Original Research Article

Global excellence through adopting of E-governance system in higher education institutions with respect to Mysore region

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A B S T R A C T

E-governance has gained popularity in recent years, with many countries resorting to information communications technology (ICTs) to modernise government, educational sectors, increase efficiency and improve public service delivery and ICTs methodology are also expected to reduce corruption by promoting transparency. Development of a country depends on reflects of that country's education. India has seen massive growth in the higher educational sector. University and colleges have important role for the growth of higher education. During the past three decades there is tremendous increase in the number of colleges under universities in India. E-governance has infinite function in the growth of educational sector. Application of e-governance in education has led to new area of innovations. It enables our educational sector to reach at global level. This Study investigated university and college administrators and the perspective is towards applying E-governance for effective higher education. The objective of this paper is to propose the E- governance system in education institution. We are considering both the primary and secondary data to analyse the current system. The sample used for the study consists of randomly selected lectures and administrative staff from different colleges in and around Mysore city and colleges affiliated to university of Mysore selected by convenience sampling method. Questionnaires were prepared and administered; the responses were collected based on the data the conclusion was draw. The results shows that colleges and university administrators have a positive perspective towards the application of E- governance in their administrative system solving the problem of poor communication between staff and external governing bodies and e-governance helps to achieving effective planning and transparency in higher education institution through universities.

1. Introduction

E-governance must be implemented across different departments and organizations with a wide spectrum of activities and with varying levels of readiness. Achieving the desired results would, therefore, require the fullest political backing, a determined and resolute approach by all organizations and departments of Government as well as active and constructive participation by the public. It would require providing institutional and physical infrastructure for taking e-governance initiatives across our cultural and regional

diversities; more importantly it would require the creation of an environment that would encourage the adoption of ICT. Thus, apart from the technical requirement, success of e-governance initiatives would depend on capacity building and creating awareness within government and outside it.

Coming to Education, it is a discipline that is concerned with methods of teaching and learning in schools or school-

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like environmentsas opposed to various non-formal and informal means of socialization(e.g., rural development projects and education through parent-child relationships). Education can be thought as the transmission of the values and accumulated knowledge of a society. Education is the step by step process that assists learning or acquisition skill, knowledge, beliefs and values. A countries humanity power can show through the better education.

E-governance also have important role for empowerment of education. Electronic governance or "E- governance" is the use of information and communication technologies in organizations to provide user services, to improve work efficiency, transparency and to promote democratic values; as well as a regulatory framework that facilitates information communication initiatives and promoting the knowledge to society. The introduction of e-governance applications in education relates to changes, not only at the level of teaching and learning, but also in carrying out administrative tasks in educational institution. An e-governance system provides numerous benefits over the educational conventional or manual system. The purpose of e-governance is to bring transparency and efficiency in the working of an institution. E- governance is not just about hardware and software computer based system but it includes a whole lot of entities. The successful execution of e-governance system must always exist in the evolution of resolving the need for partners changing needs. E-governance is very essential for the generation of quality information and management of the information for effective decision making.

"Higher education comprises all post-secondary education, training and research guidance at education institutions such as universities that are authorized as institutions of higher education by state authorities"

2. Review of Literature

"Dr. Md. MahmoodAlam,2016 " To gain the optimum impact of E-governance in higher education, certain issues: why E governance implement the university administration, how E-governance implementation could be effective; what the requirements are to achieve effective E-governance implementation need to be addressed [1].

"Charanjeetkaur & Premmehtha, 2014" E- Governance has very important to track their educational functioning such as registration, admission, student information, classes, time table ,salary and expenses, examination, performance, grades, hostels, security and reports. It also open a new ways of debating to the students Imparting education organizing and delivering information and services [2].

3. E-Governance in Universities and College

Universities have important role into their educational functioning. It is an institution for higher education and research which awards academic degree in various discipline. In the present scenario, university should require administrators or leaders in order to achieve their effective job performance. As the world changes, information and knowledge changes rapidly, teaching and learning processes as well as the administrative functions of universities also have to change. These functions are very important to all level of education like primary, secondary higher-level education. The introduction of E-governance in universities relates to changes, not only at the level of teaching and learning, but also in carrying out administrative tasks in universities. College and university may have various requirements which include computerization and management of processes such as admission, registration, student information, classes, attendance, time table, examinations, performance, library, salary and expenses, hostels, security and reports. The application of e governance can improve education quality, expand learning opportunities and make education accessible at everywhere. It is investigated in the level of university and college administrators' perspective towards the application of E-governance for effective higher education in this paper.

