

E-learning in India - The Role of National Culture and Practical Implications

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***Abstract.** The primary purpose of this research paper is to understand the role of national cultural dimensions on e-learning practices in India. India is considered a major player in the world economy today. US multinationals are significantly increasing their presence in India and understanding local HRM practices will help global companies transition better. This conceptual paper uses the national cultural dimensions of the GLOBE project, which is identified as the most topical theoretical framework on culture. The national cultural scores are used to develop hypotheses for specific cultural dimensions. Examples from the literature are also used to strengthen the proposed hypotheses. This research proposes that national cultural dimensions of power distance, uncertainty-avoidance, in-group collectivism, and future-orientation influence e-learning practices. Future research can definitely empirically test the hypotheses proposed. This study provides e-learning strategies for multinationals while integrating two theoretical models. The suggested strategies can be implemented by multinationals in other countries with similar national cultural dimensions also. This research also proposes a theoretical e-learning model identifying the impact of national cultural dimensions on e-learning practices. This research also provides practitioners a strategic implications model that could be implemented for e-learning initiatives in multinationals.*

Keywords: E-learning and National Culture, Cross-cultural management, GLOBE Study and India, E-learning and India, National cultural dimensions and e-HRM.

1 Introduction

1.1 E-learning: Definition and pros and cons

E-learning can be defined as providing training and development to employees via any electronic medium such as the internet, intranet, satellite TV, video or compact discs (CD). Jay Cross, founder of Internet Time Group and global consultant, introduced the term e-learning in 1998 suggesting a comprehensive training method via any technology-based medium. Several terms are used to refer to e-learning such as computer-based-training (CBT), online learning (OL), virtual learning (VL), internet-based training (IBT) among several others [19, 6].

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E-learning can further be divided into synchronous and asynchronous methods. Asynchronous e-learning methods provide immense flexibility to the learners allowing them learn the online material at their own convenience and pace. Further, the learner and the trainer may not be communicating online at the same time. On the other hand, synchronous e-learning allows for concurrent discussion among learners and trainers through enhanced technological capabilities such as video-conferences and live chats providing a very social learning environment [29].

Organizations have identified several advantages with this learning method. As learning styles among individuals vary greatly, online learning allows employees progress at their own pace. An online training program tends to be more standardized than instructor-based learning. E-learning schedules do not usually follow a strict format of specific place and time providing employees undeniable flexibility in learning. Employees can enhance their own professional development on any subject matter from a variety of experts. Further, e-learning is very conducive to businesses that want to provide learning and development to a multitude of employees in geographically dispersed locations. As the world is becoming a global marketplace, e-learning allows for an international learning platform [1, 6].

E-learning has proven to be very cost-effective and has shown to provide a positive return on investment. [1, 6]. IBM, the giant technocrat, confirms savings through e-learning initiatives-\$50,000 for every 1000 classroom training days being replaced by e-learning programs. Classroom training is expensive as it involves the instructor's fees, employees' travel expenditures to training sites, and the cost of training rooms [1].

On the other hand, practitioners [42, 20] and scholars [47, 44] have identified several disadvantages to e-learning. This learning method requires employees to demonstrate a lot of discipline and self-direction. Further, the collaborative and interactive spirit of classroom training cannot be replicated by an online medium. For instance, IBM managers preferred learning soft management skills only through classroom training [44].

Employees may not seek to clarify their learning concerns immediately as they may do in classroom environments. Therefore employees may not actually master the subject content. Many e-learning programs try to include too much content into their learning modules causing an information overload. In contrast, classroom training provides for clarification of immediate doubts and also opportunities for discussions that enhance learning. E-learning does not facilitate easy learning for content material that is new and subject matter that needs a lot of knowledge sharing. Also, from a business perspective, the start-up costs for establishing e-learning programs may be very prohibitive for small and medium-sized companies. Further, e-learning may be conducive to employees who are tech-savvy and are independent learners [47].

The global e-learning market is predicted to surpass \$52.6 billion by 2010 with North America having the lion share of this market. As of today, about 60% of US organizations actively promote e-learning to train their employees [33]. US organizations, such as Booz Allen and IBM, frequently contend for the top awards of ASTD (American Society for Training and Development) for the training support they provide their employees. Booz Allen, a global consulting company in Northern Virginia, uses e-learning method predominantly for career development and provides about 600 learning modules to enhance employee learning [34]. In 2007, IBM spent \$700 million enhancing employee online learning with each employee spending at least 55.5 hours annually augmenting their online learning skills. Their latest online creation

known as IBM@Play involves business simulations and the use of avatars (three dimensional images) to enhance organizational learning [44].

1.2 Challenges in adopting e-learning

E-learning provides employees a self-paced, autonomous, repetitive, cost-effective and flexible method of training. On the other hand, an instructor-based training encourages group interaction, identifies the training expert, and provides a sense of formality. In a study on global e-learning initiatives, only 24% of the global companies identified their e-learning initiatives overseas were successful [44, 20].

Scholars [41, 30, 36] and practitioners [20, 42] identify several challenges with the adoption of e-learning; 1) National cultures, 2) learning and thinking styles, 3) age of trainee audience 4) polychronic and monochronic concept of time, and 5) technical infrastructure 6) translation issues. The literature on e-learning suggests very mixed results as to what impacts knowledge and learning outcomes.

