E-Learning Empowerment In India A Likert Scale Technique

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Abstract—*There is rapid development in the domain of e-learning in the last ten years in India. Infact it has become crucial for some individuals and are actively participating and learning new subjects in the contemporary India. It is the accessibility of ICT that has helped in the progress of the e-learning platforms. It has become the integrating medium for individuals in learning and gaining knowledge irrespective of the space and time. However, one will observe that simply learning itself is not sufficient in the initiative taken by the Digital India programme. One needs to empower the individuals to use the e-learning sites and platforms. Thus, there is a need to know the e-learning empowerment status of the individuals' also. This is possible if there is a technique or an instrument which helps one to measure the empowerment. One is not talking about standardizing the formula or applying it in the environment. Tis will certainly raise the question s and it is wastage of time. Consequently, a formula or technique will be introduced in the research paper based on the LIKERT SCALE. An attempt will be made to give the definition of e-learning Empowerment. The details of the scale and its importance will be made during the course of the discussion in the paper.*

Introduction

The major initiatives of Digital India are the digital awareness programmes and the economic status of the knowledge. With such programmes, our country will be prepared for the following:

a) Enhancing and promoting of the e-learning programmes

b) Awareness of the new topics

c) Learning different subjects

d) Introduction to new topics

e) Promotion of the reading habits

f) Advancement of the writing skills

g) Meeting new individuals

h) Discovering new cultures

i) Understanding of the rituals and traditions

j) Collaborations and Associations with the other learning and learnt members

In order to make it a big success of the e-learning platforms, it is necessary to know more about them. Subsequently, growth has been observed in

1. Access to the Internet

2. Competency towards the technology of Information and Communication

3. Knowledge of the Computers

4. Basic Skills needed by the individuals to operate the computers

5. Availability of the computers to individuals and in various locations

With the knowledge of Computers, one can see the changes around us in varied forms:

- Playing Online games

- Writing Blogs

- Downloading Music

- Buying and selling of different things

- Socializing with one another

- Communicating with one another

- Maintaining accounts and records

Apart from all these things, one main thing that underlies is the KNOWLEDGE of various subjects and the introduction of the new subjects. The knowledge is gained through rigorous and continuous learning on daily or on regular basis by the individual/s. One more change that is observed in the contemporary societies is the NEW FORM OF LEARNING. This is called the e-Learning mode or learning through mobile phones or computers. Consequently, there is an immediate need of EMPOWERMENT OF e-LEARNING in the society. The analysis of this clause reveals the presence of three words:

1. Empowerment

2. E-learning

3. Empowerment of e-learning

Various definitions of EMPOWERMENT are:

1.Authority or power given to someone to do something[W1].2.The process of becoming stronger and more confident, especially in controlling one's life and claiming one's rights [W2].3.A management practice of sharing information, rewards, and power with employees so that they can take initiative and make decisions to solve problems and improve service and performance [W3].4.Empowerment is based on the idea that giving employees skills, resources, authority, opportunity, motivation, as well holding them responsible and accountable for outcomes of their actions, will contribute to their competence and satisfaction[W4].5.Warrant, commission, license, and qualify [W5].6.Authority or power given to someone to do something [W6].7.The term empowerment refers to measures designed to increase the degree of autonomy and self-determination in people and in communities in order to enable them to represent their interests in a responsible and self-determined way, acting on their own authority. Empowerment as action refers both to the process of self-empowerment and to professional support of people, which enables them to overcome their sense of powerlessness and lack of influence, and to recognize and use their resources [W6].8.In the field of citizenship education and democratic education, empowerment is seen as a tool to increase the responsibility of the citizen. Empowerment is a key concept in the discourse on promoting civic engagement. Empowerment as a concept, which is characterized by a move away from a deficit-oriented towards a more strength-oriented perception, can increasingly be found in management concepts, as well as in the areas of continuing education and self-help [W7].9.Empowerment is defined as the development of the information, skills and abilities that are necessary for individuals to control their own activities [15]10.Empowerment is the process of challenging existing power relations and gaining greater control over the sources of power. Empowerment is a process of awareness and capacity building leading to greater participation to greater decision making power and control to transformative action [16].11.Empowerment is the expansion of choice and action of an individual to shape one's own life [17].