4. Environment Surrounding Higher Education

Education and higher education has been based on a western "university model," it has developed in a way that is deeply rooted in the societies of which it is a part. However, the environment surrounding higher education is changing rapidly. The recent rise of a knowledge-based society; social, economic and information globalization; increased demand for higher education; and changes in the political and social environment of developing countries are all deeply connected and are having a significant influence on higher education. Even in India education system is changed and many new initiative has been taken for the development of education system by introducing national education policy 2020.

5. Transition from an Industrial Society to a Knowledge Society

In the latter half of the 20th century we have seen a change from economic growth led by mass production industry based on the established technology to knowledge-based growth in which hard and soft innovation ("creation of knowledge") has a higher economic value. In the past, material and human capital like abundant natural resources and abundant labour were the source of economic growth. However, the application of science and technology and the use of knowledge of the quality of information and management have now become the keys to economic growth. At present, there is a strong demand for the ability to create and apply this knowledge which is essential to economic growth. In order to participate in this kind of

knowledge-based economy, social infrastructure that will contribute to this is necessary. At the national level, access to information must be secured, and promotion of information disclosure and legal protection and management of information like patents and copyrights are needed. Also, higher education institutions must maintain their status as places for the creation of knowledge and have an intimate connection with society to ensure that the new technologies developed can be applied in economic activities.

6. Globalization of Society and Demand of Information Technology

Information technology have been developed enormously in recent years, the movement of people, goods, money and information has become much easier and the globalization of the world economy has accelerated. Already the information technology has caused borders to cease to exist, and if one has access to an information network it is possible to get information from it and share newly created things with many people. In this way, the information revolution has provided rapid access to knowledge and spurred the creation of new knowledge. This also contributes to the production of new wealth and services. The development of information technology has diversified the forms of higher education, and on the one hand is connected to improved quality and expansion to a wider target of students. However, the information technology gap within and among countries is causing a new gap in higher education. At the same time with globalization of information, economic globalization is also proceeding at a rapid pace. Multinational corporations are on one hand in a dominant position. On the other, the economies of developing countries are easily affected by trends in the globalized economy. Because of the declining costs of moving and the rise of the information society, globalization of the labour market is also progressing. While this contributes to human resources exchanges necessary for the development of higher education, it is also connected to the deepening brain drain of the knowledge workers, who are the main source of the creation of knowledge, to a relatively small number of industrialized countries.

7. Rising Demand for Higher Education Sector

On a developing mode and in the recent times, higher education expanded throughout the world remarkably, though there have been different degrees. If one looks at increases in enrolment rates, one sees that the increase for higher education was greater than that for primary and secondary education. From 12 million students in 1960, the number of higher education students rose to 88 million in 1997, an approximate seven- fold increase. Universities in developing countries had been small in scale and extremely intended to train elite persons, but from the time colonies

became independent, higher education underwent rapid expansion. One of the reasons for this rapid expansion was that the demand for human resources who had underdone higher level education or training grew with the increasingly complicated society and economy and the earlier mentioned changes in the social environment. Furthermore, over the past 50 years, developing countries which had put their energy into expanding basic education produced a result whereby the expansion of primary and secondary education led to an increased need for higher education. In other words, as there is a relative increase in the schooling of a country's citizens, the middle class starts to demand a higher level of education in order to secure success in the society. In response to this kind of increasing demand, at a global level, higher education also changed from the elite style prevalent earlier to mass higher education. Also, trends towards greater diversity among students and institutions and towards lifelong education have progressed.

8. Changes in the Political and Social Environment of Developing Countries

The political and social environment of developing countries from the 1990s and the recent international situation were not unconnected with higher education. For example, when the socialist system of the Soviet Union and other Eastern European countries collapsed, in many countries democratic movements increased and issues of governance, civil society and human rights became to be debated. On the other hand, regional conflicts disputes and frequent occurrences of terrorism led to voices demanding peace and multiculturalism. Based on this background, higher education is expected to contribute to the development of a healthy civil society and the cultivation of social cohesion.

