No Age Correlation in
the Effectiveness of Corporate E-learning in India

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ABSTRACT :

Technological advances are dramatically altering company in-service training and development in India. Although the adoption of online learning programs by Indian organizations has been significant in recent years, the capabilities and efficacy of such programs have yet to be fully investigated. In this study, we have investigated the effectiveness of corporate e-learning through a survey to almost 200 employees working in public and private banks in India, ranging from 30 to 50 years old. The employees had various backgrounds in computer skills, beliefs, and interests and such differences cause different perceptions towards e-learning and thus its effectiveness. We found no age correlation in attitude towards e-learning or towards its uptake and effectiveness. Findings suggested that eliciting actual e-learning needs from the employees, rather than company top-down directive, would enhance attitudes, uptake and effectiveness.

1. INTRODUCTION :

Technological advances are dramatically altering the training and development landscape in India. Although the adoption of online learning programs by Indian organizations has been significant in recent years, the capabilities and efficacy of such programs have yet to be fully investigated. Most effort in this area has been devoted to program development while examinations of online program quality and effectiveness have been merely implied. With little empirical knowledge about Internet-based learning outcomes, the need for research in this area is not only timely, but also imperative.

In this study, we adopt the cognitive perspective of e-learning, and the word e-learning has been used synonymously with e-training. E-learning has been defined as the use of information and communication technologies to deliver information and instruction to employees as part of planned efforts to increase job-related knowledge and skills. Organizations are choosing e-learning as a mode of imparting learning so as to increase learner convenience, reduce cost of delivery of learning, track and monitor learning needs of employees, and customize learning programs for them. E-learning appeals to organizations that have a strong need to deliver consistent training across multiple locations. While the potential advantages of e-learning make it appealing, organizations embarking on e-learning implementation must keep two things in mind ;- there are a number of potential drawbacks to using e-learning, and successful implementation requires significant planning and effort. E-learning initiatives can require considerable investment in both information technology (IT) and staff. Specific costs include development costs to design and build the actual courses as well as hardware and software costs to allow users to access the training.

According to the Technology Acceptance Model (TAM) by Davis, Bagozzi, & Warshaw (1989), employee attitudes toward computers must be investigated since the intention of computer use and actual use are influenced by such attitudes. Employees have various backgrounds, computer skills, beliefs, and interests and such differences cause different perceptions to e-learning.

The primary objectives of this study are to evaluate the positive and negative perceptions held by e-learners towards key aspects of e-learning, and to identify any areas that might need improvement.

The secondary objectives are to determine what are the key drivers of e-learning, and what perceptions do e-learners hold with regard to their e-learning experiences.

Factors such as age, gender, personality, and computer experience have proven to be determinants of computer attitudes (e.g., Hunt & Bohlin, 1993 ; Miller & Varma, 1994 ; Raub, 1981 ; Reece & Gable, 1982 ; Taylor & Todd, 1995). More specifically, this research seeks to determine whether or not there is any correlation between the effectiveness of e-learning and ; -

H.1: the age group of the respondent,
H.2: the job level of the respondent,
H.3: the job experience of the respondent,
H.4: access to the internet outside the workplace (home or café etc),
H.5: willingness to use information technology tools in work life,
H.6: match of e-learning content with job requirements,
H.7: customization of e-learning according to individual requirements,
H.8: lack of interaction between the learners and the guide,
H.9: extent of use of internet in daily work life, and
H.10: applicability of e-learning on the job.

2. METHODS :

The participants were 194 employees for public and private banks. Data were collected on the perception of employees about e-learning. The responses were measured on a Likert scale of 1 to 5. Of the 194 participants, there were 83% males and 17% females. Approximately 65% of the respondents were in the age group of 30-to-50 years. Almost 59% respondents had e-learning experience of less than 12 years, and 64% respondents were executives or middle management. Almost 70% of the respondents had access to computers and internet technology. Almost 83% were willing to use information technology tools in their work life, and 74% respondents found e-learning effective.

3. RESULTS :

Pearson's Chi-square value was calculated between the perceived effectiveness of e-learning and each of the variables in the ten hypotheses H.1-10, and any difference was determined, given in Table 1, below.

Table 1 : Results of Chi-square Tests

H	Chi-square value	df	Asymptotic significance
1	16.530	12	0.168
2	6.682	12	0.878
3	12.118	12	0.436
4	47.912	16	0.000
5	53.846	16	0.000
6	21.990	16	0.144
7	62.432	16	0.000
8	21.734	16	0.152
9	6.665	8	0.573
10	33.153	16	0.007

4. DISCUSSION AND IMPLICATIONS :

Generally it has been assumed that younger employees adopt to information technology tools much easier than older employees. Also it has been assumed that employees with more experience find it more difficult to change and adapt to newer styles of learning than employees with lesser experience. Another assumption is that since employees at lower job positions need to prove their expertise and knowledge to gain status and acknowledgement in their

organization, so they tend to use information technology tools more than employees at higher positions. However, the present study found that there was almost no correlation between age, experience, or job level on the effectiveness of e-learning programs (data shown in Table 2 below).

that the e-learning programs were more effective. Thus the extent of technology acceptance of the employees was another key driver of the effectiveness of the e-learning programs.