Various definitions of e-Learning:

1.learning conducted via electronic media, typically on the Internet[w6].2.A learning system based on formalized teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times[w7.].3.e-learning is electronic learning, and typically this means using a computer to deliver part, or all of a course whether it's in a school, part of your mandatory business training or a full distance learning course[w8].4.e-Learning is learning utilizing electronic

technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online[w9].5.As e-learning has evolved into a global change agent in higher education, it has become more diverse in its form and applications. This increased diversity has complicated our ability to share research findings and best practices, because we lack a shared set of definitions to distinguish among the many variations on e-learning that have arisen[w10].6.E-learning or "electronic learning" is an umbrella term that describes education using electronic devices and digital media. It encompasses everything from traditional classrooms that incorporate basic technology to online universities[w11].

Various notions with respect to the empowerment of e-Learning:1.E-learning stands for a form of electronically designed, distributed, and facilitated learning activities. It includes instruction delivered via all electronic media, such as the Internet, intranet, satellite broadcasts, audio/video tape, interactive TV, and CD-ROM[15].2.E-Learning identified as adult learning –"In his characterization of the adult learner, Malcolm Knowles noted that as people mature, they become increasingly self-directed in how they acquire skills and knowledge…[w12].

Now the question arises: HOW DOES ONE KNOW THAT THE INDIVIDUALS ARE COMING FORWARD FOR e-LEARNING COURSES? In order to know and answer this question, a measuring scale needs to be presented on the empowerment of the e-learning in India and there is no need to question on it.

It is in relation to this, e-learning empowerment refers to "a process through which an individual is moving forward towards learning mode to the digital technology with the help of the competencies like psychological, legal, economical, intellectual, emotional and technical attitudes". Subsequently, a measuring scale on Likert parameters will be presented in the paper. This will further help us in three ways:

a) To make the Universal Scale
b) Format for the measuring scale
c) Application of it

METHODOLOGY

Following steps are involved:

1.Using the Likert Scale-This will be our standard and generalized through the usage of summated rating technique.2.Items are collected and form our data-In this step, the acceptance or rejection of each item will depend on the scale of the agreement and disagreement of the individual. This data was collected from both primary and secondary data by preparing the questionnaire (data collected from more than 50individuals), panel discussions of the experts, from different books, journals and websites. As a result, 275 objects were covered under the headings of psychological, legal, economical, intellectual, emotional and technical

competencies. 3.The items are edited for further use in the measurement. This was done purely on objective basis and the items were good signs of e-learning empowerment. They were scored and final results were comprehended by the individuals. The objects were not final ones and changed after proper consensus of the experts. These items had only one meaning and were easily understood by all. Unknown and duplicate ones were deleted from the final data base. 4. List of the selection of the items. A final list was adopted and presented for the approval from the panel of experts. This was again based on the Likert Scale of five point's viz. Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree for every sentence captured in the final list. This constitutes the criticality ratio technique for the collection of the list.5.Presentation of the ascending or descending order of the items –In this, the differences were observed between different learners-who wanted to proceed further with the e-learning and those who discarded it. Accordingly, the marks were allotted from 0 to 4.The Table 1 represents the mark allocation technique.6.Analysis of the items-The data was collected on daily basis. Frequency, Mode and median were calculated from the data.7.Application of the Reliability Tests-Different methods were used after every week and they are:

a. Frequency- After every one week
b. Number of times-2
c. Method-Examine and Re-Examine Methodology to get the COEFFICIENT OF STEADINESS
d. Scale Scores-Correlations between the scores and their calculations
e. Number of Recordings-2 to 3
f. Exclusions-22
g. Approximate value of the Correlation Analysis- 0.70(rounded off otherwise it was 0.7077564321)

RESULT: Highly Reliable One

8.Validification of the Scale-Under this, Validification of the content was used to get the final results. This resulted to the entire sampling population of the data which was collected from time to time. This was further tested by the discussions with various individuals.