9. Statement of the Problem

Higher education has become more complex due to the increase in the number of student's enrolment as well as the number of disciplines being offered under different universities. Hence, college have more complexity to achieve the set goals. This complexity make college and university administrators sometimes to face with more challenge of managing university in a meaningful and productive way. Some of the problems faced include poor communication within external governing bodies, lectures and administrative staff of the college and universities and sometimes effective planning because most of the processes are still carried out manually. Hence, this paper looks at the lectures and administrators perspective towards the application of E-governance in universities and college under higher education sector and there effective and transparency system.

10. Objectives of the Study

1. To check the application of E governance system, helps to maintain good communication between various stakeholders.
2. To check the E governance system influence effective planning and transparency of higher education institution.
3. The present scenario of acceptance of e-governance system in educational institution.
4. To exanimate the present practice in e-governance system in university and colleges.

10.1. Limitation of study

1. The study is limited to Mysore city.
2. The study is restricted to only 50 respondents.
3. The research is limited due to time constrains.

11. Materials and Methods

11.1. Sample and sampling technique

The sample for the study consisted of 50 lectures and administrative staff. Among in and around Mysore city which is affiliated to university of Mysore.

11.2. Research instrument

The paper entirely based on descriptive research. The research instrument was a five-point rating scale of Strongly Agree, Agree, neutral, Disagree and Strongly Disagree.

11.3. Method of data collection

Data were administered and collected by the researcher. The data were collected through primary source and secondary source. The primary data was collected by using questionnaire to the lectures and administrative staffs are selected as sample by using convenience sampling method. Secondary data was collected by various websites, journal, magazine, etc., Approaches for Systematic Planning of Development Projects / Higher Education.

12. Analysis and Discussions Data Presentation

Figure 1 depicts the gender and education distribution of the respondents. It is observed that 50% of the respondents were male while 50% were female. The education of 88% respondents have done their master degree, while 12% respondents had other education qualification like diploma, engineering etc. are working in educational institution in and around Mysore city and the same is shown in below pie chart.
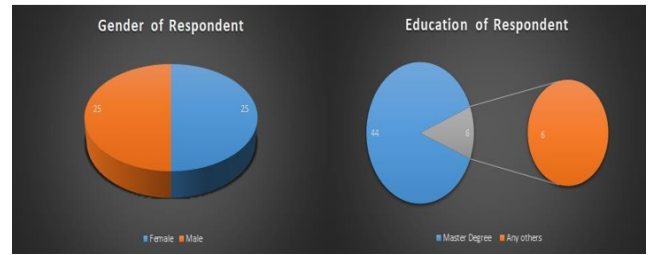

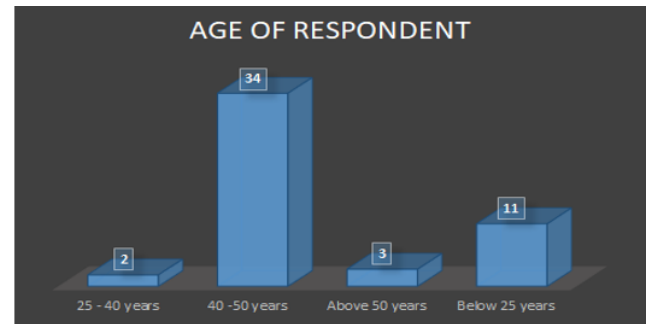**Figure 1:** Gender and education (Source: primary data)

Figure 2: Age (Source: primary data)

12.1. Interpretation

Figure 2 shows the Bar graph on the age of respondent in which 68% responded that they had been in between 40-50 years, while 22% responded that they had been in below 25 years, 6 % had been in above 50 years, 4 % of the respondent in 25-40 years

13. Interpretation

The residuals statistics says that, the difference in Age and Educational background of the respondent have varies in Mean, Median, Mode, and Standard Deviation. So, this difference has positively reflected in the higher education sector to accept the E-governance system in colleges and universities.