National cultural dimensions of power-distance, uncertainty-avoidance, institutional collectivism, and future orientation have shown to influence methods of training learning and training. Some researchers suggest that high power-distance cultures prefer to have subject matter experts disseminate training information as such a method of instruction identifies training experts and provides them with the status and power that such cultures value. Further in such cultures an authority delivering the training content has better results on trainees who feel a sense of obligation to learn from such experts [41, 48]. The literature also implies also that high uncertainty-avoidance cultures prefer to have any approach to training that reduces the uncertainty in mastering the training content. Employees from such cultures prefer to have learning methods that are clearly structured with definite learning outcomes. E-learning is considered risky due to problems that trainees may encounter in the learning process, such as technological or navigational problems [15, 47].

Scholars suggest that collectivist cultures prefer a group approach to learning as it satisfies their communal interest in learning and also demonstrates concern for the entire group's learning outcomes. Collective cultures exhibit a strong group focus on group harmony. On the other hand, individualistic cultures reflect a strong emphasis on self-growth and individual potential which e-learning methods provide. Employees from cultures with high future orientation have a strong focus on their future career prospects and hence any form of education or training is cherished [50, 41, 21].

Learning approaches of deductive and inductive influence training methods such that deductive learners prefer to have an emphasis on the training process while inductive learners focus on the results of training. Collectivist cultures prefer a deductive reasoning style, while individualistic cultures prefer an inductive learning style. Deductive learners are usually trained on concepts from the general to the specific principles and thus prefer collective learning, while inductive learners are trained from the specific to the general principles and hence prefer independent inquiry [41].

[50] suggests that three kinds of thinking styles help employees approach their attitude to learning and development; inventive, evaluative and implementing. Inventive style of thinking encourages employees to suggest new ideas and thoughts. Evaluative styles persuade employees to challenge old paradigms and construct new ones. Finally, implementing styles encourage employees to be passive recipients of training information while subject matter experts provide content information. Self-directed or

e-learning learning styles may be more conducive to inventive and evaluative learning than implementing learning cultures.

Learning preferences could also be dictated by the age of trainees. Younger trainee audiences were able to assimilate e-learning content quicker than older trainee audiences. Older audiences find it more difficult to change their traditional paradigms of learning [20]. However, [38] in a study of 194 employees of both private and public banking sectors of India found that age of the trainees did not result in any different consequences for e-learning.

The concept of managing time as defined by monochronic or polychronic cultures further impacts how employees manage their time for learning. Monochronic cultures tend to be single-tasked and people from such cultures usually finish one task before moving to another. Hence employees from such cultures manage their time quite well and therefore can handle the demands of a self-paced e-learning environment. However, polychronic cultures tend to multi-task and people from such cultures try to do more than one task at a time. Thus employees from these cultures find the process of time management and self-paced e-learning quite challenging [41, 20].

[39] and [16] also suggest that e-learning initiatives could also be hampered by the lack of appropriate technological infrastructures. Emerging economies frequently experience the phenomenon of “digital-divide” where the population in these nations are strongly divided between who has access to technology and who does not. While most of the western nations are used to the concept of laptops both in their homes and offices such technological luxuries may not be available in emerging economies. For instance, a comparison of internet penetration (IP) suggests that US and Japan lead with IP of 69.3% (US), 67.2% (Japan), and economies like China and India lag with IP of 9.3 % (China) and 5.4% (India). The concept of continuous or online learning may be a contradiction in such economies which seems to be dictated by who has the money to access technology [16].

[20] suggests improper translations and use of ethnocentric expressions could hinder the process of e-learning in other cultures. In an e-learning project in India and United Arab Emirates trainees took longer to complete e-learning programs that were similar to the ones delivered in the US. Trainees in India and United Arab Emirates took 25% more time to complete the webinars because of style of language and expressions were US-centered. It is important to understand the vocabulary of the target audience so that e-learning transitions can be smooth.

1.3 E-learning initiatives: India

Indian organizations emphasize training and development to enhance knowledge capital and also stay on par with the global competition [11, 54]. Further, as Indian educational institutions do not sufficiently prepare students for corporate work; Indian organizations invest substantially in training and development to provide the “finishing school” touch to job applicants [2, 50]. For instance, Infosys Technologies Ltd, a leader in information technology, provides on an average four months of training for their entry-level trainees with a typical day being from 9:00 am to 5:30 pm. [53]. Suzlon Energy Ltd, a global energy leader, operating in 22 countries, conducts “Campus to Corporate Conversion” training programs for almost 6 months for their new applicants [52]. Therefore the concept of training and e-learning is welcomed by most large and IT organizations [10, 55, 52].

In India, Sanjay Sharma, CEO of Tata Interactive systems championed the e-learning efforts in the 1990s. E-learning initiatives at the academe and corporate levels have tremendous support from the federal government. The National Knowledge Commission was established to make India a potential leader in the field of knowledge and learning [6, 50].

The government is promoting e-learning initiatives in education by providing training to faculty to ensure smooth transitions for students from class-room environments to self-directed learning styles. E-learning initiatives in the academe have provided several advantages for students in the Indian culture. Students feel they can question their teachers via an internet-based training more freely than in a traditional classroom. Educators in high-power distance cultures, such as India, display a lot of authority and power and students usually are passive recipients of knowledge in such learning atmospheres. Students seem to be more regular in attending e-learning classes as chronic traffic in heavily crowded metropolitan cities creates tremendous commuter problems. Finally, educators are able to create deadlines and send reminders for academic projects more efficiently for students via a web-based learning method creating learning efficiency [6, 5].

