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Governmental Initiative of DigiLocker: An Empirical Study with respect to Undergraduate College Students

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Abstract: Digital Governance refers to Information and Communication (ICT) enabled route to better governance. It improves the quality of administration by facilitating procedures by making it more efficient and user-friendly. One of the schemes initiated by GOI that will bring qualitative change in the life of an average citizen especially the youth is DigiLocker. This is one of the flagship scheme launched by the GOI recently. The scheme has an inherent potential to give an opportunity to a large section of population with a paradigm shift in ushering in e-governance. DigiLocker, 'a sharable private space on a public cloud' where an individual can store the documents issued by governmental departments, educational institutions and other agencies, and where they can have an easy online access. The broad objective is to digitally empower the society and have the ease of functioning in a knowledge economy.

Keywords: Technology, Digilocker, Information Technology, digital transformation, youth, empowerment

I. INTRODUCTION

Information Technology has an immense potential for the future growth prospects of India meeting the needs of government, business, schools and colleges, healthcare etc. along with the private enterprises. The present world is increasingly becoming technology efficient and so, is our youth. The young college going generation is totally tech-savvy and knows how to use the new apps and software to make their day-to-day work easy. Digital Movement in a country definitely is instrumental in its growth and development. A number of initiatives in Information Technology sector in India have nurtured innovation, promoted delivery of e-Services to citizens and changed drastically the functioning of business and government and its departments.

The Government of India (GOI) launched Digital India Movement in 2015 to bring a complete digital transformation in the working style of the citizens of India and that of the various departments of GOI. Digital India (DI) Programme is an umbrella programme to chart India's course to digitally empowered society. The government services and other initiatives are made available to the citizens at affordable costs. And surely, digital transformation of such sort with such schemes was the need of the hour. On being transformative, the idea was to realize IT (Indian Talent) + IT (Information Technology) = IT (India Tomorrow) (Srivastava, Dr. Shekhar 2017). Many schemes were launched in diverse arenas like, Education, Healthcare, Panchayat etc. for managing documents so that varied spheres of the ecosystem are covered under these schemes that aim at the digital transformation of the country. These technologies can serve to facilitate different ends including the delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management (Rao, Dr. N.Mareswara 2016).

DigiLocker is one of the key schemes launched by the GOI under the umbrella of Digital India. The purpose of the DigiLocker initiative was:

- 1) For the Resident (individual who has downloaded the app and is the user of the service) – He would be able to save lot of documents digitally and he does not need to carry them in physical form if he goes for a job interview or college admission or to make his new passport.
- 2) There is no need to print and submit so many physical copies at multiple places wherever you want to submit it. Firstly, this saves the environment because we are not using paper for printing multiple copies and secondly, the chance of your personal data leak is minimized.
- 3) The authority where you submit your document needs to verify the authenticity of the document that takes effort and resources. With the use of DigiLocker, this verification is not needed because we are downloading the document directly from the respective and reliable authority.

GOI expected that DigiLocker will make it easy for the residents to receive services by saving time and effort as their documents will now be available anytime, anywhere and can be shared electronically (<https://blog.mygov.in/digital-locker-scheduled-to-be-launched-on-1st-july-2015-by-the-hon-prime-minister/>).

The main technology components of the DigiLocker system are:

- 1) **Repository:** Collection of e-documents that is exposed via standard APIs for secure, real-time access.
- 2) **Access Gateway:** Secure online mechanism for requesters to access e-documents from various repositories in real-time using URI (Uniform Resource Indicator).
- 3) **DigiLocker Portal:** Dedicated cloud based personal storage space, linked to each resident's Aadhaar for storing e-documents, or URIs of e-documents (www.digilocker.gov.in).

When the scheme was launched, the citizens were excited and enthusiastic about using the new app and the idea of having all your important documents at your fingertip seemed to appeal many especially youth.

