USE OF LEARNING TOOLS IN THE ACADEMIC SESSIONS - A STUDY ON HEIs OF ODISHA WITH REFERENCE TO THE MANAGEMENT OF ICT .

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ABSTRACT

This study considers the development of online learning management to assist academic and learning in Higher education institutes . Faculty orientation on online teaching , students in each department and to determine the course delivery , are tested here . Course completion by use of ICT that the students get oriented to increase their performance. exam schedules, exam results and transcript are conducted through online system . Given the importance of HEIs, this study examines the level of satisfaction of on online learning management system adopted by different type of institutes during COVID period to their student shave been tested. Mostly the students agree that there is no gap in the system as per the expectation .

KEY WORDS: online, teaching , student orientation, virtual class, learning management

INTRODUCTION:

Quality in higher education has become the prime task of countries the world over. In countries like India, the explicit focus on quality enhancement in higher education through an external mechanism is relatively new. Until recently, access to higher education itself, for an increased percentage of the relevant age group, was an indicator of national progress; graduating from an institution of higher education meant, for an individual, a stamp of differentiation from the masses. In the changing situation, however, marked by expansion of higher education and globalization of economic activities, education has become a national concern with an international dimension. To cope with this changing situation, countries have been pressurized to ensure and assure quality of higher education at a nationally comparable

Management Information System (MIS) is a subject of the internal controls of an organization, covering the application of people, documents, and technologies by administrators to identify and solve problems. It is a planned system of collecting, processing, storing and disseminating data in the form of information needed to carry out the functions of management

Colleges are of several types. They can be classified into various categories depending on the freedom they enjoy to innovate in curriculum, funding pattern, programme offerings, management structure and their relationship with the parent university.

The **management information system** should include a description and measures as to how the strategic objectives will be achieve.

Correct decision making is possible with the efficient utilization of information

Following key services are provided as part of the Digital Education Systems vertical:

- Digital Classrooms
- Digital University Management System
- Wi-Fi and Network Solutions
- ICT Labs
- Digitization of Records
- Virtual Classrooms

- Online Admission System
- E-content Preparation
- Educational MIS (Management Info Systems) for Schools
- Enables in improving Operational Efficency

In all this competitive ICTs equipped educational institutes there is much more than the quality education that is expected by the students. Students need quality service in all of the required information that is required by them. In order to present their day to day problems, students needs environment that can facilitate them in every way. Different higher educational institutes are continuously striving to achieve this target. For example when a student require his transcripts after courses finalization then it can take more than a month time when there is conventional system installed in educational institutes

OBJECTIVES OF THE STUDY
The present study is based on certain objectives
1. to measure MIS performances in higher education
2. to measure differences in MIS efficiency across different college level
Hypothesis-I: *Well linked ERP is significantly different in opinion across the college types.*

LITERATURE REVIEW
Dr. R. K. Shrivastava, Dr. A.K. Raizada, Mrs. Neeta Saxena (2012) revealed in their paper "Role of e-Governance to strengthen higher education system in India" that the planning for efficient administration of higher educational institutions and to achieve the world class standard it is necessary to have an improved collaboration and access to information by introducing IT in Educational Sector with e-governance as a security for maintaining standard. The e-governance needs security for smooth information flow, best practice database and enhanced capacity for information analysis etc. With the introduction of ICT, electronic governance is an emerging trend to re-invent the way the government works, becoming a new model of governance.. Many problems of higher education system can be solved by the Public Private Partnership model and e-governance.

Prateek Bhanti1, Dr. S. Lehri, Dr. NarendraKumar(2012) in their paper "E-Governance: An Approach towards the Integration of Higher Education System in India" suggested from their study that With the help of e-governance, the process of allocation of fund can be made automated or time bound. All details needed for the approval of funds can be fetched by centralized system. The Centralized database of students will provide better opportunities to the bright students. It can empower the government to plan the development of education system in whole country. It can be useful to analyze the course in heavy demand in a particular area or region.