Indian organizations are also promoting e-learning to enhance the knowledge capital of their employees and therefore contribute to firm performance. In a study of 640 managers from public, private and multinationals organizational learning was positively related to firm performance. In this study it was observed that line managers had a more significant role in developing organizational learning programs than HR managers. E-learning initiatives seem more predominant in large Indian companies and multinationals that tries to provide the best practices for their employees [9, 8].

[7] also observed some impediments for e-HRM services in Indian corporate are resistance from HR leaders that they may have reduced control over HRM functions and also lose their primary jobs. In another incident, teachers in an academe institution did not allow students to use their computers and log on to their online programs fearing for their job security. Also, many university students have indicated preferences to the importance of social interaction in learning [6].

Other critical barriers for implementing e-learning initiatives include lack of proper technological infrastructures. While on one hand, India is applauded for its leadership position in the IT (information technology), the paradox of “digital-divide” exists. This phenomenon has created a virtual divide between the affluent enjoying the benefits of latest technology, while the middle-class and lower economic levels are left behind. India’s population of one billion has only 5.4 % internet penetration with approximately about sixty million internet users. In contrast, the US has about 69.3% internet penetration with about 207 million internet users [16]. The Indian public school system, of 1 million schools, has only 0.2 percent of computer-based education [6]. Poor infrastructure and undependable power shortages make any computer-based learning programs quite challenging for the majority of the population. While the big metropolitan cities of Mumbai, Bangalore, Chennai, Delhi and Hyderabad are very well-connected, technological infrastructure is not to global standards in most cities [5].

US global organizations are choosing India for several reasons to establish their overseas operations [53, 45]. Primarily, labor costs for entry-level knowledge professionals in India is around \$25-\$50/hour, in comparison to those of \$75/hour in the US [29], proving to be very cost-effective for multinationals. Further, the country has a very well-educated English-speaking work force that can communicate easily with other

English-speaking cultures [6]. The country's work force is commended for its high work ethic- demonstrating a willingness to work twelve- hour work days for six days a week [30, 56].

Today 125 Fortune 500 US companies have their R &D centers in India [56]. Dell is planning to double its work staff in India over the next three years to almost hire 20,000 technical workers. Microsoft is going to add another 3000 jobs in India over the next three to four years [22]. Pearson Educational Technologies, educational leader, has moved its entire e-learning development to India to take advantage of the sophistication of the local information technology departments and lower labor costs [32].

This conceptual article is organized as follows: First, it details the theoretical framework which is divided into three sections- learning theories, social customs and history, and national cultural dimensions with specific relevance to India. The methodology section identifies the rationale for using the GLOBE (Global Leadership and Organizational Behavior Effectiveness) cultural study to predict hypotheses for e-learning practices. The results section provides hypotheses for specific national cultural dimensions that influence e-learning practices. The discussion section integrates the theory and results to provide specific strategies for multinationals. Finally, the paper identifies contributions for both scholars and practitioners. The paper also includes a theoretical and practitioner model for researchers and practitioners.

2 Theory: Learning theories and National Cultural Dimensions

2.1 Learning Theories

Learning theories help understand how individuals process, store, and recall information that is being learnt. Scholars have proposed several theories to provide an understanding on individual learning such as the behaviorist, cognitive learning, constructivist, social learning, and social constructivist [10, 54].

The behaviorist theory suggests that individuals learn by observations followed by positive or corrective reinforcement. Examples of such learning can be observed when individuals are trying to learn any psychomotor skills (cycling, driving) or when trying to learn job-related skills that can be mastered by observation (job shadowing in retail, manufacturing). Further in the e-learning environment, the behaviorist approach can be included to allow learners to observe content or task to be mastered followed by targeted feedback [10, 54].

Cognitive learning theory suggests that individuals learn based on the importance of the learning material to the learner, the learner's self-efficacy skills (the learner's confidence that we can learn this), and the integration of past and current knowledge. Examples of cognitive learning approach can be observed at the work-place when employees are sent on new job assignments-thus employees perceive the new assignment important to their professional growth which requires an assimilation of past and current job skills [10, 54].

Constructivist learning theory suggests that individuals learn based on how they can construct the learning material to make it meaningful. The knowledge that the learners master and construct are transferred to the work-place. Examples of constructivist learning occur when employees undergo training programs where they have to create and develop build their own subject knowledge [10, 54].

Social learning theory is considered a bridge between behaviorist and cognitive learning theory as it includes observation, retention and recall happening dynamically at the same time. Finally, the social constructivist theory suggests that learning is a strong domain of the socio-cultural environment and individuals develop and construct their learning styles based on their social and cultural interactions. Individuals' cultural and social perspectives provide the basic learning foundation as to how individuals build, retain, and recall information. Individuals learn based on how they have been exposed to learning through their social and cultural environment [10, 48, 54]. This paper will integrate the social constructivist learning theory and national cultural dimensions to identify their influence on e-learning methods in India.