But soon after the launch of the scheme, the following challenges surfaced:

- **IT Literacy** – It is a fact that just the launch of a good scheme, however good does not guarantee its success. It is imperative that the prerequisites required for the actual implementation of an initiative are well taken care of. In this case, the most important prerequisite for using the DigiLocker is IT Literacy and it is found that still is an elusive phenomena in both, urban as well as rural areas. The government should have taken care to provide basic IT knowledge at the mass level along with making it a part of the curriculum at the school and college levels. The rural and semi-urban localities should be targeted. The assistance of various IT Companies can be sought and the Companies in pursuance of Corporate Social Responsibility (CSR) can come forward to groom especially the youth in this arena. The IT empowered youth will definitely comprehend the benefits accruing from this flagship scheme of the government and will be encouraged to use it.
- **Publicity** - The scheme is not well publicized among the citizens. There are many IT literate citizens/professionals who could have taken advantage of the app but due to hardly any publicity of the initiative, they don't seem to have any knowledge about the DigiLocker scheme. Too many schemes with little follow-up are the drawback and the plethora of schemes tend to confuse the literate, semi-literate and illiterate citizens of the country.
- **Inclusiveness** – Infact, many initiatives like these have not been successful in bringing inclusiveness. For the people in the rural areas who do not have access even to the basic education, certificates or driving license; providing them a facility to save important documents when they don't have many documents to save really does not attract them. However, if they are told that such a repository of personal information would be helpful to them in many ways where they are required to give such documents like, in buying and selling of property etc., they would understand the real significance of the scheme and readily come forward for the same.
- **Availability of the Facility at Individual and Institutional Ends** - The main issue is that the scheme has to be adopted both at the individual and institutional ends and both the parties should be registered for the same. The GOI should aim at making the use of DigiLocker compulsory for the governmental educational institutes and other governmental agencies like, Licensing Authority, Banks etc. and other services that are availed commonly by the people to ensure success of the scheme.
- **Security** – According to many studies (*Hernandez, JMC & Mazzon, JA, 2007*), privacy and security issues have proven important barriers to the use of online services. If our personal data is stored at a place, there should be adequate safeguards that these cannot be misused. This faith would really encourage more and more takers for the same.

II. REVIEW OF LITERATURE

Research papers, e-resources and literary works were studied and referenced to understand the key features of DigiLocker. The purpose and usability of the scheme was understood, and then the aspects of DigiLocker that needs to be studied were identified.

D., Dr. Uthira published her paper namely, User Acceptance of DigiLocker System Based on the Theory of Technology Acceptance Model. In her paper she has tried to determine if the user acceptance and user satisfaction of DigiLocker can be explained using TAM (Technology Acceptance Model) theory. TAM is a model that shows how users accept and use a technology. In TAM, the main determinants of user's acceptance of new technology are perceived usefulness (PU) and perceived ease of use (PEU) (D., Dr. Uthira, 2018). She concluded that while the ease of use and usefulness go hand in hand, it is their combined effect that drives their behavioral control, which ultimately has an effect on the satisfaction levels.

Bharati, Jyotsana Singh and Garg, Arpit in their research paper namely, How Useful Is Digital Locker? An Empirical Study In Indian Context have tried to understand the usefulness of DigiLocker for the citizens of India by taking into consideration four independent factors - Perceived Ease of Use, Variety of Services, Social Influence and Perceived Risk. While perceived ease of use and variety of services has positive impact on the usefulness of Digital Locker, Social Influence and Perceived Risk did not have strong influence on usefulness of digital locker (Bharati, Jyotsana Singh & Garg, Arpit, 2016). They have suggested studying

usefulness of DigiLocker on the specific age groups. They have also suggested reviewing the risk and security of DigiLocker, which gets clarified only with time and usage by the citizens.

Arvind. P.P, Vitthalrao., M. O. and Mukund., J. M. have explained the working and benefits of DigiLocker in their research paper namely, Digi Locker: Ambitious Aspect of Digital India Programme. They have concluded that usage, success and problems faced by the scheme must be monitored time-to-time to make it successful (Arvind, P. P., Vitthalrao, M. P., & Mukund, J. M., 2015). So, there is need of a study that will try to monitor the usage of DigiLocker among the citizens.

Roa, Dr. N. Mareswara published the research paper titled, Citizen Participation in Digital India – A Study in Andhra Pradesh. The researcher has tried to analyze the usage of seven apps of Digital India - OnlineRTI – File RTI Online, MyGov – Access Government Initiatives, MEAIndia – Know Everything About Indian Missions Abroad, Narendra Modi App – Connect with the PM, GARV Grameen Vidyutikaran App– Transparency in Rural Electrification, mPassport Seva App – Anytime Access to Passport Services, mKavach App – Comprehensive Mobile Security Solution among the citizens of Andhra Pradesh. The scale taken for the study was ‘Having Knowledge, No Knowledge and Not Responded’. He concluded that Digital India is a precondition for good and transparent administration with e-democracy backed by e-government acting as the prime mover for the economic growth. The governmental role in Digital India lies in developing high capacity communications infrastructure, linking communities locally and globally and enhancing potential of individual through knowledge sharing, developing self confidence and self-respect (Rao, Dr. N. Mareswara, 2016). One thing to notice here is that there are a lot of factors involved in concluding that the citizens are using a scheme and are satisfied with it. We cannot just conclude on a positive response on three-scale question that the scheme is a success or not. Also knowing about a scheme does not guarantee usage of scheme.

