. It shows if the distance learning system will be adopted then the course structure will also be better in performance as compared to one where DL (Distance Learning) courses are not offered.

The analysis of correlation depicts that there is moderately significant and positive(r=0.520**, p=0.000) relationship between DLE system and Evaluation and Assessment. It shows if the distance learning system will be adopted then the Evaluation and Assessment will also be improved as compared to one where DL courses are not offered.

The analysis of correlation reveals that there is moderately significant and positive(r=0.505**, p=0.000) relationship between DLE system and Training and Learning Process. It shows if the distance learning system will be adopted then the Training and Learning Process will also be developed as compared to one where DL courses are not offered.

The analysis of correlation reveals that there is moderately significant and positive(r=0.467**, p=0.000) relationship between DLE system and Student Support. It shows if the distance learning system will be adopted then the Student Support will also be better in performance as compared to one where DL courses are not offered.

The analysis of correlation reveals that there is moderately significant and positive(r=0.465**, p=0.000) relationship between DLE system and Course Development. It shows if the distance learning system will be adopted then the Course Development will also be increased as compared to one where DL courses are not offered.

The analysis of correlation reveals that there is moderately low and positive(r=0.350**, p=0.000) relationship between DLE system and Institutional Support. It shows if the distance learning system will be adopted then the Institutional Support will also be somehow increased as compared to one where DL courses are not offered.

The analysis of correlation reveals that there is moderately low and positive(r=0.340**, p=0.000) relationship between DLE system and Faculty Structure. It shows if the distance learning system will be adopted then the Faculty Structure will also be somehow increased as compared to one where DL courses are not offered.



As the output of analysis shows that there exist a positive relationship between Education Standards and Distance Learning Education System. Hence H₁ is accepted.

Table-2 Regression Model Summary

		U	•	
Model	D	D Canada	3	Std. Error of the Estimate
Model	K	R Square	Square	Estimate
1	.556 ^a	.310	.306	.59767

a. Predictors: (Constant), DLE

Table-2(a) ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.515	1	32.515	91.024	.000a
	Residual	72.514	203	.357		
	Total	105.029	204			

a. Predictors: (Constant), DLE

b. Dependent Variable: Education Standards

Table-2(b) Coefficients^a

		Unstandardize	d Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	2.032	.283		7.190	.000
	DLE	.534	.056	.556	9.541	.000

a. Dependent Variable: Education Standards

After looking Table 2, 2(a) and 2(b), we analyzed that R square is 0.310. This means that 31% variance is explained by dependent variable. The value of Adjusted R square is 03.6. The standards error of estimate is 0.597. It shows that there is a significant impact of independent variable. The regression coefficient B represents the amount the dependent variable will change if independent variable is changed by one unit. The B coefficient for education standards is 0.534. Beta is the standardized regression coefficient, which allows us to compare the effect of variables measured on different scales. ANOVA shows that the p-value is <0.05 which shows the level of significance. The p-value from above table shows that there exists a relationship between two variables. So this model is good fit.

The regression analysis between Distance Learning Education System and education standards shows that R square between Distance Learning Education system and education Standard is 0.310 which indicates that if we want to measure the impact of Distance Learning Education system on education standards, then 31% of the change in education standards is caused by Distance Learning Education system. Education standards are related with Institutional Support, Course Development, Teaching/Learning Process, Course Structure, Student Support, Faculty Support and Evaluation and Assessment. It means that much importance is paid to education standards. If we look at the standardized coefficient Beta then we will come to know that DLE system has strongest impact on ES with B(0.556) at 000 significance level which is less than =0.5 education standards will be more improved where DLE system is adopted as compare to where the DLE system do not exist.

As the output of analysis shows that Distance Learning Education System has significant impact on Education Standards. Hence H_2 is accepted.

Discussion

The data reveals that distance learning has many advantages for students. A student can save his time in DE which is required to go to campus in traditional class room education. As students just need to come on internet



and attend classes. DLE system is a flexible system of education. Students in DE can adjust their classes schedule according to their own choice. DL works better with student schedules than do traditional courses. Students believe that DL enables them to attend classes more frequently. DL enables students to take more courses in a year than traditional methodologies. DL methodologies have much of an advantage over the traditional methodology. However difficulty in contributing to class in a DL environment also seems to limit the relative advantage of DL.

The higher education of Pakistan was established in 2002 and it has taken enriched steps to improve the education standards of Pakistan. It has significantly taken vital steps to maintain quality standards for higher education in Pakistan. It also has a quality assurance cell. This quality cell is mainly in the view that evaluation and assessment is significantly attached with quality. It says that internal and external assessment is mandatory for a pure quality assurance system. This Problem of maintaining education standards is really a sensitive issue by HEC now. HEC has established eleven standards for measuring performance of the institutions. There are no separate education standards for distance education system.

As per the outcome of the analysis both hypothesis are accepted. The first hypothesis was to check the Level of Education Standards is positively associated with the level of DE and the other was DLE system has significant impact on educational Standards.

There is found to be a significant relationship and impact between both variables of DLE system and ES. It is evident that DLE system has significant impact on educational Standards. The outcome of analysis reveals that Course structure is the most important factor. It has the highest p value so it is evident that students are required to inform with course objectives and supplemental information of course objectives, concepts and ideas. In DLE system students are more required to set their expectations of time per week of study and for their homework assignment. Faculty is also required to grade and return the assignments within a certain period of time. Learning outcomes of each course is required to be clearly mentioned in written form. It is quite evident in DLE system that sufficient library resources are also compulsory for students. Students are also required to set their commitment with the online course.