2.2 Social and historical context

Portuguese invaders introduced the term *castas* in the 16th century which meant tribes, groups, or families. They observed Indians working harmoniously but in separate groups [17]. The Indian caste system was divided into four principal categories based on a social and economic hierarchy- the highest, the *Brahmins*, (intellectual leaders), *Kshatriyas*, (soldiers of war), *Vaishyas*, (business traders), and *Shudras*, (unskilled laborers) [27, 25]. The early presence of such a rigid caste system had powerful organizational implications. The caste system created distinct labor categories and status differences among the groups. Consequently, the concepts of inequality, loyalty, and power distance were established early in the Indian social system [38, 26, 27].

Governments and political parties also exert a considerable influence on management practices. A contemporary example is that of the Communist party's biased selection practices of hiring only their political candidates as upper-level executives in Eastern European organizations [38]. India's was colonized by the British for almost a century and they introduced a work culture along the same lines of inequality established by the Indian caste system. Differential treatment between the superiors and their subordinates was the norm in British organizations in India. [27, 25, 26]. The British reinforced the caste distinction at the work place by promoting and recommending only the upper caste to prominent jobs [25, 26].

2.3 National Culture of India: The Globe Study

This study uses the GLOBE cultural dimensions as it one of the most recent studies [18] on organizational values and cultures. It has synthesized cultural findings from 61 countries on nine core cultural dimensions. The predominant cultural dimensions are assertiveness, future-orientation, gender egalitarianism, humane orientation, institutional collectivism, in-group collectivism, performance orientation, power distance and uncertainty-avoidance. Table 1 provides definitions of these cultural dimensions.

#	Cultural Dimension	Definition
1	Assertiveness	The degree to which individuals in organizations or societies are assertive in social relationships
2	Future-Orientation	The degree to which individuals in organizations or societies plan for the future
3	Gender Egalitarianism	The degree to which organizations or society promotes gender equality
4	Humane Orientation	The degree to which individuals in organizations or societies reward individuals for positive behavior
5	Institutional Collectivism	The degree to which organizational and institutional practices encourage collective action
6	In-group Collectivism	The degree to which individuals in societies reflect collectivist behavior
7	Performance Orientation	The degree to which upper management in organizations and leaders in societies reward group members for performance excellence
8	Power Distance	The degree to which organizations and societies accept power
9	Uncertainty-Avoidance	The degree to which organizations and societies avoid uncertainty by relying on practices and procedures

Table 1: Definitions of Cultural Dimensions

Source: Chhokar, J., Brodbeck, F., & House, R (Eds) (2007). Culture and Leadership Across the World. The GLOBE book of In-depth studies of 25 societies. Lawrence Erlbaum Associates. Mahwah, New Jersey

Six of these dimensions have their origins from Hofstede's cultural studies. The collectivism construct has been divided into two specific dimensions, institutional and in-group collectivism, to reflect differences between societal and organizational cultures. The masculinity dimension has been developed into assertiveness and gender egalitarianism to reflect individual differences and gender equity. Future and humane orientation have their origins from studies of Kluckholm and Strodtbeck and the performance orientation was derived from McClelland's work on achievement [18].

3 Methodology

This conceptual research paper uses the latest cultural scores from the GLOBE study to predict the influence of culture on e-learning practices in India. Most cultural studies on

human resource management and training use national cultural dimensions of Hofstede [23, 36] which have been applauded and criticized for several methodological issues.

Hofstede, the principal research investigator, analyzed data from a single multinational company (IBM) and its 53 regional subsidiaries from 1967-1970 to provide his pioneer work on national cultures to the research world. The respondents for his research were predominantly non-managerial employees and the survey was primarily used as a management diagnostic tool to understand the nuances in IBM's overseas branches. In contrast the GLOBE research, conducted from 1994-1997, is a collaborative effort of about 170 researchers from 61 countries researching about 951 non-multinational organizations. The GLOBE respondents were managerial employees and this massive research was theory-driven, based on extensive academic literature [18, 27].

Apart from these methodological issues, the GLOBE research introduced cultural dimensions both at the organizational and societal level- therefore collecting two units of analysis (cultural practices or "as is" and cultural values "should be"). This is a distinguishing feature of this cross-cultural study [25, 12]. This study also introduced a new cultural dimension, performance orientation, not addressed in that of Hofstede's. Scholars suggest that Hofstede's studies did not measure feminine scores directly- a lack of masculinity was considered feminine, but in contrast, the GLOBE project measured feminine scores per se [43]. The results section provides the scores and hypotheses for power distance, uncertainty-avoidance, in-group collectivism, & future-orientation.

4 Results

This paper will identify four national cultural dimensions that have demonstrated sufficient impact on learning and knowledge construction. Specifically, the dimensions of power-distance, uncertainty-avoidance, in-group collectivism and future-orientation will be discussed. Scholars suggest the division of power (power-distance), the concept of structure (uncertainty-avoidance), the collectivist atmosphere (in-group collectivism) and planning ahead (future-orientation) have considerable impact on learning practices [3, 48]. Table 2 provides scores and ranks for India and the US on these cultural dimensions. The next section will discuss specific hypotheses for these dimensions and their relevance to e-learning practices.