Porey, Dr. Jayant D. has suggested in his paper titled, Digital Locker System in India, that perceived ease of use and variety of services has positive impact on the usefulness of Digital Locker, Social Influence can play an important role in creating more awareness among the citizen of India but it did not have strong influence on usefulness of digital locker (Porey, Jayant D., 2016). So, the GOI must implement an advertising/publicity campaign about Digital India schemes for the benefit of the citizens.

Kaur, Harpreet (2016) has elucidated the policy initiatives undertaken by GOI to provide various governmental services electronically through integrated and progressive schemes, which would go a long run to ensure efficiency and transparency. She also cautions that ensuring reliability of such services is imperative for the success of the schemes introduced under the umbrella of Digital India (DI) platform.

As part of this paper we will try to focus on the youth of today who are going to be the future of tomorrow. Till now no empirical study is done “only” on the college students.

We will try to analyze if use of DigiLocker by the Undergraduate College students are dependent on the following:

- a) Age of the Resident
- b) Gender of the Resident
- c) School from where they have done their schooling (Private/Government)
- d) College from where they are pursuing their Undergraduate Degree
- e) Type of Course they are pursuing

Objectives of the Study

After thorough analysis of existing material with respect to the subject matter in concern, the research problem is identified as:

- 1) One objective of the research paper is that if the Undergraduate College Students in and around Delhi have awareness of the scheme of DigiLocker introduced by the government as part of the DI scheme and are they motivated to use DigiLocker. We would like to calculate if the usage of DigiLocker is dependent on the following:
 - a. Age of the Resident
 - b. Gender of the Resident
 - c. School from where they have done their schooling (Private/Government)
 - d. College from where they are pursuing their Undergraduate Degree
 - e. Type of Course they are pursuing
- 2) We would also analyze-
 - a. The type of documents undergraduate college students maintain in their DigiLocker
 - b. Acceptability of DigiLocker documents in various undergraduate Institutes
 - c. How secure the students feel DigiLocker is?
 - d. If students find DigiLocker easy to use or not?
- 3) Our aim is to make suggestions to make DigiLocker more usable among the young students.

Hypothesis

In pursuance of the above objective, the following hypotheses were formulated for testing:

H₀₁: There is no significant difference for usage of DigiLocker on the basis of Age of the respondents.

H₁: There is a significant difference for usage of DigiLocker on the basis of Age of the respondents.

H₀₂: There is no significant difference for usage of DigiLocker on the basis of Gender of the respondents.

H₂: There is a significant difference for usage of DigiLocker on the basis of Gender of the respondents.

H₀₃: There is no significant difference for usage of DigiLocker on the basis of School (Private/Government) from where the respondent has done his schooling.

H₃: There is a significant difference for usage of DigiLocker on the basis of School (Private/Government) from where the respondent has done his schooling.

H₀₄: There is no significant difference based on the college from where they are pursuing their Undergraduate Degree.

H₄: There is a significant difference based on the college from where they are pursuing their Undergraduate Degree.

H₀₅: There is no significant difference for usage of DigiLocker on the basis of Type of course the respondent is pursuing.

H₅: There is a significant difference for usage of DigiLocker on the basis of Type of course the respondent is pursuing.

III. RESEARCH METHODOLOGY

The study was conducted on the primary data collected from 226 under graduate college students from various constituent colleges of Universities of Delhi. A questionnaire was circulated to the respondents in the form of a Google form. The questionnaire was divided into two parts. Part one of the questionnaire collected details about the respondent like, age, school, gender, college, university and course they are studying. Part two collected details about the usage of DigiLocker by the student.

SPSS Statistics 21 is used for analysis of the responses.