Dr. Mani Ahmed (2013) in a research paper "Application Of Information Communication Technology (ICT) And Records Keeping In Schools" revealed that the roles that records play in school administration demand that they must be kept prompt, sincerely and safely. This may provide reliable and timely data to educational managers and policy makers.. It was found that lack of proper record keeping, dishonesty, and other malpractices are negatively affecting the accuracy in the field of education and of course in other fields of our national happenings. The ICT is a good means of recording and protecting the records they generate. However, issues such as security, usage, maintenance and lack of qualified personnel to man the ICT centres are hindering the effective utilization of such centres. It is stated in the "ICTs for higher education", a Background paper from the Commonwealth of Learning in UNESCO World Conference on Higher Education that more universities are looking into developing ICTs applications to improve the quality and capacity of management information systems for strategic decision making and policy implementation. It will also help to stimulate and allow smooth flow of information throughout the higher education system and

also help for better and increased access of university services and information through the web. There are many benefits 0f using ICT for university administration, students and instructors.

Ranjeeta Kapoor and Nishtha Kelkar(2013) in their research paper "E-Governance: Higher Education in Rural Area" have revealed that achieving the goals of efficient administration and to meet the challenges of globalization, international competition and modern science and technology development, it is necessary to implement fast and reaction based e governance into education sector. Through e-governance we improve the quality of higher education in rural and backward area. E-governance can create the transparency between the universities, colleges and students. It will bring forth, new concepts of governance, both in terms of needs and responsibilities. They also suggested that many problems of higher education system in rural area can be solved by the Public Private Partnership model and e-governance.

Today, there is an increasing pressure from organizations to supply information for managerial decisions. According to Abubakar et al. (2017) information integration and exchange encourage the creativity and learning within the organization, which has significant impact on organizational performance.

Abubakar et al. (2017) opined that "to increase the success of knowledge management projects and applications, investing in information technology is unavoidable". Rezaei et al. (2016) studied effect of cloud computing systems on the service quality of knowledge management systems. The uploading result of a knowledge management system using the cloud computing technology is also investigated aiming to answer the main question "whether this new knowledge management system can cause a proper result on the quality of services or not?" According to their findings the users observed significant differences after the implementation of the service.

Alzahrani (2017) evaluated the success of a digital library system based on DeLone & McLean's IS Success Model and it has been reported that digital library systems have a strong influence on the quality factors, satisfaction, behavioral intent and deviation of actual use.

RESEARCH DESIGN

This present study is empirical in nature. The empirical data have been collected from customers at the bottom level covered every corner of the state for analyzing the quality assurance in higher education by using an interview schedule.

Primary data from have been collected by using a pre-tested and pre-coded schedule questionnaire through personal one-to-one interview. Further, secondary data have been collected from published and unpublished sources. Survey was chosen as a research technique in this study to investigate and measure the effectiveness of management information system in higher education of Odisha. Questionnaires have been designed and directly delivered to the students of different college level in this study of Odisha to collect data while they are in the different stores. The argument for choosing survey was to provide quick, efficient and accurate means of assessing information about the population.

SAMPLING DESIGN

The samples were carefully selected by the researcher, which were typical and true representatives of the total population. The selection of the samples has been made without prejudice and bias from 300 students of different college level of Odisha. Out of the total only 280 respondents were chosen based on stratified random sampling method from quality assurance in higher education.

3.4.   COLLECTION OF DATA
(i)   Primary Data

In order to fulfill the objectives set, a sample study was undertaken by using a well framed questionnaire that was duly filled in by the respondents. The questionnaire has been prepared to know the quality delivery system efficacy in higher education and to seek the opinion of the students regarding the online education modes in higher education in Odisha

Sample areas: Mostly the sample areas have been taken as from the district of Khordha , Cuttack , Puri and Dhenkanal.

3.5.   PERIOD OF THE STUDY:

It covers mostly from the year 2020-21 to 2021-22, in respect to the primary data market report at lower level. The total students during these periods were interviewed and the data were collected.

3.6.   STATISTICAL TOOLS AND TECHNIQUES:

The reliability of the model has been tested using Cronbach Alpha Coefficient. The corrections of constructs have been carried out to establish the relationships that exist between constructs.

The study was conducted within the state of Odisha by taking students into consideration and data were collected according to the opinion of the students from five type of higher education institution, i.e. government, Private, Self-financing, on e-learning modes covering Technical, General, centre. Out of the 300 students, only 20 cases were found to be invalid from non-response to some questions.

For the present analysis and interpretations cross tabulation of gender type, education, factors have been included in the demographic study to consider the pattern of links and relation to each variable with the effective Management. Further, response wise analysis from the respondents have been analyzed and interpreted through Factoral-test, to find out the quality assurance in the higher education in Odisha.

