

Role of Online Education in Building Brand Image of Educational Institutions

Papel de la educación virtual para desarrollar la marca de instituciones educativas

Parikshat S. Manhas¹

Received: August 28, 2011

Accepted: December 18, 2011

Abstract

In this article we try to present the general impression that online learning/real time virtual learning conveys. The myriad interpretations of online education are depicted elaborately along with its advantages and influence on various stakeholders. The disadvantages of online education reveal their apparently potent drawbacks, which are then trailed by «opposing views». These views give concrete justifications against the so-called shortcomings of online learning and enlist the techniques used to tackle them.

Besides of what online education does for students, learners and tutors at large, it also confers some potential by-products, such as helping build a strong brand image of educational institutions that offer it. Although educational institutions worldwide are employing online learning resources to create a brand image for themselves, a well-worn discussion has to be mooted to understand the implications of their usage.

Keywords: Online education, E-learning, brand image, educational institutions, real time virtual learning.

Resumen

En este artículo nos proponemos presentar la impresión general que el aprendizaje virtual/tiempo real del aprendizaje a distancia transmite. Las miles de interpretaciones sobre la educación virtual se describen esmeradamente junto con sus ventajas e influencias sobre sus diversos actores/participantes. Las desventajas de la educación virtual revelan sus aparentemente grandes inconvenientes, las que luego son expuestas por las «opiniones contrarias». Estas opiniones ofrecen justificaciones concretas en contra de los llamados defectos del aprendizaje virtual y se apoyan en las técnicas que usan para enfrentarlos.

Aparte de lo que la educación virtual hace con los estudiantes, aprendices y tutores en general, también trae como consecuencia algunos resultantes poderosos, como es ayudar a construir una imagen sólida de la institución educativa que la ofrece. Aunque las instituciones educacionales en el mundo están empleando recursos virtuales de aprendizaje para crear una imagen de marca propia, un muy conocido debate se plantea para entender las implicaciones de su uso.

Palabras clave: Educación en línea, E-learning, imagen de marca, institución educativa, educación virtual en tiempo real.

1. Associate Professor of The Business School (TBS), and Coordinator of Global Understanding Course, University of Jammu, Jammu, Tawi, India. <psmanhas@hotmail.com>.

INTRODUCTION

Online Education is synonymous to distance learning or e-learning and is referred to as such as opposed to the orthodox mode of learning. In this learning option students are not obliged to attend classes; they do not have to study by listening to the teachers face to face and scribbling down what they hear without interaction, making a statement or exchanging a few words. Online education is a student-oriented fashion of learning. If we are to gauge its efficiency by the yardsticks of flexibility, group concurrence, self-paced learning and the rest, then online-learning has no parallel. How it is a befitting substitute for traditional education systems is accounted for in a thread-bare discussion in this article.

In the present scenario, education and learning drastically shift from traditional method to technological framework. The role of technology and the educational institutions imply that technological mediums are able to build up their educational institutions as well as their means for providing the education as a global brand. The main idea behind the educational practice is “E-Learning” and, with the advent of online mediums, numerous educational researchers and practitioners investigated the various aspects of learning such as learning strategies, learning environments, learning motivation, conceptual development as well as cognitive development and cognitive growth during learning. Liaw, Huang & Chen (2007) focus on the use of Information Technology and the Internet as a teaching and learning tool which is rapidly expanding into today’s learning environments, where online learning delivers a broad array of solutions that enhances knowledge and performance using Internet technologies. According to Manhas (2010), the competition is so high that no organization, be it management schools or other institutions, can exist without innovative ideas and, of course, everyone is using electronic tools for survival.

The information and communication systems, whether networked or not, serve as specific media to implement the learning process. The term will still most likely be utilized to reference out-of-classroom and in-classroom educational experiences via technology, even as advances continue in regard to devices and curriculum. E-learning is essentially the computer and

network-enabled transfer of skills and knowledge. E-learning applications and processes include Web-based learning, computer-based learning, virtual classroom opportunities and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio. Abbreviations like CBT (Computer-Based Training), IBT (Internet-Based Training) or WBT (Web-Based Training) have been used as synonyms to E-learning. Today one can still find these terms being used, along with variations of E-learning such as elearning, Elearning, and eLearning.