#	Cultural Dimension	India (Rank)	US (Rank)
1.	Power Distance	5.47 (16)	4.88 (49)
2.	Uncertainty-Avoidance	4.15 (29)	4.15 (28)
3.	In-Group Collectivism	5.92 (4)	4.25 (51)
4.	Future Orientation	4.19 (15)	4.15 (16)

Table 2: National Cultural Dimension Scores for India and the US

Source: Chhokar, J., Brodbeck, F., & House, R (Eds) (2007). Culture and Leadership Across the World. The GLOBE book of In-depth studies of 25 societies. Lawrence Erlbaum Associates. Mahwah, New Jersey.

*(For the GLOBE study, a score of 4 indicates gender egalitarianism, a score higher than 4 indicates feminine orientation, while a score lower than 4 indicate masculine orientation).

4.1 Power- Distance

The high Indian scores on power-distance (5.47) reflect a society that is distinguished by social hierarchy and power [17]. Formal titles such as Mr., Mrs., Dr, Sir, or Madam are widely used both in the corporate and in education [17]. Subordinates do not sit down till they are asked to do so by their superiors. Generally Vice-Presidents and upper-level managers in Indian organizations use private rooms for their office, while other employees have general cubicles- indicating a clear class distinction. Indian subordinates rarely circumvent their bosses as such behavior is considered defiance to authority. In corporate environments, subordinates usually carry out their superiors' decisions implicitly without questioning [25, 27].

In training and development, such national cultural values dictate the type of learning and training methods employees would prefer. High power distance cultures favor a learning environment that differentiates and identifies the source of expertise. An instructor-based training is compatible with such deeply entrenched cultural values. The trainers offer training based on their knowledge and expertise which provides them with status and power. The trainees receive and learn information from the experts in the appropriate training protocol- as passive recipients and questioning only wherever

relevant. Therefore such cultures may not view replacing human experts with computer-based methods very positively [41, 48].

In an empirical study on 310 students, [48] demonstrated that students from high-power distance cultures prefer passive methods to active methods of teaching. Passive methods identified sources to provide the information predominantly in the form of lectures, guest speakers, or classroom presentations. Active methods required students to be responsible for their own learning and involved independent learning in case studies, research projects or group projects. Students from high power distance cultures preferred to receive learning from an expert and also demonstrated less preference for self-directed learning styles [48].

E-learning requires considerable autonomy and responsibility for one's own learning which high power distance cultures do not prefer. Classroom or passive methods of presentations seem to satisfy the concept of identifying levels, which is very important in high power distance cultures; 1) trainers are identified as the upper level with the required knowledge and 2) trainees are identified as the lower level with less expertise [41, 48].

Learning theorists suggest that individual learning is a consequence of the socio-cultural environment and early developmental interactions [10, 54]. In India, individuals have been accustomed to constructing and developing their knowledge in a passive way as status differences as a consequence of social distinctions and colonial rule encouraged submissive learning. Employees were encouraged to rely on authority for any learning or training outcomes. Therefore it would be implied that in an e-learning environment, employees will prefer synchronous e-learning methods where a training authority or expert can be visibly identified through videoconferencing or online chats. Therefore it would be right to argue that high power distance cultures would more likely adopt synchronous e-learning methods to those of asynchronous as it allows them to make power and status distinctions.

Based on the following discussion, and the national cultural scores and ranks (India: 5.47; US; 4.88; Rank; India; 16; US; 49), this leads to the first hypothesis:

H1a: Employers from high power distance cultures are more likely to use synchronous e-learning methods than employers in low-power distance cultures.

H1b: Employers from Indian organizations are more likely to use synchronous e-learning methods than employers in US multinationals.

4.2 Uncertainty-Avoidance

The high Indian scores on uncertainty-avoidance (4.15) reflect a culture that is very ritualistic and ceremonial- therefore the society adopts elaborate procedures to reduce anxiety. Many Indian social customs suggest a culture that strongly tries to circumvent the unknown. For instance, in business, employers consult astrologers to predict the future and take business decisions in parallel with astrological predictions. For marriages, social customs dictate that the astrological stars of the prospective groom and bride are matched before the wedding plans are even established [17].

In training and development, such national cultural dimensions demonstrate a strong need to reduce uncertainty in the learning process. High uncertainty-avoidance cultures prefer a learning environment that clearly provides structure and rules. A classroom-based environment allows for such a structured learning method. The training expert

clearly sets the rules and expectations and the employees feel secure in such a learning process [48, 50].

In an empirical study of 310 university students, it was observed that students from high uncertainty-avoidance cultures preferred learning styles that were less risky from the learners' perspective. The top three learning methods of students were lectures by instructor, classroom discussion and reading textbooks. These learning methods require minimal efforts from the learners and hence reduce the anxiety in the training process [48].

E-learning requires a lot of self-mastery and independent thinking which can be quite risky for anxious learners as navigational and technological problems occur. Learners should be comfortable with the isolative self-exploratory learning process of e-learning that can be intimidating even to the experienced [50, 39]. Learning theorists suggest that individual learning is a product of the environment that individuals have been cultured and exposed to [10, 54]. In India, there is a strong tendency to circumvent the unknown and therefore individuals prefer a very predictable work or learning environment. Therefore in an e-learning environment employees will prefer synchronous e-learning methods as it would provide a more structured learning atmosphere which will mitigate any concerns associated with new learning. Asynchronous methods allow individuals a lot more autonomy and self-direction which might create more anxiety for the new learner.