Profile of the Respondents:

The profiles of the respondents under demographic study are given below;

Gender: It is genially as per general types, it has been of two types and these two types have been included in this study as Male and Female   .

College type: The college type of the respondents are taken into consideration as it is link to different sectors like: government, Private, Self-financing, Distance mode and e-learning centres.

Table- showing Gender of the students

	Frequency	Percent
Male	182	65
Female	98	35
Total	280	100

Sources: Compiled Data

Table- shows the gender category of the students. Here out of total students (280), 271 students (65%) are belonging to male category whereas 98 students (35%) are belonging to female category.

Table- showing the college Type

	Responsesy	Percent
Technical	68	24.3
General	171	61.1
Professional	41	14.6
	280	100.0

Sources: Compiled Data

Table- reported the different college type which has been categorized as Technical, General, and professional teaching hubs Here out of total students (280), 171 students (61.1%) belong to general category whereas only

41 students (14.6%) belong to professional colleges category. Further, 68 students are representing to technical colleges.

Table- showing institution type of the students

Types of HEIs	Responses	Percent
Government Degree	39	13.9
Private Degree	52	18.6
Self-financing Degree	31	11.1
Aided Degree	81	28.9
HS level	77	27.5
Total	280	100.0

Table- reported the education institutes where the students are presently reading and has been categorized as higher secondary, Technical, Graduate, Professional/Master Degree and Any Other. Here out of total (280), maximum 81 students (28.9%) are from aided institutes of the state where as 39 students are from government colleges .

Q. How readily do you come to evaluate yourselves in preferring Quality?
It has been measured through preference type of the respondents, which has been measured in ranks.

Sl. No.	Items	Rank
a.	e-content	1
b.	Joining Information in time	4
c.	E-Library management	3
d.	Network connectivity to all stakeholders	2
e.	E-infra	9
f.	Learning management is well managed	5
g.	Good integrated system	6
h.	e-platform of learning and discussion is well accepted and managed by teachers	8
i.	Multiple system of learning as virtual are most updated	7

Ranking table has been presented - which reported a more emphasis is given to e-learning material(content) i.e. it is assigned as rank 1 followed by Network connectivity and e-library management system. But less importance is given to Mostly learning management is accepted i.e. it is ranked as 9 to e-infra.

FACTOR ANALYSIS

The following factors have been considered for different type of institutions for MIS application in Higher education pattern now a day. The factors significant have been highlighted for this study as the respondents have responded more positively to these considerations than other allied factors. The factors are namely:

        A. Adoption of E-Banking Technology
        B. learning Fit System

C. well E-Platform
D. user friendly E-library management for contents
E. Automation Management is mostly effective
F. Learning Platform Initiatives by the institutes is well accepted
G. Key Learning mechanism by teachers are well oriented
H. Pattern of Exam / Result is well managed on online modes
I. Orientation to students on each event is proper
J. Good integrated system with e- infra

The reliability study along with KMO measurement has been drawn along with Factor analysis.

Management of online learning

Table- Reliability Statistics on Management of online learning

Cronbach's Alpha	N of Items
0.913	10

Sources: Compiled Data

Table- shows the reliability test (Cronbach's Alpha) of "**Management of online learning** " where the result of 10 factor variables reveals 0.0.913 and the reliability of responses can be positively considered as accepted for further analysis.

Table- KMO and Bartlett's Test on Management of online learning

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.924
Bartlett's Test of Sphericity	Approx. Chi-Square	86.966
	df	45
	Sig.	.000

Sources: Compiled Data

Table- shows two tests that indicate the suitability of data on **Management of online learning** for structure detection. The Kaiser-Meyer-Olkin Measure of Adequacy indicates that the proportion of variance in variables of employee alignment that might be caused by underlying nine factors. Further, Bartlett's test of sphericity tests the correlation matrix, which indicates that variables are unrelated and unsuitable for structure detection as the value is 0.924. So, it indicates that factor analysis may be useful with input variables of perception on **Management of online learning**