Developments in internet and multimedia technologies are the basic enabler of E-learning, with consulting, content, technologies, services and support being identified as the five key sectors of the E-learning industry (Nagy, 2005). Thus, online learning has started and is gaining popularity in many universities in recent years. For example, most of the universities in Malaysia use online learning to supplement regular campus instruction (Ibrahim, 2002).

It is plain to observe that researchers are in complete agreement that one of the key attributes of a company, if not the key attribute, is the brand image. In addition, establishing a strong brand image is indeed a powerful way of developing market power, which consequently helps to create a tight control over its position within the market. Due to barriers to entry, a rounded marketing plan should focus on all aspects of the marketing mix; this also helps to retain a consistent consumer interest. On somewhat similar lines this research helps to gauge the reaction of the general public towards online education and its impact/contribution in building brand image of educational institutions. We know that in today’s competitive world educational institutions also need to have a positive brand image in order to attract the best students and retain the best talent.

LITERATURE REVIEW

Online education can be defined as an approach to teaching and learning that utilizes Internet technologies to

communicate and collaborate in an educational context. This includes technology that supplements traditional classroom training with web-based components and learning environments where the educational process is experienced online (blackboard.com).

Online Education is a multi-tier pyramidal framework that is tailor-made for those galaxies of students who yearn for flexibility, leverage, self-paced learning in this can't-breathe-a-second way of living. Many stark flaws of traditional educational system take a heavy toll on students who, due to sundry commitments, suffer dearth of time, money and energy to comply with the run-of-the-mill and stringent schedules of conventional mode of learning. One gets incited to appreciate the student-focused benefits endowed by Online Education that is entirely elusive in the orthodox method of education. In fact, in the domain of Online Education the focus shifts from a brick and mortar institution to a congenial abode for the students or any place of their choice which is conducive to their comfort, morale and productivity and where they can lend ample focus to their work without being drifted off-track. Simply put, student-oriented education turns out to be the norm in Online learning. With the manifestation of Internet, Online Education is also marching alongside it, removing barriers while imparting higher education to its students with more emphasis on global interaction and latest expansion of knowledge (Rafi, 2010).

Online learning is a form of distance learning—formal study in which teacher and learner are separate in time and space (Smith & Blomeyer, 2005). Distance learning, where the bulk of instruction is offered via computer and the Internet, is called online learning (EC, 2000). It is, somehow, similar to e-learning. Tavangarian et al (2004) stated that E-learning comprises all forms of electronically supported learning and teaching. The Web becomes a virtual learning space where knowledge is shared and collaboration happens, not only between those who are geographically dispersed, but also among those who work on similar ideas at different times and contribute to that knowledge creation. (Scagnoli, 2005). Thus, online learning has started and is gaining popularity in many universities in recent years. For instance, most of the universities in Malaysia use online learning to supplement regular campus instruction (Ibrahim, 2002).

In the past, competition used to be somewhat restricted to limited geographic areas such as nations and possibly continents. But since then, the average of students who go abroad to study is about less than 2% (Rosina, Poe & Manhas, 2008). According to Manhas (2009), the main reason for this small percentage is cost: it is expensive, and beyond the means of most students, to study abroad for one year or one semester. Other inhibiting factors include comprehension about staying in a culture where one does not know the language and where one cannot have the comforts of home, long distance from home, safety factor (especially after 9/11), fear of illness (such as SARS), etc. It is, therefore, important for the schools / institutions to bring education to the doorstep of the students.

Online education grants effortless access to assistants, which permits the founding of a consortium of intellectuals for the purposes of intellectual exchange, collaboration, collective thinking, and socialization. Here, faculty is no longer limited by geographical borders.

In the background of online learning's influence, Kyong-Jee Kim and Curtis J. Bonk (2010) have laid three stark conclusions derived after a series of rigorous surveys. These are:

- Given the demand for online learning, the plethora of online technologies to incorporate into teaching, the budgetary problems, and the opportunities for innovation, they argue that online learning environments are facing a “perfect e-storm,” linking pedagogy, technology and learner needs.
- Given the rapid growth of online education and its importance for postsecondary institutions, it is imperative that institutions of higher education provide quality online programs.
- Given that many learners expect to receive some sort of training and support from their institutions to be ready for online teaching, colleges and universities need to consider how they will respond to these needs.