Based on the following discussion, and the national cultural scores and ranks (India: 4; 15; US; 4.15; Rank: India; 29; US; 28), this leads to the second hypothesis:

H2a: Employers from high uncertainty-avoidance cultures are more likely to use synchronous e-learning methods than employers from low- uncertainty-avoidance cultures.

H2b: Employers in Indian organizations are more likely to use synchronous e-learning than employers in US multinationals

4.3 In-group Collectivism

The high Indian scores on in-group collectivism (5.92) indicate a culture that is very tightly knit to both immediate and extended family. Collectivist cultures are characterized by a very close social framework where members distinguish themselves from in-groups and out-groups. In-group members could be members from the same social caste, religion, immediate or extended family. In India, it is very easy to distinguish a person's caste and religion by her or his last name. Indian employers frequently recruit, hire, promote and train employees from their own social castes and families [14, 13].

In training and development, high collectivist scores depict a strong need for an interactive group learning process. Collectivist cultures focus on the process of learning rather than learning outcomes. The context of working and learning together are traditional values deeply held. A case in point- Japanese postal employees display a collaborative work spirit as employees are trained to unload packages from the delivery trucks as a group. In contrast, similar postal work in the US emphasized individual responsibility for unloading postal packages [37, 42].

The learning and training emphasis in collectivist corporate cultures is gaining knowledge together and not trying to be different. E-learning has a strong emphasis on self-development and individual career advancement that high collective cultures do not

prefer [37]. [42] observes from global e-learning professional projects that only 7% of the Japanese companies introduced e-learning initiatives as the cultures' strong preference for group interaction and support dictates any other training method less engaging.

Further, scholars [41, 29] also suggest that learning styles in individualistic and collectivist cultures differ greatly. Individualistic cultures prefer an asynchronous method of e-learning, where individuals construct and build their knowledge independently at their own pace. However collective cultures prefer a synchronous method of learning that allows trainees and trainers to engage in a collaborative spirit of learning. Learning theories also suggest that individuals learning styles are socially and culturally constructed. In India, learning has always been a collaborative effort as trainers and learners as the collectivist orientation seeks a mutual learning process. In a qualitative study on graduate students, [29] observed that asynchronous learning allows time for self-reflection - an aspect that individualistic cultures appreciate. Synchronous learning provides for social support- a trait that collectivist cultures strongly value.

Based on the following discussion, and the national cultural scores and ranks (India: 5.92; US; 4.25; Rank: India; 4; US; 51), this leads to the third hypothesis:

H3a: Employers from high in-group collectivist cultures are more likely to use synchronous e-learning methods than employers from low in-group collectivist cultures.

H3b: Employers in Indian organizations are more likely to use synchronous e-learning than employers in US multinationals

4.4 Future-Orientation

The high Indian scores on future-orientation (4.19) reflect a society that always plan for the future. The Indian culture nurtures children very early with axioms such as "save for a rainy day". This trait to plan for the future is reflected in adults also with most Indians having personal savings bank accounts [17].

In training and development, high scores in this national cultural dimension reflect a work culture that is always planning for their future. Employees from such cultures therefore value any learning and development as it will enhance their future professional status [17, 18]. US joint ventures management observed in China that attractive hiring strategies for Chinese applicants required placing a great emphasis on learning and development opportunities that multinationals could provide. China has high scores in future-orientation and hence employees from such cultures place a strong value on their future employability and any learning opportunities thereof [21].

As individuals in high future-orientation cultures are conditioned to planning and thinking ahead always, learning theorists suggest that this could possibly have consequences in the preferred learning methods. In a qualitative study, it was demonstrated that synchronous e-learning methods allows individuals to plan and organize their learning outcomes. This study demonstrated that 33% of the communication time among learners was spent on planning for future tasks and assignments. Therefore it would be right to argue that high future orientation cultures would prefer e-learning methods that allow them to plan and think ahead such as in synchronous e-learning [29].

Based on the following discussion, and the national cultural scores and ranks (India: 4.19; US; 4.15; Rank: India; 15; US; 16), this leads to the fourth hypothesis:

H4a: Employers from high future-orientation cultures are more likely to use synchronous e-learning than employers in low future-orientation cultures.

H4b: Employers in Indian organizations are more likely to use synchronous e-learning methods of training than employers in US multinationals

Figure 1 provides a theoretical model of national cultural dimensions and e-learning. This framework can be tested by researchers to augment their understanding of national cultural dimensions and e-learning practices.