The next issue was the respondents' perception towards adoption of E-governance in Higher Education institution general. The multiple responses to simple questions demanding ratings. The analysis was to measure the respondent's perception of the e governance and acceptance in educational institution. The developed countries are characterized by highly acceptance to E-governance system and cumbersome administration procedures. Hence it was necessary to ask these questions to know the respondents' perception towards e- governance and the concept in India.

14. Interpretation

When we are comparing the descriptive statistics, there is no difference in Mean and Standard Deviation in

Table 1: Age

Residuals Statistics of the respondent					
	Minimum	**Maximum**	**Mean**	**SD**	**N**
Predicted Value	1.368	3.288	2.3	0.507	50
Residual	-1.046	0.81	-3.876e-18	0.401	50
Std. Predicted Value	-1.839	1.948	-1.857e-16	1	50
Std. Residual	-2.432	1.956	-0.002	0.987	50

Table 2: Educational

Residuals Statistics of the respondent					
	Minimum	**Maximum**	**Mean**	**SD**	**N**
Predicted Value	2.823	3.543	3.12	0.174	50
Residual	-0.388	0.811	4.721e-18	0.279	50
Std. Predicted Value	-1.714	2.437	-1.139e-15	1	50
Std. Residual	-1.388	2.644	-0.018	0.958	50

Source: primary data

Descriptive

	N	Mean	SD	SE
Age	50	2.3	0.647	0.091
E-governance enabled easy to communicate to each other in the organization	50	4.22	0.864	0.122
E-governance helps to get timely information	50	4.26	0.899	0.127
E-governance helps to get transparent information	50	3.82	1.119	0.158
E-governance can solve the problem of poor communication between the students, staff, parents and government bodies	50	3.8	0.926	0.131
E-governance helps to get accurate information	50	4.1	0.678	0.096
E-governance helps to reduce cost and time consuming	50	4.14	0.7	0.099
E-governance enables easy way for processing for admission, registration and examination process of students	50	4.12	0.773	0.109
E-governance helps to find various solutions for administrative problems	50	3.94	0.89	0.126
The students will give support for the E-governance system in institution	50	3.74	0.986	0.139
E-governance ensure the security of transaction	50	3.96	0.699	0.099
Descriptive	N	Mean	SD	SE
	50	3.12	0.328	0.046
Education				
E-governance enabled easy to communicate to each other in the organization	50	4.22	0.864	0.122
E-governance helps to get timely information	50	4.26	0.899	0.127
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E-governance ensure the security of transaction	50	3.96	0.699	0.099

Source: primary data

acceptance of E-governance system but there is difference between Education and Age. Age parameter has shown a slighter deviation in accepting this system but the same can overcome with relevant trainings or skill enhancement program. Even government has taken some initiative to enhance the skills of the employees in various sectors.

14.1. Correlation analysis

The correlation analysis presented in table measures the relationship between the communication, timely information, transparent information, solving the problem, accurate information, reduce cost and time consuming, easy way for processing, find various solutions, support and security of transaction regarding the E-governance in educational institution. The result shows that E-governance is strong and positively correlated with the educational institution. This is of no surprise since both variables like age and education made them to accept the E- governance system on the same.

1. A-> E-governance enabled easy to communicate to each other in the organization
2. B-> E-governance helps to get timely information
3. C-> E-governance helps to get transparent information
4. D-> E-governance can solve the problem of poor communication between the students, staff, parents and government bodies
5. E-> E-governance helps to get accurate information
6. F-> E-governance helps to reduce cost and time consuming
7. G-> E-governance enables easy way for processing for admission, registration and examination process of students
8. H-> E-governance helps to find various solutions for administrative problems I-> The students will give support for the E-governance system in institution J-> E-governance ensure the security of transaction

Correlation is significant at the 0.01 level (2-tailed). Correlation is significant at the 0.05 level (2-tailed).

15. Interpretation

Age is not correlated to the education of the respondent since both are not directly related to the operation of E-governance to yield in educational institution, but it is very effective in managing certain information and also to boost the higher education sector to compete globally and our nation's educational system becomes stronger. For the issue of acceptance, it can be seen from the Table that it is negatively related to both age of the respondent. The more that the e- governance system influence the overall development of this sector is dependent.