A conclusion can be drawn from these points that the dawn of online learning is simmering and as it barges

into the long dominated field of formal education, a perfect e-storm is in the making, with various institutions gearing up for its welcome.

The advantages and disadvantages of online education are detailed by Manhas (2009) as follows:

Advantages

Education,
Flexibility,
Reduced Overall Expenditure,
New Educational Ventures,
Group Concurrence,
Self-paced learning,
Transparency,
Internet,
Asset to 'People with a Challenge.'

Disadvantages

Lessened Peer to Peer Learning
Technophobia
Technological Hiccups

Although on-line learning / education can be a materials-rich and stimulating learning situation, it can also be a socially impoverished and lonely learning situation. Whether learning is on-line or not, the process of establishing a sense of a community of learners is a challenge in any classroom. Different studies support several researchers' apprehensions of the value of electronic communities: that on-line learning is more likely to produce social isolation than connectivity. Furthermore, some of the main barriers in the operation of effective online learning and global communication can be the following:

- cultural and environment problem;
- teaching style differences;
- problems of language and semantics;
- technical problems relative to platforms, operating systems and lack of standard interfaces.

To come to terms with the underlying point of friction in its universal acceptance, there is a need to critically examine the online education scenario and understand its impact on brand image of higher educational institutions. At this juncture, one query arises:

do the advantages and disadvantages of online learning consolidate its efficacy position against the odds? With the threadbare discussion we have had, two implications can be drawn: 1) some earnestly support it; and, 2) some vehemently denounce it.

But it defies us to come to a conclusion whether the arena of online education is a breeding ground for innovation or a mine-field. Therefore, to lay a solid foundation for our argumentation, a study was planned based on a research done by Manuela Milani (2008). Milani grounded her research on 'quality perception' in order to evaluate the efficacy of online education and side by side understand the potential impact of the cultural factor on the developing scenario of virtual education.

Brand is commonly referred to as the name, term, design, symbol, or any other feature that identifies one seller's good/service as distinct from those of other sellers (Aaker, 1996). The concept of brand image has been very significant to consumer behavior since the 1950's. As Aaker and Keller (1990) argue, and confirmed in Hsieh's study, that, brand image has been considered an important part of a firm's marketing program, not only because it serves as a foundation for tactical marketing mix issues but because it also plays an integral role in building long term brand-equity. Earlier definitions of brand image are presented in broad terms by Dobni (1990) who put forward other authors' understanding of brand image. Indeed, such definitions all concur, echoed by the words of Levy (1978) who stated that brand image is a constellation of ideas in people's minds that sum up their knowledge of the brand and their approach towards it. Another contemporary understanding of brand image was put forward by Hsieh (2002), who felt that building a brand image based on the identified benefit-based image dimensions consisted of a set of benefit brand associations. This helped consumers understand with clarity what a brand can do for them symbolically, economically, sensorial or as a utility. But perceptions of brand or brands image should not be taken to represent a brand's market position (Manhas, 2010).

From these definitions, a clear trend is appearing with regard to the perception of brand image with key figures around the mid-nineteen hundreds, supporting a

collective view that an individual takes in a collaboration of ideas that the company puts forward as a representation of themselves. This allows them to draw a clear conclusion of a company from a few certain points which strike a cord with the individuals.

RESEARCH METHODOLOGY

An on-site survey was conducted and the total sample size of our survey was 600 (see Table 1). Actually, the questionnaires were distributed to 700 students; however only 600 were usable. Some of the respondents submitted incomplete questionnaires and hence were discarded; some did not return their questionnaires.

Participants included 140 students of Global Understanding Course. All of them were returned since the questionnaire was administered during class hours. Forty of them were incomplete and therefore discarded. Data was not collected from students who enrolled but did not complete the course. Further 560 questionnaires were distributed in the state of Jammu & Kashmir; 500 students responded and returned the document. The high percentage of response rate can be attributed to the fact that the questionnaires were distributed during class hours.

A stratified random sampling method was used to select the respondents from various institutions. Table 2 depicts the complete demographic profile of the respondents. The total sample was distributed among three

Table 1.