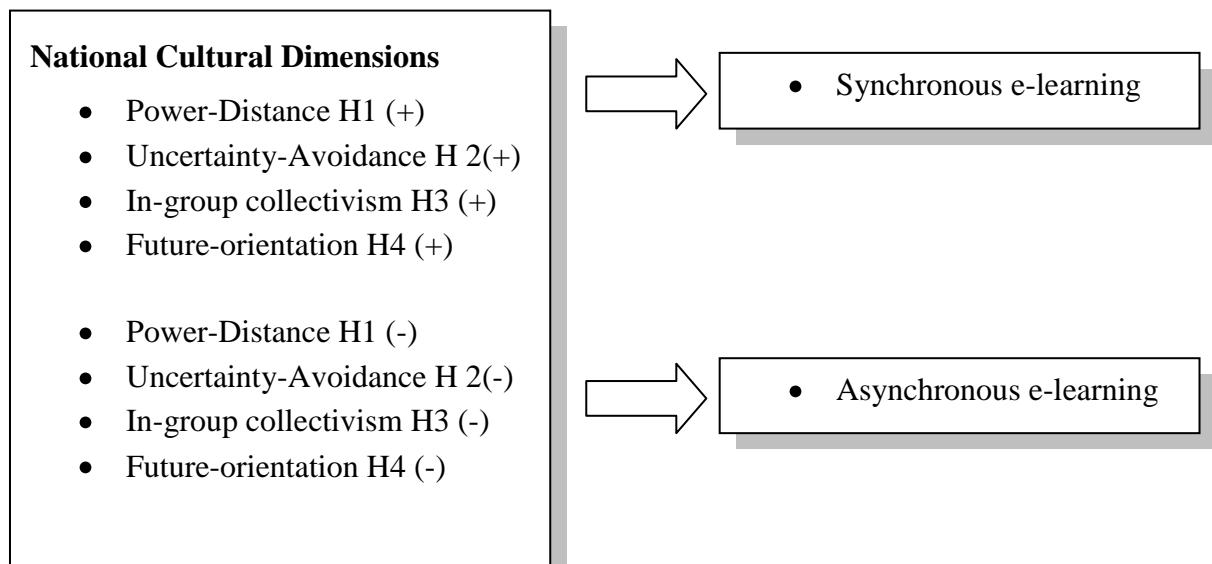


Figure 1: Theoretical Model of National Cultures and E-learning

5 Discussion

National cultural dimensions have shown to have powerful organizational implications. [28] provides evidence of the influence of power-distance on pilot behavior as evidenced from recorded conversations between co-pilots and pilots of Korean Airlines. Korean airlines had a high statistic of airline clashes and the authorities were keen to remedy this problem. An external investigation observed how co-pilots of these airlines obeyed implicitly the orders of their superiors (pilots) regardless of the safety or outcome of their flights. The co-pilots would ignore the orders from the air control towers regarding landing or taking off and follow their pilots' commands without any questions. Korea has a high power-distance culture and these recorded conversations suggest the powerful effect superiors have on subordinates- subordinates refuse to assert their viewpoint even when the safety of hundreds of human lives are in question.

[36] in their meta-analysis of 82 articles on culture and IT suggest that national cultural dimensions (power-distance, uncertainty-avoidance, masculinity-femininity, and collectivism) do impact the adoption of IT services. High power-distance learning cultures demonstrate a strong need to have power vested in an expert which e-learning services may not accommodate. High uncertainty-avoidance cultures find IT services quite risky (technological problems) and hence do not consider any e-HRM services reliable (such as e-recruitment, e-learning). Collectivist cultures have a strong need for face-to face interactions which e-learning may not be very conducive to.

[36] further identify three main conflicts (system, contribution and vision) related to national culture and the adoption of information technology. A system conflict occurs when an IT application (e-learning) brings to surface the cultural differences in implementation of these services. In implementing e-learning, the cultural importance of subject matter experts presenting information in a formal structured classroom environment becomes the main conflict in implementation. A contribution conflict occurs when a society's core values contradict with the application of the IT services (e-learning). A society's core values of being group-oriented or anxious about the unknown can be in direct conflict with the process of e-learning as it is deemed isolative and inherently risky. A vision conflict occurs when the society's values about the technology conflicts with the actual values of the IT application (e-learning). While e-learning is generally considered self-paced, continuous, and a flexible method of learning (actual IT values of e-learning), the society's values (India) may consider e-learning unreliable (lack of subject matter experts), undependable (chronic power outages and low internet penetration) and not engaging (no group interactions) [36].

High power distance cultures prefer a teacher-oriented method of learning as it identifies the expert and provides them with appropriate privileges, status, and power. High uncertainty-avoidance cultures favor structured learning environments and passive methods of learning as it seems to reduce the learning risk. Collectivist cultures find group learning interaction methods more engaging and also considerate of the entire groups' career outcomes. Future-oriented cultures always like to plan ahead and e-learning seems to offer ample opportunities to do so through continuous learning [41, 20].

Learning theories imply learning and knowledge creation is largely a result of how individuals are socially and culturally trained. The method of learning among individuals develops in a chronological way which usually begins in the early formative years which is subsequently reinforced over the academic years culminating in established learning patterns by adult ages. Practitioners from multinationals observe a lot of learning discrepancies while trying to implement any global training programs [10, 48, 54, 41, 42].

Learning discrepancies due to cultural preferences have been observed in different countries. In China, for an e-learning leadership module, both the US and Chinese leaders were asked to learn and assimilate similar content. The Chinese leaders mentioned to their US counterparts that the leadership concepts taught in the online course were not likely to be implemented in China as leadership can be only be understood through personal interactions and relationships. In Korea, for an e-learning problem-solving module, it was observed though Korean employees indicated that they had completed the learning modules they were not able to discuss the content thoroughly. The learning module suggested discussions of newly acquired content matter with their Korean supervisors. In Korea, subordinates do not like to imply having acquired superior knowledge to their supervisors- the hierarchy never changes- the bosses always have more subject knowledge. In Brazil, for an e-learning finance course, Brazilian managers indicated online course completion but their work applications did not reflect thorough mastery of content. It was realized that the gregarious Brazilians prefer face-to face interactions while learning and a solitary learning style was not conducive to absorb subject matter [20].