Interpretation

Table 1: Demographic Analysis

Variable	Category	Sample	Percentage
Age	16-17 Years – Ist Year Students	84	37.17%
	17-18 Years - IInd Year Students	67	29.64%
	18-19 Years - IIIrd Year Student	75	33.18%
Gender	Male	117	51.77%
	Female	109	48.23%
Type of School	Private	118	52.21%
	Government	108	47.79%
Type of Course pursuing	Technical	64	28.31%
	Professional	52	23.01%
	Hons.	58	28.31%
	Pass/General	52	23.01%
College	College A	74	32.74%
	College B	74	32.74%
	College C	78	34.51%

It is clear from Table 1 that out of 226 students, 37.17% students are studying in their first year of graduation and thus must have taken admission this year only in their respective college. There are 51.77% male students and 48.23 % female students. 52.21 % of students have done their schooling from private schools. There are 28.31% of students who are pursuing a technical course (B. Tech./B.Sc. (Computer Sc.)/etc.), 23.01% are pursuing a professional course (BBE/BMS/etc.).

Table 2: Data Analysis between Knowledge about DigiLocker and Variables

Variable	F-Value	Significance
Age	7.735	0.001
Gender	1.532	0.217
Type of School	6.113	0.014
Type of course pursuing	6.875	0.029
College of Graduation	1.239	0.143

Hypothesis H₀₁ proposes that there is no significant difference for usage of DigiLocker on the basis of Age of the respondents. Significance value 0.001 indicates that the Null Hypothesis H₀₁ is rejected. Thus, we conclude that knowledge about DigiLocker is indeed dependent on Age of the respondent.

Hypothesis H₀₂ proposes that there is no significant difference for usage of DigiLocker on the basis of Gender of the respondents. Significance value 0.217 indicates that the Null Hypothesis H₀₂ is accepted. Thus, there is no significant difference for usage of DigiLocker on the basis of Gender of the respondents.

Hypothesis H₀₃ proposes that there is no significant difference for usage of DigiLocker on the basis of Type of school from where the respondent has done his schooling (Govt. School/Private school). Significance value 0.014 indicates that the Hypothesis H₀₃ is rejected. Thus, knowledge about DigiLocker is indeed dependent on the basis of type of school attended.

Hypothesis H₀₄ proposes that there is no significant difference based on the Type of the Course the respondent is pursuing. Significance value 0.029 indicates that the Null Hypothesis H₀₄ is rejected. Thus, knowledge about DigiLocker is indeed dependent on the Type of Course the respondent is pursuing.

Hypothesis H₀₅ proposes that there is no significant difference for usage of DigiLocker on the basis of College from where the respondent is pursuing graduation. Significance value 0.143 indicates that the Null Hypothesis H₀₅ is accepted. Thus, there is indeed no significant difference for usage of DigiLocker on the basis of College from where the respondent is pursuing graduation.

Thus, we conclude that "Knowledge about DigiLocker Scheme" is dependent on age of the respondent, whether he is in his first, second or third year of graduation, from where the respondent has done his schooling and the type of course he is pursuing. We also conclude that knowledge about DigiLocker Scheme is independent of Gender of the respondent and the college from where he is pursuing Graduation.

Frequency Analysis

- 1) **Age** – 60% of the Final Year undergraduate respondents want to use DigiLocker at the time of seeking job after their graduation for the ease of handling documents. So, the government must take initiatives for the wider usage of DigiLocker documents in the industry too. This will facilitate the students during their job interviews, as they will not have to submit multiple physical copies of their documents in all the firms they want to apply to.

Another thing to note here is that 80% of the First Year undergraduate respondents said that they did not have knowledge that a scheme namely, DigiLocker could be used wherein their mark sheets and other documents could be used in the Educational Institutes/Universities they wanted to apply to.

Another aspect was at the end of the educational institutions that have not come forward to show their readiness and preparedness to use a progressive scheme launched. So, the GOI needs gearing up with action related formulas. Even after 3 years of launch of the scheme, the scheme has not been implemented in the true earnest. The youth does not have awareness of the futuristic scheme of the GOI. The readiness to accept and endorse comes later. At the other end, even the Government-run Institutes do not have system of accepting DigiLocker mark sheet that would definitely ease out many of essential functionalities. This definitely calls for strict policy enforcement if the benefit of the scheme has to accrue in the true earnest.