The data reveals that second most important factor is evaluation and assessment. It is evident that it is significant to measure the educational effectiveness in DLE system with various ways. It is more required to set specific standards to compare and improve learning outcomes of online courses. The effectiveness of the institute depends upon the quality of the evaluation of each course. Thus the standard of evaluation and assessment has strong impact on DLE institute. It provides diversity among online courses in terms of design and delivery.

The teaching and learning process is also an important factor. In DLE system student interaction with faculty and student interaction with each other is more required. The institution is required to engage students in analysis and technical assignments. Courses are required to design in such a way that student can be engaged in problem solving skills by communication with pother students. Feedback to student assignment is an essential element of online courses. Course material is mandatory to design in such a way that promotes coordination among various students.

The data reveals that Student support services are also required to be paid much attention. Students are needed to remain updated with all the admissions and course objectives. Students are also required to be informed in writing with each & every update in online course. Technical assistance is also to be paid much attention while supporting students. It is evident that DLE system is more responsive toward student complaints, issues and grievances. Distances learners are required to offer need based student support flexibility and sensitivity in distance education.

The outcome of analysis shows that Course development is also an essential factor on which DLE system has significant impact. It is clear that online course is required to approve through competent review. It is needed to review by content experts, instructional designers and evaluation personnel. It is also evident that minimum standards are required to design and deliver the online course. During online course the various learning styles of students are considered. Expected learning outcomes are essential in course development.

The analysis also reveals an impact of faculty structure. It is evident that technical assistance to faculty members is always required. Those instructors who come from traditional & conventional system are required to offer proper training. Training is required to continue throughout the progression of online course. Instructors are also required to have all written resources to deal with any issue. It has clear evidence that faculty is mainly responsible for teaching, research and student services. The primary element of every educational institute is faculty and it is required to have quality committed members. Faculty members always demonsatre professional growth in context of research.

It is also worth considering that institutional support is also of vital importance. The institutional resources are reflected in providing incentives to faculty members, institutional providing rewards and documented technology



plan. It is evident that distance institutions have strong financial resources to acquire support for building and other maintain infrastructure.

In the light of above discussion, it is proved that hypotheses are accepted, and objectives are met.

5. Conclusion

The study was aimed to study the DLE system. It was also aimed to evaluate the education standards described by HEC. The purpose of this study is to help the policy makers while making judgment with reference to distance education. The study was conducted in order to find out the relationship between DLE system and education standards. The DLE system was considered as one construct while the education standards were comprised of seven dimensions. The study finds out the impact of DLE system on educations standards. It was found that DLE system is positively associated with Education standards. Moreover it has significant impact as well. The study reveals that DLE is a flexible system. Students are offered a lot of benefits. However it is very difficult for students to contribute in online discussion. The data reveals that education standards are of vital importance for any educations system. The course structure is the most important factor. It has strong relationship with DLE system. Whereas faculty structure is not as such an important benchmark in the perception of faulty members. It has low positive relationship with it.

6. Managerial Implications

The findings show that the performance of any DLE institute is vital. It should provide a minimum quality public certification for self-improvement from higher education commission. The institute should follow the clear mission and objectives. It will help the institute in supervising management, faculty and governing bodies in decision making while allocating resources and developing the DL courses. It will also help to support research and scholarly activities. The mission and objectives should be finalized through constant reviews. Institutional support should be a fundamental planning element of DLE system. The resources related to physical, technological, equipment & supplies, research are mandatory for successful running of online courses. The institutes should be capable enough to handle all these resources. Keeping in view the financial resources, an institute should conduct a detailed financial analysis which must reflect that institute can acquire any other resources at any time. The institute should have two fiscal years data along with. The role of faculty in DLE is different from conventional teaching so highly professionals should be hired. The qualification of faculty should be consistent with quality standards and online courses learning outcomes. The institute should clearly identify the selection criteria of faculty members, their periodic performance review, and their promotion criteria. The institute should offer intensive research in order to enhance the teaching environment. The institute should develop the curriculum in such a way that it should have appropriate depth of contents according to different level of study. The curricula should reflect the research element as well. Therefore the institute should also provide all technical facilities to faculty members, content experts and specialists for integration of knowledge required to develop the curriculum. The institute should offer sufficient library resources for enhancing learning environment among faculty, students and staff. It should train the users as well. Pedagogy of internet learning should be the part of training & development in DLE system. The institute should design a student support services model which reflects the flexibility for students. It should be open enough to reply and deal with all the queries and needs of students. The service should be consisted of financial aid and counseling to students as well which is mostly missing in DLE system. The student support services should address the diversity of students as well. The students should be communicated as the partner of the institute. The DLE institute should review the enrollment plan and periodic admission catalogs for future planning so that it will be the evident to further improve the admission policies.

7. Limitations and Future Research

This study is only limited to distance education. In future conventional institutions can also be selected and a comparative study can be conducted. There are a few distance education institutions in Pakistan. Like Allama Iqbal Open University and Virtual University of Pakistan. Due to importance of emerging internet based systems in distance learning education system, the study is restricted to Virtual University of Pakistan. In future all the institutions conducting distance and internet based education can be included in the research. Moreover a comparative study can also be conducted institution wise. Only the faculty members were selected as respondents. In future all the students and administrators can also be added in the study.

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