Table- Communalities on Management of online learning

		Initial	Extraction
A1	Adoption of E- Technology on safety network	1.000	.552
A2	learning Fit System with proper framework	1.000	.536
A3	well E-Platform links	1.000	.812
A4	user friendly E-library management for contents	1.000	.556
A5	Automation Management is mostly effective for all types of use	1.000	.894
A6	Learning Platform Initiatives by the institutes is well accepted	1.000	.515
A7	Key Learning mechanism by teachers are well oriented	1.000	.592

A8	Pattern of Exam / Result is well managed on online modes	1.000	.519
A9	Orientation to students on each event is proper	1.000	.591
A10	Good integrated system with e- infra	1.000	.817

Extraction Method: Principal Component Analysis.
Sources: Compiled Data

Table- highlights that the highest communalities value in the factor of "**Management of online learning** " questions asked to different respondents of Odisha, which are recorded maximum positive value against 'A5: Automation Management is mostly effective for all types of use (0.894)''A3: well E-Platform links. (0.812) A10 Good integrated system with e- infra   (0.817)

Table-   Total Variance Explained on Management of online learning

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.398	13.976	13.976	1.398	13.976	13.976
2	1.189	11.891	25.867	1.189	11.891	25.867
3	1.148	11.483	37.349	1.148	11.483	37.349
4	1.059	10.594	47.943	1.059	10.594	47.943
5	0.985	9.85	57.794			
6	0.975	9.754	67.548			
7	0.884	8.842	76.39			
8	0.833	8.329	84.719			
9	0.777	7.766	92.484			
10	0.752	7.516	100			

Extraction Method: Principal Component Analysis.
Sources: Compiled Data

Table –   indicates total variance analysis for **Management of online learning** with initial Eigen values which shows the variance explained by the initial solution and sum of squared loadings. In the initial Eigen values for factors, those were above one can be taken to further study, out of the total 10 factors. Seven factors have been extracted here as the sum of square values is more than one. Only 48 percent of data seems to be valid in total cumulative variances and rest 52 percent indicate a loss of data in the factor analysis and can be analyzed in the following tables.

Table- Component Matrix on Management of online learning

Factors	1	2	3	4
Adoption of E- Technology on safety network	0.335	0.182	0.053	0.636
learning Fit System with proper framework	0.702	0.356	0.229	0.056
well E-Platform links	-0.337	-0.068	0.319	0.042

user friendly E-library management for contents	0.029	0.628	0.393	0.08
Automation Management is mostly effective for all types of use	-0.476	0.122	0.086	0.213
Learning Platform Initiatives by the institutes is well accepted	0.586	0.115	-0.12	0.21
Key Learning mechanism by teachers are well oriented	0.577	0.019	0.397	0.043
Pattern of Exam / Result is well managed on online modes	0.521	0.202	0.106	0.32
Orientation to students on each event is proper	0.305	-0.239	-0.003	-0.471
Good integrated system with e- infra	0.046	0.486	0.387	-0.479

Sources: Compiled Data

Table – reveals the component wise values those are mostly correlated with the "**Management of online learning** ", which are indicated in the matrix form. Out of ten factors, four factors have been extracted those have more values in both the columns of components. Here the four significant factors are A2 i.e. learning Fit System with proper framework (0.702), A6 i.e. Learning Platform Initiatives by the institutes is well accepted (0.586), A7 i.e. Key Learning mechanism by teachers are well oriented (0.577) and A8 i.e. Pattern of Exam / Result is well managed on online modes (0.521). Although the linear correlation between the components have been measured the related component values, which are higher .and show significant to the solution.

Key Factor on Learning mechanism :
Table- Reliability Statistics on Key Factor on Learning

Cronbach's Alpha	N of Items
0.889	5

Sources: Compiled Data

Table- reported the reliability test (Cronbach's Alpha) of "**Key Factor on Learning**" of the higher education which is performed to check the reliability of questions (5) or items that constitute dimensions. It resulted in an overall score of 0.889 indicating internal consistency of the items and the reliability of responses can be positively considered as accepted for further analysis.