Sampling Table and Participants

Respondents	Questionnaire Distributed	Questionnaire Received	Response Rate (in percentage)
Global Understanding Course (GUC)	140	100	71.42%
Degree Colleges	560	500	89.28%

Table 2.

Socio Demographic Profile of Respondents

Variable	Percentage
Gender	
Male	61.9
Female	38.1
Age (in years)	
20 & Below	23.1
21-30	33.3
31-40	17.0
41-50	16.3
51 & above	9.9
Education	
Primary school	2.4
Secondary school	3.5
High school	15.9
Bachelor's Degree	51.6
Master or Doctorate Degree	26.3
Annual Household Income (in INR)	
Less 30,000	32.1
30,000 – 50,000	16.3
50,000 – 100,000	29.0
100,000 & above	21.8

regions of the state: Jammu, Kashmir and Ladakh. In each region, the educational institutions were selected randomly, and in each educational institution students were also selected on random basis.

STATISTICAL TECHNIQUE USED

Factor Analysis

Over the years several different techniques have been used to assist researchers in understanding the perception of the respondents. The primary techniques are Factor Analysis, Discriminant Analysis, Multi-attribute Compositional Models and Multidimensional Scaling. Each has advantages and disadvantages (Green & Rao, 1972; Hauser & Koppelman, 1979). Several articles discuss and demonstrate the use of factor analysis (Hauser & Urban, 1977; Hauser & Wisniewski, 1979; Huber & Holbrook, 1979). Usually, the input data consist of a three-dimensional matrix of subjects' ratings of objects on a variety of attributes. The advantages of factor analysis are that both subjective and objective attributes can be used and that the dimensions of the product space are relatively easily determined from factor loadings.

Hauser and Koppelman (1979) conclude that attribute-based techniques such as factor analysis and discriminant analysis provide better measures of consumer perceptions than similarity techniques such as multidimensional scaling if the set of attributes is reasonably complete. In addition, these authors show that factor analysis is typically better than discriminant analysis. They also suggested that factor analysis performs better than any other technique with respect to both predictive ability and interpretability. Therefore, factor analysis was used to study the responses of the respondents.

RESULTS

Descriptive Statistics

Information regarding the awareness about online learning methodologies, usage of it by various educational

institutes, usage of the same by various respondents was collected and it was found that 84% of the respondents were aware of the online methodologies being employed and their usage. At any given point of time they had used the same for their work / studies. Only very few of the targeted audience claimed that they hardly ever put them to use. Those who used it habitually had computers at home and hence could avail it anytime. In contrast to the chronic users, the occasional usages were due to the lack of a personal computer at home. Around 80% of the respondents felt that the educational institutions should employ them and, in fact, according to the headmasters of various institutions, who were part of sample size, they also reflected that the same were being initiated in their institutions too.

The Kaiser-Meyer-Olkin test (KMO) and Bartlett's test of Sphericity were also applied on the collected data. Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations among variables are small or not. The results on Table 3 showed that value of KMO is 0.876 and, according to the criterion suggested by Kaiser (1974), the result for our value of KMO = 0.876 is "Meritorious". Thus, KMO Statistic suggests that we have sufficient sample size relative to the number of items / attributes in our scale. The significance Level (Sig) for Bartlett's test of Sphericity (135584.65), for the 15 attribute/ item Correlation matrix, was highly significant ($p < .000$). Thus, we can conclude that, according to Bartlett's test, the correlation matrix is not an identity matrix. Hence, the KMO statistic and Bartlett's test of Sphericity ($P < O$) suggest that the correlation matrix is factorable and that there are some underlying factors/dimensions that may explain the variance of 15 items.

Principal Components Analysis with Varimax Rotation identified three factors that explained 78.22% of total variance (see Table 4). The factors were named as:

Factor I - Perceived Benefits Factor
 Factor II - Access Factor
 Factor III - Technical Know How Factor

The Perceived Benefit Factor consists of six attributes, namely: 1) Self-Paced learning, 2) Unpleasant conventional mode of learning, 3) Differently abled students, 4) Upgradation of subject matter, 5) Online

Table 3.
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.876
Bartlett's Test of Sphericity	Approx. Chi-Square	135584.6
	Df	105
	Sig.	0