Most of the employees when interviewed said that they felt that the e-learning programs though technically well designed

Table 2 : Data on Variables and Effectiveness of e-Learning

H	Item	mean	sd	variance
--	Effectiveness of e-learning programs	3.0813	0.99666	0.993
1	Age group	2.2276	0.93924	0.882
2	Job level	2.4309	0.72521	0.526
3	Job experience	2.1870	1.12607	1.268
4	Access to the internet outside the workplace	3.1057	1.09255	1.194
5	Willingness to use tech in daily routine tasks	3.6992	1.13032	1.278
6	Match of e-learning content with job requirements and career plans	3.4146	1.02371	1.048
7	Customization of e-learning according to individual requirements	3.5691	0.91509	0.837
8	Lack of interaction between learners and guide	3.2314	1.20250	1.446
9	Extent of intent usage	2.2033	0.57202	0.327
10	Applicability of e-learning on the job	3.5447	1.11069	1.234

The study assumed that since e-learning programs are anywhere and anytime programs and can be taken at the learner's convenience, so the availability of internet access outside the workplace would be an important factor determining the effectiveness of e-learning programs. Indeed the findings supported this assumption that access to the internet outside the workplace was one of the key drivers of e-learning effectiveness.

The study assumed that despite the fact that organizations have invested in setting up an information technology infrastructure to improve the effectiveness of employees, there remained a gap between the actual and ideal use of these information technology tools in their daily routine tasks. The study found that the effectiveness of e-learning programs definitely depended upon the willingness of the respondents to use the information technology tools in their daily routine tasks. Respondents who were more willing to use the information technology tools in their daily routine tasks reported

were nevertheless not very suitable for them. So the study assumed that the e-learning programs are not found to be very effective and successful because the e-learning program content does not match with the job requirements and career plans. The study found that there was no correlation between the effectiveness of the e-learning programs and the match of the content with their job requirements. Customization of the training programs according to individual requirements was found to be another key driver for effective e-learning programs. Most of the training programs are designed, implemented and executed at the organization level with a one-size-fits-all ideology. The respondents felt that they have certain individual learning needs and that most of the time they need a lot of information and knowledge in the course of their work. The traditional training programs do not cater to these impromptu learning needs of the employees. The study found the e-learning programs were more effective because of

the customization afforded by them. Also the e-learning programs had more applicability to the job than alternative traditional training programs whose content although matched with the job requirement was not tailored according to their personal requirements.

The study assumed that since technology interfaces are very impersonal and interactive in nature, as compared to face-to-face training programs. It was found that there was no relationship between the effectiveness of e-leaning programs and the lack of interaction between the learners and the guide. Most of the respondents felt that e-learning programs were equally interactive as training programs. This study determined that e-learning definitely led to learner convenience (see Table 3) in terms of being self-paced, local availability and access, the customization allowed, and the opportunities for self-development.

to technology definitely plays a very important role towards the effective implementation of e-learning, there are however some other factors such as suitability of the e-learning program to the job at hand, and customization of training – which are important in determining the success of the e-learning implementation. Also there seems to be another important dimension which has come out in this study and which can be explored further. That dimension is whether or not assessment of learning / training needs of the employees should be done centrally at the head office level or should it be done at the local level by the employees themselves who should define their own training needs. It could also be further explored whether or not e-learning is effective if the extent of involvement of the learners in the decision to be trained was high or low. Also would the learners feel more motivated to learn

Table 3 : Correlations between Effectiveness and Learner Convenience Variables

Learner convenience variable	Chi-square value	df	Asymptotic significance	mean	sd
Self-paced learning	34.272	16	0.005	3.7073	0.91196
Flexible learning environment	11.018	12	0.527	3.5528	0.80167
Customization allowed	62.432	16	0.000	3.5691	0.91509
Local availability and access	31.120	16	0.013	3.2683	1.00876
No disruptions in work routine	24.888	16	0.072	3.5447	0.94307
Self-development opportunities	32.328	16	0.009	3.7642	0.92401

5. CONCLUSIONS :

Although e-learning has not lived up to its promise in revolutionizing corporate training in India, there is little doubt that such a mode of learning will play as large a part in the future of human resource development in this part of the world as it has in the West. The emphasis on learning vis-à-vis training connotes an altogether more important outcome, that of behavioral change and the development of performance through the transfer of knowledge and skills on a continuous basis rather than erratically like traditional face-to-face training programs. The findings from this study suggest that although access

and apply their learning if their involvement in the learning decision was higher? More work is needed here to focus on an analysis of the learner needs and learner demands for e-learning, which in corporate India is currently supply rather than demand driven.

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