Table- KMO and Bartlett's Test on Key Factor on Learning

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.914
Bartlett's Test of Sphericity	Approx. Chi-Square	156.257
	df	10
	Sig.	.000

Sources: Compiled Data

Table- shows two tests that indicate the suitability of data on **Key Factor on Learning** for structure detection. The Kaiser-Meyer-Olkin Measure of Adequacy indicates that the proportion of variance in variables of learning that might be caused by underlying nine factors. Further, Bartlett's test of sphericity tests the correlation matrix, which indicates that variables are unrelated and unsuitable for structure detection as the value is 0.914. So, it indicates that factor analysis may be useful with input variables of perception on **Key Factor on Learning.**

Table- Communalities on Key Factor on Learning mechanism

		Initial	Extraction
G1	Teachers are connected through MIS	1.000	.914
G2	Questions /answer are possibly solved through MIS	1.000	.915
G3	User friendly and easy linked in system	1.000	.916
G4	Higher quality learning materials are uploaded easily	1.000	.977
G5	Student-teacher meet through MIS are proper on grievance	1.000	.697

Extraction Method: Principal Component Analysis.

Sources: Compiled Data

Table- highlights that the highest communalities value in factor loading of **Key Factor on Learning** are recorded against 'Higher quality learning materials are uploaded easily (0.977) followed by other factors . Out of **five** factors, mostly these can be studied further for their significance.

Table- Total Variance Explained on Key Factor on Learning

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.531	30.620	30.620	1.531	30.620	30.620
2	1.130	22.609	53.230	1.130	22.609	53.230
3	1.061	21.223	74.453	1.061	21.223	74.453
4	.756	15.122	89.575			
5	.521	10.425	100.000			

Extraction Method: Principal Component Analysis.

Sources: Compiled Data

Table – indicates total variance analysis for **Key Factor on Learning** with initial Eigen values which show the variance explained by the initial solution and sum of squared loadings. In the initial Eigen values for factors, those were above one can be taken to further study. Out of the total five factors, three factors have been extracted here as the sum of square values is more than one. Only 74 percent of data seems to be valid in total cumulative variances and rest26 percent indicate a loss of data in the factor analysis and can be analyzed in the following tables.

Table- Component Matrix^a on Key Factor on Learning

		Component		
		1	2	3
B1		0.396	0.256	0.148
	Teachers are connected through MIS			
B2	Questions /answer are possibly solved through MIS	0.814	0.246	-0.125
B3	Transparency and easy linked in examination system	0.033	-0.101	0.919
B4	Higher efficiency as learning maerials are uploaded easily	0.616	-0.47	-0.278
B5	Student-teacher meet through MIS	0.576	-0.404	0.319

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Table – reveals the component wise values those are mostly correlated with the '**Key Factor on Learning** which are indicated in the matrix form. Out of five factors, three factors have been extracted those have more values in both the columns of components. Here the three significant factors are "B2 i.e. Questions /answer are possibly solved through MIS (0.814), B4 i.e. Higher efficiency as learning materials are uploaded easily (0.616) and B5 i.e. Student-teacher meet through MIS (0.576). Although the linear correlation between the components have been measured the related component values, which are higher .and show significant to the solution.

Table- Descriptive on types of college

Types of HEIs	Responses	Mean	Std. Deviation	Std. Error
Government Degree	39	1.9560	1.26064	.09344
Private Degree	52	2.1308	1.31812	.12743
Self-financing Degree	31	2.0556	1.06756	.17793
Aided Degree	81	2.4333	1.59056	.29040
HS level	77	2.0000	1.26612	.11020
Total	280	2.0431	1.28468	.05821

Sources: Compiled Data

The descriptive table- indicate for factors on Learning **management system** which was responded by the students of different college level in Higher education of Odisha. Here, the results of means core revealed above 3.0, means the level of agree with the statement is more strongly linked to satisfaction. From observation, it is marked that in " Common e- infra between the teaching/learning," it is less than the average

score of 3.0 across the college level, which indicates that the students are satisfied as low in the information management system of the higher education.

Table- ANOVA

I3	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.022	4	1.756	1.064	0.002
Within Groups	455.40	276	1.650		
Total	462.422	280			

Sources: Compiled Data

ANOVA table - reported a significant difference across the students of the different MIS in higher education of Odisha, irrespective of their sex and Total number of respondent. Here, the significance value is 0.002 (P≤ 0.05) on "Common e- infra between the types of college on teaching/learning management system " with F-value of 1.064. So, they are significantly different in their opinions and for both the types of MIS in higher education in Odisha the difference may arise.