Table 4.
Exploratory Factor Analysis

Factors	Factor Loading	Eigen Value	Variance %	Communalities
I. Perceived Benefits Factor		6.528	41.444	
a. Self-paced learning	0.64			0.534
b. Unpleasant conventional mode of learning	0.86			0.796
c. Differently abled students	0.90			0.845
d. Upgradation of subject matter	0.897			0.810
e. Online delivery methods	0.879			0.835
f. Individual progress plans	0.91			0.855
II. Access Factor		2.947	21.347	
a. Cost effective	0.86			0.83
b. No geographical boundaries	0.91			0.812
c. Flexibility in education system	0.87			0.832
d. Interaction with students/teachers worldwide	0.73			0.558
e. Branded University degree available at door step	0.81			0.722
III. Technical Know How Factor		2.27	15.436	
a. Use of computer	0.95			0.887
b. Constant up gradation of knowledge	0.94			0.901
c. Efficient integrated system	0.81			0.765
d. Awareness of technologies	0.73			0.645
Total Variance			78.22	

Delivery Methods, 6) Individual progress plans. The factor loadings ranged from 0.64 to 0.91, with Individual Progress Plan bearing the highest factor loading (0.91) and Self-paced learning the lowest (0.64). These respondents primarily supported the following benefits being derived out of the Online Education System.:

Self-paced learning

- Initiated and directed by learner
- On demand availability
- Sense of equality

Unpleasant conventional mode of learning

- No documentation
- Reduced learning time

Differently abled students

- Remain at one location to access variety of courses

Upgradation of subject matter

- Expert knowledge
- Consistent delivery

Online delivery methods

- Automated classes accommodating many students in one session
- Interpersonal breath (peer groups)

Individual progress plans

- Learn at own place
- Expert knowledge

The Access Factor consists of five attributes, which are the following: 1) Cost effective, 2) No geographical boundaries, 3) Flexibility in education system, 4) Interaction of students/teachers worldwide, 5) Branded University degree available at door step. The factor Loadings ranged from 0.73 to 0.91, with No geographical boundaries reaching the highest factor loading (0.91) and Interaction of students/teachers worldwide scoring the lowest factor loading (0.73). Access was one of the major factors, which contributed to respondents to support the online learning process; they felt that universities that provide it have an enhanced brand image than academic institutions that do not providing it. The basic reasons that supported each attribute were:

Cost effective

- Pay less per credit hour

No geographical boundaries

- Sharing knowledge across borders
- Accessibility to remote locations

Flexibility in education system

- Learning not bound to day/night
- Does not hamper occupation
- Imparted through net
- Comfort with home
- No financial constraints

Interaction of students/teachers worldwide

- Value learning
- Student centered teaching approaches
- Branded University degree available at door step

The Technical Know How Factor consists of the four following attributes: 1) Use of computer, 2) Constant up gradation of knowledge, 3) Efficient integrated system, and 4) Awareness of technologies with a factor loadings range from 0.73 to 0.95. Use of Computer obtained the highest factor loading (0.95) and Awareness of technologies received the lowest factor loading (0.73). Respondents were primarily referring towards the ease of use of the online learning system. They supported it because of following reasons:

Use of computer

- Increase career prospect
- Enhance learning experience

Constant up gradation of knowledge

- Interactive sessions
- Variety of viewpoints

Efficient integrated system

- 24/7 Accessibility to course material
- Just in Time methods to access & evaluate progress
- Accommodate different learning styles
- Awareness of technologies

CONCLUSION AND IMPLICATIONS

The research presented here has attempted to provide an insight into the issue of online education and how it can enhance the brand image of educational institutions. Through this research we have been able to identify the underlying factors on which students' perceptions are developed, which can be of immense use for educational institutions. By looking at the results of factor analysis it was noted that there are three prominent factors that affect online education, already mentioned.

Online education has gained acceptance because of these factors; hence, it has become highly imperative for the educational institutions world wide to employ it and enhance their brand image and marketability in the eyes of the students. The relevance towards building effective brand image of educational institutions seems obvious, and the three prominent factors (Perceived Benefits Factor, Access Factor, Technical Know How Factor) as given by the respondents are important to be recognized in this matter. Regarding the perception of the educational institutions by the respondents, the perceived benefits factor is of particular interest. The Perceived Benefits Factor and the image perception according to type of information source lead to brand building. Thus, it is imperative for educational institutions to provide the benefits so derived out of this study, like Self-paced learning, Unpleasant conventional mode of learning, Differently abled students, Upgradation

of subject matter, Online delivery methods, Individual progress plans, in order to enhance their brand image amongst the student community.