FINAL OUTPUT OF THE MEASUREMENT

1. Criticality Ratio was used for the calculations
2. Frequency Distributions were used extensively
3. Highest and Lowest Scores were taken for the calculations
4. Only 25% were taken from the final set of the scores
5. The formula was

$$\frac{\overline{X_{highest}} - \overline{X_{lowest}}}{\sqrt{S_{highest}^2/N_{highest} + S_{lowest}^2/N_{lowest}}} \Biggr\} = T$$

where

$\overline{X_{highest}}$=mean of highest group

$\overline{X_{lowest}}$=mean of lowest group

$S_{highest}^2$=Variance of the highest group responses

S_{lowest}^2=Variance of the lowest group responses

$N_{highest}$=Number of individuals in the highest group

N_{lowest}=Number of individuals in the lowest group

T=Differentiation between highest and lowest groups

These "T" statements were selected to standardize the empowerment of e-learning. See also the Appendix at the end of the paper. There are 38 items classified in the following manner:

a) Psychological Features- 5
b) Legal Bindings-3
c) Economic Conditions-7
d) Intellectual Competency-5
e) Technological Competency-18

Some of these statements are positive and others are negative by nature.

CONCLUSION

Consequently, the technique exhibited in the research paper was developed to capture the EMPOWERMENT OF e-LEARNING. This is based on the Likert Scale. It showcases the psychological, legal bindings, economic conditions, intellectual and technological competencies of the individuals. The technique involves 38 statements which help us to arrive at the conclusion and it is based on correlation theory of analysis. The coefficient of reliability was found to be 0.70 and is highly dependable for calculations. This will certainly help us to know and empower the e-learning platforms in the society.

TABLE 1

FOR A POSITIVE ANSWER				
STRONGLY AGREE	AGREE	NO IDEA	DISAGREE	STRONLY DISAGREE
4	3	2	1	0
FOR A NEGATIVE ANSWER				
STRONGLY AGREE	AGREE	NO IDEA	DISAGREE	STRONLY DISAGREE
0	1	2	3	4

APPENDIX
PSYCHOLOGICAL FEATURES
This pertains to the perceptions mind

SA-Strongly Agree, A-Agree,U-Undecided,D-Disagree,SD-Strongly Disagree					
STATEMENTS	SA	A	U	D	SD
I love to learn new things.					
I like to gain knowledge of various subjects.					
It really motivates me to learn more.					
I love the new developments of the technology.					
Learning is easy with self-pace done.					
LEGAL BINDINGS					
Acceptance from the legal domains					
STATEMENTS	SA	A	U	D	SD
I sign the acceptance of the TERMS & CONDITIONS involved in the learning.					
It is really time consuming.					
I do not understand the legal technicalities.					
ECONOMIC CONDITIONS					
The economic conditions of the individuals for e-learning					
STATEMENTS	SA	A	U	D	SD
I purchase the e-learning course through debit card.					
I purchase the e-learning course through credit card.					
I purchase the e-learning course via Internet Banking.					
I purchase the e-learning course Net Transfer.					
I do not like to purchase through plastic money.					
An online payment does not satisfy me.					
I am scared of the online payments.					
I do not trust online payments.					
INTELLECTUAL COMPETENCY					
STATEMENTS	SA	A	U	D	SD
I enroll to different courses at the same time.					
I am satisfied in achieving instant results.					
I get multiple certificates at the same time.					
I get enough opportunities to interact with the faculty members across the world.					
I get opportunities to gain the multiple projects which are beneficial for me.					
TECHNOLOGICAL COMPETENCY					
This helps to understand the skills of the individuals					
STATEMENTS	SA	A	U	D	SD
I love the multiple skills involved in learning.					
The technology is very interactive by nature.					
I can login in from any location.					
There is no bound for the time involved in learning.					

I am able to save the learning material.					
I am able to print the learning material.					
I am able to know about new technologies involved in learning.					
I get the skype connections within the website.					
I can chat, talk, attend meetings, be part of the focus groups, group communities and share my knowledge.					
I am able to login via laptop, mobile phones and tablets.					
I hate when there is no internet connectivity available to me.					
I lose my patience when the internet is running in a slow manner.					
I am able to perceive the differences between different Institutes and Colleges.					
I can see the technical gaps from course to course.					
I get used to new technological developments.					
There are differences in the prices of the courses due to the technological patterns involved in the courses.					
It is easier to learn through online.					
E-learning is growing from day to day.					

Acknowledgements

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