Table- Gap in Management of MIS

Satisfaction	Frequency	Percent
High gap	36	12.9
Medium	81	28.9
Low	20	7.1
Acceptable	78	27.9
NO-Gap	65	23.2
Total	280	100.0

Sources: Compiled Data

Table- shows the level of gap in management in MIS as opined by the students which is asked in question. Here the level of gap has been categorized as High gap, Medium, Low, Acceptable and O-Gap. Here out of total respondents (students), maximum 81 respondents (28.9%) viewed that the level of gap is medium which exists in the management is acceptable whereas only 20 (7.1%) respondents viewed as Low. Further, 65 respondents opined that the level of gap is zero, 36 opined as high gap in the management in MIS. Hence it is concluded that there is certain amount of gap exists in the management

Table- Satisfaction of students on online management

Satisfaction	Responses	Percent
LOW	115	41.1
MODERATE	98	35.0
HIGH	67	23.9
Total	280	100.0

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Table- reported the level of satisfaction of the students in the management. Here out of total students, maximum 115 students (41.1%) are low satisfied in the management system of the higher education whereas 98 students (35.0%) are s atisfied moderately. Further, 67 respondents (students) opined that they are highly satisfied in the management system of the higher education.

CONCLUSION:

In this chapter, the data on quality assurance in the higher education in Odisha across college level have been analyzed and interpreted by taking different factors into consideration. The factors are Adoption of E-Banking Technology, Education Fit System, E-Platform, E-library, Automation Management, Learning Platform Initiatives, key Factor on Learning, Pattern of Exam / Result and Orientation. For the analysis and interpretation of data, factoral-test, chi-square test, Cronbach's Alpha test, cross tabulation, Anova, descriptive statistics and Regression to find out find out the quality assurance in the higher education in Odisha. The lower satisfaction is marked among 115 students as compared to other type. 65 students reported no gap in the online system as expected out of the total 280.. So the hypotheisis is accepted for all purpose.

1) Abubakar, A. M., Elrehail, H., Alatailat, M., & Elçi, A. (2017). Knowledge management, decision-making style and organizational performance. Journal of Innovation. Advance online publication. doi:10.1016/j.jik.2017.07.003

2) Alzahrani, A., Mahmmud, I., Ramayah, T., Alfarraj, O., & Alalwan, N. (2017). Modelling digital library success using the DeLone and McLean information system success model. Journal of Librarianship and Information Science. Advance online publication. doi:10.1177/0961000617726123

3) Argyris, C. (1991), "Management information systems: the challenge to rationality and emotionality", Management Science, p. 291.

4) Best, D.P. (1988), "The future of information management", International Journal of Information Management, Vol. 8 No. 1, March, pp. 13-24.

5) Eswaran.S and Singh.S, "*Marketing Research, Concepts, Practices and Cases*", Oxford University Press, New Delhi 2006, pp. 314 – 410.

6) Economic Survey, Govt. of Orissa, 2005-12

7) "Evaluation study of SHG-Bank linkage programme in KBK region in Orissa", NABARD, 2004-05.TO 2011-12

8) Gupta, S., Statistcal Methods, S.Chand Publications, NewDelhi, 2004, PP.135-256.

9) Patri.D, "Stastical Methods", Kalyani Publishers, New Delhi, 2003, pp. 752-802.

10) Ross.S.A., "The Determinants of Financial Structure: The incentive – signaling Approach", Bell Journal of Economics, Vol 8, 1977, pp. 23 – 46.

11) Sinha, Sanja, and Prakash Bakshi. 2004. Crossfire. *Small Enterprise Development* 15 (2): 4-7.

12) *Ahmed, M., & Jibia, J. A. (2013). Appication of Information Communication Technology (ICT) and record keeping in schools. International Journal of Innovative Research and Development, 2(1).*

13) DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean Model of information system success: A ten year update. Journal of Management Information System, 19(9), 9-30. doi:10.1080/07421222.2003.11045748

14) *Kapoor, R., & Kelkar, N. (2013). E-Governance:Higher Education in Rural Area., (pp.95-97).*

15) *Alhomod, S., & Shafi, M. M. (2013, April). E-governance in Education:Areas of Impact and proposing a framework to measure the Impact. Turkish online Journal of distance education, 14(2).*

16) *Shrivastava, R. K., Raizada , A. K., & Neeta, S. (2012). Role of e-governance to strengthen higher education system in India. Journal of Research & Method in Education, 4(2), 57-62.*

17)