[23] suggests multinationals should take advantage of national cultures in implementing HRM practices in diverse countries. For instance, introducing team incentives in

collectivist cultures (such as Japan) would be very congruent with the local culture and more likely to produce positive business results. The Indian collectivist orientation has a strong family emphasis which most Indian companies accommodate with family-friendly practices (family retreats, family memberships to clubs). Multinationals should be cognizant that providing HRM practices that are congruent with the local culture is very likely to have affirmative organizational outcomes [40, 46].

For e-learning initiatives to be successful overseas, practitioners should conduct a cultural analysis and understand the role of national cultural dimensions on HRM practices. Based on this deduction, e-learning programs can be modified to provide and get the best from employees in different cultures. In high-power distance and uncertainty-avoidance cultures, it is important to initiate synchronous e-learning initiatives so that it would allow trainees to defer their learning questions to the authority on the subject. Such cultures prefer an authority to confirm and corroborate subject matter. In high uncertainty-avoidance cultures, the anxiety of assimilating and learning information on an independent schedule can be mitigated by having a synchronous format as it allows trainees to discuss any learning concerns with an expert. Such cultures prefer any training options that are less risky and more reliable [48, 20, 41].

In high collectivist cultures, it would be very beneficial to provide synchronous e-learning initiatives as it allows for social learning where trainees can collaborate with other trainees to satisfy their communal interest for learning. While establishing their business in China, IBM, the technocrat giant, realized the importance of *guanxi* or relationship-building. Therefore when they introduced, Sales Quest, an e-learning training program, they created a virtual world that allowed sales trainees from different parts of the country to socialize and interact extensively with each other [44].

In cultures with high future-orientation as employees have long-term perspectives, synchronous e-learning programs allow individuals to think and plan ahead. As this learning method provides opportunities to discuss with peers and experts, it provides sufficient time for individuals to strategize and think ahead [39, 9]. Table 3 provides multinationals strategic e-learning implications relevant to the specific national cultural dimensions.

#	Cultural Dimensions	Impact on E-learning	Strategies for multinationals
1.	High Power Distance Low Power Distance	Employees prefer to learn from training experts. Employees prefer independent and self-directed learning	Establish <u>synchronous e-learning</u> that can allow learners to identify a learning expert to showcase subject knowledge. Establish <u>asynchronous e-learning</u> that allows for self-mastery.
2.	High Uncertainty-Avoidance Low Uncertainty-Avoidance	Employees are anxious about new methods or the unknown Employees are risk-averse and welcome novel approaches	Establish <u>synchronous e-learning</u> to provide the capability to clarify learning questions with visible authority. Establish <u>asynchronous learning</u> that allows for self-exploration in learning
3.	High In-group collectivism Low-group collectivism	Employees prefer group interactions for learning Employees prefer individual learning	Creating <u>synchronous learning</u> communities to nurture the collectivist orientation. Creating <u>asynchronous learning</u> to allow individual learning
4.	High Future-orientation Low Future-orientation	Employees like to plan ahead for any management outcomes Employees do not strategically plan for management outcomes	Providing <u>synchronous e-learning</u> methods that allow learners to plan ahead. Providing <u>asynchronous e-learning</u> methods that does not provide opportunities for specific planning

Table 3: Strategic Implications for E-learning

6 Conclusion

This section identifies both the theoretical contributions and practical implications. First, while studies have examined the role of national cultures on training and learning, academic papers (both empirical and conceptual papers) have not examined the role of national cultures on e-learning per se [50, 41]. This paper suggests that power-distance, uncertainty-avoidance, in-group collectivism, and future-orientation have a strong influence on the type of e-learning methods. This paper addresses this paucity in theoretical research by providing an e-learning model that can be tested by academic researchers.

Second, most studies on HRM practices adopt the national cultural dimensions of Hofstede [36, 51] but this paper examines e-learning from the perspective of the most topical national cultural study and its results. The GLOBE cultural study is considered unique as it collected data to identify both the current (what is) and futuristic (what should be) societal values [18]. This study also examines the role of future-orientation on e-learning while most studies on national cultures and HRM practices predominantly use power-distance, uncertainty-avoidance and collectivism. Therefore this paper extends the knowledge of national cultural dimensions and HRM practices.

Third, this paper provides a strategic implication model for practitioners as multinationals increasingly choose to establish in emerging economies. Multinationals experience tremendous challenges in implementing standardized global practices due to deep-rooted cultural differences in learning. A case in point-Japan has only 7% of their organizations using e-learning initiatives while the US has 60% of their organizations adopting some form of online learning programs [42, 47]. This paper provides preliminary guidance as how to integrate national cultures (theory) to identify strategic e-learning implications (practice) to bridge the gap between scholars and practitioners.

Finally, this study focuses on an economy that is moving forward in leaps and bounds [38, 24]. Multinationals are establishing to India at an increasing pace with about 15,000 joint-ventures in India today [14]. [38] emphasizes that India and China are going to be the most successful emerging economies with India becoming the world's "back-office" and China becoming the "factory of the world." Multinationals should increase their awareness of cultural practices in these upcoming economies so that their international transitions are easier.

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