- 2) **Documents Uploaded** -75% of the respondents maintained their Driving License in DigiLocker. Driving License is the most commonly used document by the citizens even they have completed their education. Till now DigiLocker driving License was not acceptable at a lot of places, not even by the traffic policeman.

But now Ministry of Road Transport has issued a notification on 9 August 2018 that digital DL, RCs from DigiLocker are "legally recognized at par with original docs as per IT Act 2000" and "valid under Motor Vehicles Act 1988, to be treated at par with certificates issued by transport authorities".

- 3) **How many students used DigiLocker for taking admission?** – Only 15% of the respondents said that they used the DigiLocker documents during their admission process in the college.

This is because a lot of educational institutes have not started accepting the DigiLocker marksheets and certificates.

- 4) **Security** - 63% of the respondents felt that DigiLocker is not secure. We can further analyze if security and usage of DigiLocker are related?
- 5) **Ease of Use** - 69% of the respondents felt that DigiLocker is easy to use. We can further analyze if ease of use is related to type of course the student is studying. The User Interface of DigiLocker is quite simple and the steps to upload our documents and then retrieving them later are very easy. But we can further study that if all the students found the steps easy or only students of Technical/Professional courses.

IV. CONCLUSION

Information and Communication Technology (ICT) is basically a technical tool that requires qualitative and quantitative increase in various new applications devised. Only then, ICT can play a decisive role bringing in new opportunities for the people. The human condition is the most fundamental condition for e-governance initiatives to become a reality. "The human factor includes such capacities as individual skills and awareness and such aspects as individual mindset and motivation, acceptability of new technologies, social capital, trust and legitimacy".

- 1) A wider usage of DigiLocker will facilitate the students during their job interviews, as they will not have to submit multiple physical copies of their documents in all the firms they want to apply to.
- 2) A large number of undergraduate students said that they did not have knowledge that a scheme namely, DigiLocker could be used wherein their mark sheets and other documents could be used in the Educational Institutes/Universities they wanted to apply to.
- 3) Another aspect was at the receiving end, i.e., at the level of educational institutions that have not come forward to show their readiness and preparedness to use a progressive scheme launched.

Suggestions

To convert the DigiLocker Scheme into success, its user-centricity has to be increased. The foremost requirement is of course, the need to improve e-skills, e-learning and broadly, e-literacy. The digital gap should be reduced. DigiLocker Scheme should be linked to e-sign framework that enables one to digitally sign a document online using Aadhaar authentication.

A few suggestions are mentioned below:

1. One of the main problems faced by many who wanted to use the DigiLocker is that the Agency where one wants to submit the digital documents too must have been registered with DigiLocker to request for the documents of the resident. For e.g., if you want to submit your educational certificates for the college admission or job interview, then the respective college or the firm in which you want to apply must be registered with DigiLocker to request for your certificates.
2. If even after 3 years of launch of the scheme, the scheme has not been implemented in the true earnest. The use of DigiLocker is a futuristic scheme that would make the submission of essential documents at required place paperless, quick and transparent. With so many cases of fake mark sheets and forging of other documents, the scheme would be facilitating transparency and serve a check against the use of cases of forgery. Moreover, ease of handling important documents would be an added advantage.
3. Of course, it is important that adequate security provisions should be in-built to keep the information of the users safe stored in the cyber space and prevent from any misuse. For this National Informatics Centre (NIC) should be strengthened as Central Certification Agency for the government organizations to issue digital certificates for ensuring security, integrity, authenticity and non-repudiation of information transactions and prevent impersonification and other frauds (Kaur, Harpreet, 2016).
4. The GOI needs gearing up with action related formulas and other stakeholders should gear up for use of the scheme that is far from reality. Hence, the scheme seems to be working on paper but needs a lot of action before it turns into reality.
5. Active campaigning/publicity of DigiLocker scheme is the need of the hour, the target audience being youth of today.
6. DigiLocker App for smart phones for the ease of it - Digital India prepares the country for becoming a knowledge economy and a digitally empowered society. People would use technology when it provides value addition to them and would enhance quality in their lives and such schemes, as DigiLocker minimizing the use of physical documents needs to be strengthened and expanded, which would ultimately substantially improve the citizen's interface and lives. The sharing of e-documents should across the agencies should be through registered repositories to minimize the chances of any misuse or mishandling. In short, online repository of your private information like, certificates, educational degrees, identity documents etc. should be made mandatory and should be activated both at the user end and at the receiver's end.

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