15.1. Regression analysis

At this section, the study has determined the adoption of E-governance system on the profitability of higher educational sector by conducting the regression below where the age of employing a practionists have been omitted due to the fact that the respondents could not provide accurate measure of the variable

16. Interpretation

Regression takes a group of random variables and tries to find a mathematical relationship between the age and educational level of the respondent. This relationship is typically in the form of a straight line (linear regression) that best approximates all the individual data points. In multiple regression, the separate variables are differentiated by using numbers with subscripts. In this study the respondent are ready to accept the E-governance system in higher educational institution and majority of them are aged but that is not constrained they are ready to adopt it. [3,4]

16.1. ANOVA

Analysis of variance (ANOVA) is a statistical technique that is used to check if the means of two or more groups are significantly different from each other. ANOVA checks the impact of one or more factors by comparing the means of different samples. Another measure to compare the samples is called a t-test. When we have only two samples, t-test and ANOVA give the same results. However, using a t-test would not be reliable in cases where there are more than 2 samples. If we conduct multiple t-tests for comparing more than two samples, it will have a compounded effect on the error rate of the result.

17. Interpretation

This model gives a detailed description about the E-governance system, here Age is not a barrier to accept the E-governance system in educational institute. In colleges or university, the employees are well educated but poor in technology but proper skill enhancement program will increase the potential of the employee and motivate them to accept this concept and it will helps to compete with global education system for positive output. [1,2]

17.1. Coefficient of variance

The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean. It is generally expressed as a percentage. Without units, it allows for comparison between distributions of values whose scales of measurement are not comparable.

When we are presented with estimated values, the CV relates the standard deviation of the estimate to the value

Pearson Correlations

E-governance		A	B	C	D	E	F	G	H	I	J
A	Pearson's r	—									
	p-value	—									
B	Pearson's r	0.765	—								
	p-value	< .001	—								
C	Pearson's r	0.422	0.615	—							
	p-value	0.002	< .001	—							
D	Pearson's r	0.643	0.579	0.693	—						
	p-value	< .001	< .001	< .001	—						
E	Pearson's r	0.45	0.559	0.778	0.683	—					—
	p-value	0.001	< .001	< .001	< .001	—					
F	Pearson's r	0.42	0.654	0.528	0.611	0.744	—				
	p-value	0.002	< .001	< .001	< .001	< .001	—				
G	Pearson's r	0.326	0.6	0.379	0.576	0.6	0.911	—			
	p-value	0.021	< .001	0.007	< .001	< .001	< .001	—			
H	Pearson's r	0.495	0.581	0.296	0.604	0.349	0.636	0.634	—		
	p-value	< .001	< .001	0.037	< .001	0.013	< .001	< .001	—		
I	Pearson's r	0.164	0.331	0.364	0.456	0.284	0.468	0.47	0.703		
	p-value	0.254	0.019	0.009	< .001	0.046	< .001	< .001	< .001		
J	Pearson's r	0.454	0.407	0.643	0.745	0.655	0.512	0.387	0.62	0.518	—
	p-value	< .001	0.003	< .001	< .001	< .001	< .001	0.006	< .001	< .001	—

Source: primary data

Table 3: Age

Model Summary

Model	R	R^2	Adjusted R^2	R^2 Change	F Change
1	0.784	0.615	0.516	0.615	6.223

Table 4: Educational

Model Summary

Model	R	R^2	Adjusted R^2	R^2 Change	F Change
1	0.529	0.28	0.095	0.28	1.513

Source: primary data

Table 5: Age

ANOVA

Model		Sum of Squares	Df	Mean Square	F	P
	Regression	12.602	10	1.26	6.223	< .001
1	Residual	7.898	39	0.203		
	Total	20.5	49			

Table 6: Educational

ANOVA

Model		Sum of Squares	Df	Mean Square	F	p
	Regression	1.476	10	0.148	1.513	0.171
1	Residual	3.804	39	0.098		
	Total	5.28	49			

Source: primary data

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics Tolerance	VIF
	(Intercept)	2.853	0.544		5.241	< .00 1		
	E-governance enabled easy to communicate to each other in the organization	-0.382	0.184	-0.51	-2.071	0.045	0.163	6.133
1	E-governance helps to get timely information	0.449	0.211	0.624	2.125	0.04	0.115	8.725
	E-governance helps to get transparent information	-0.085	0.159	-0.147	-0.532	0.598	0.13	7.673
	E-governance can solve the problem of poor communication between the students, staff, parents and government bodies	-0.138	0.177	-0.198	-0.778	0.441	0.153	6.525
	E-governance helps to accurate get information	0.587	0.234	0.615	2.51	0.016	0.165	6.078
	E-governance helps to reduce cost and time consuming	-0.922	0.306	-0.998	-3.016	0.004	0.09	11.09
	E-governance enables easy way for processing for admission, registration and examination process of students	0.154	0.271	0.184	0.568	0.574	0.094	10.64
	E-governance helps to find various solutions for administrative problems	0.928	0.179	1.278	5.199	< .00 1	0.164	6.114
	The students will give support for the E-governance system in institution	-0.429	0.105	-0.654	-4.077	< .00 1	0.384	2.602
	E-governance ensure security the of transaction	-0.324	0.195	-0.35	-1.663	0.104	0.223	4.488

Education Coefficients

Model	Unstandar dized	Standard Error	Standardi zed	t	p	Collinearity Statistics Tolera nce	VIF
(Intercept)	3.357	0.378		8.885	< .00 1		
E-governance enabled easy to communicate to each other in the organization	0.261	0.128	0.688	2.044	0.048	0.163	6.133
E-governance helps to get timely information	-0.265	0.147	-0.727	-1.811	0.078	0.115	8.725
E-governance 1 helps to get transparent information	0.358	0.11	1.221	3.243	0.002	0.13	7.673
E-governance helps to reduce cost and time consuming	-0.199	0.212	-0.425	-0.939	0.354	0.09	11.09
E-governance enables easy way for processing for admission, registration and examination process of students	0.271	0.188	0.637	1.437	0.159	0.094	10.64
E-governance helps to find various solutions for administrative problems	0.083	0.124	0.226	0.673	0.505	0.164	6.114
The students will give support for the E-governance system in institution	0.007	0.073	0.02	0.093	0.927	0.384	2.602
E-governance ensure the security of transaction	-0.104	0.135	-0.222	-0.77	0.446	0.223	4.488

Source: primary data

of this estimate. The lower the value of the coefficient of variation, the more precise the estimate.

18. Interpretation

As per the result of correlation variance, the standard deviation is positively reflected in the education than age. So, education has a prominent role in acceptance of E-governance system in the education institutions, because majority of the respondent are completed masters and well educated. So, education has a strong hold on accepting E-governance system but age is not a considerable factor.

19. Conclusion

E-governance enhances the relationship between Students, Colleges, and University. Thus, E-governance not only provides information about various activities of a Government but also involves others to participate in various decision making process. During the last few years, many initiatives have been taken by different state and central governments in India for using IT (Information Technology) as a tool in the functioning of Colleges and Universities for the benefit of the students to enhance the skills by providing better services. In this paper we have made an attempt to summarize key areas which should be focused on the educational system of the country, when a country wishes to position itself in E-governance in a comprehensive way. This is a change, a transition in present way of the education system with online platform which helps to compete globally.[5–7] Co-operation from students, lecturers, staffs etc. will contribute to the smoother transition. Even current political system has also taken many initiatives for the adoption of E - governance system in our country by launching the Digital India, Make in India and other concepts. The government has introduced many programs in educational sector to strengthen the stream; India is likely to emerge as a leader in E-governance. In spite of poor infrastructure, poverty, illiteracy, language dominance and all the other reasons, India has many award winning e-governance projects. Effective promotion of schemes and also training by the colleges, university and government bodies will also be a boosting the quality services to their users which means there is huge potential for the development of e-governance in various sectors.

Therefore we can say that e-governance is the key to the development of education system for the developing countries like India to minimize corruption, provides efficient and effective and quality services to their citizens.

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None.

21. Conflict of Interest

None.

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