This study reveals that the respondents' highly empathic interest in the factors identified in our study was a key reason for their preference for certain educational institutions and their educational programs. The findings suggest that if these factors are present in the educational institutions, they can act as positive push factors for choosing educational institutions for study. Thus, the popularity of an educational institution and its brand image can be judged by the number of students opting for programs in that educational institution.

Besides what online education does for the students, learners and tutors at large, it confers some potential by-products which makes it more vital than ever. With the heady up rise in inflation, oil crisis and global warming, everybody has begun to scrimp and save. Companies across sectors are tightening their belts by adopting innovative initiatives such as minimizing travel costs of executives by opting for video-conferencing, experimenting with work-from-home proposals. Similarly, the majority of the higher education institutions have realized that in order to build strong brand value of their institutions they have to adopt the concept of online-learning/online education. This online education option enables the stakeholders, especially students, to extract information from different types of sources anytime, anywhere. A conclusion can be drawn from these points that the dawn of online learning is simmering and, as they barge into the long dominated sphere of formal education, a perfect e-storm is in the making, with various institutions opening their doors to it.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE STUDY

Every research study has some certain limitations and this study is no exception. They mainly were time, financial and geographical constraints. The major limitation was that it only took into consideration the views of the students who responded to the survey.

There is currently no way to match this result with the viewpoint of students who did not respond to the survey or officially withdrew from the course before the end of the semester. Another major limitation was that the sample size of this study was limited to the students of state of Jammu & Kashmir. It is suggested that a similar study should be conducted with more varied sample size from across the various cities of India.

From its beginning, the online medium has had a great scope in delivering the education and providing the flexibility to working professionals. In this study, after consulting the literature, we identified three factors, which may be less relevant in this geographical location as compared to others in developed economy where online resources are fully functional. The contribution of online medium in building the educational brand image mostly in western world is outstanding. But, as far as developed economies are concerned, the trend of delivering the online education is less in use and, hence, this concept should be explored more extensively. The study of the perception of students regarding the usage of online education, and how it affects the brand value of educational institutions, should be considered as one of the areas for future study. The immediate implications of this research extend into the realms of both research and practice. We need to conduct more elaborate studies to determine the relevance of online education in today's changing educational scenario and how it impacts the brand image of the educational institutions. In fact, we need to identify if online learning systems attract the students or act as deterrents.

References

- Aaker, D. A., & Keller, K. L. (1990). Consumer Evaluations of Brand Extensions. *Journal of Marketing*, 54(1), 27-41.
- Aaker, D. A. (1996). *Building Strong Brands*. New York: The Free Press.
- Blackboard.com. source: <http://www.google.co.in/url?sa=t&source=web&cd=10&ved=0CGYQFjAJ&url=http%3A%2F%2Fwww.uth.tmc.edu%2Fmed%2Fadministration%2Fedu_programs%2Fep%2Fblackboard%2Ftext%2FOnline_Learning_Benefits.pdf&ei=Efg7Tfq8E8HxrQfk0MjJCA&usg=AFQjCNGoNnadGh55k2GSaEcpeDJTfv5caQ&sig2=WZyG7f0I-cTyPjPH9oTwZA>; accessed on 22nd January, 2011.
- Ibrahim, D. Z., Silong, A. D., & Samah, B. A. (2002). *Readiness and Attitude Towards Online Learning among Virtual Students*. Paper presented at the meeting of the Asian Association of Open Universities, New Delhi.
- Dobni, D., & Zinkhan, G. M. (1990). In Search of Brand Image: A Foundation Analysis. *Advances in Consumer Research*, 17(1), 110.
- EC (2000). Communication from the Commission: E-Learning – Designing “Tejas at Niit” Tomorrow’s Education. Brussels: European Commission. Education.stateuniversity.com (n. d.), <<http://education.stateuniversity.com/pages/1917/Distance-Learning-in-Higher-Education.html>>. Accessed on 15th January, 2011.
- Green, P. E., & Rao, V. R. (1972). *Applied Multidimensional Scaling: A Comparison of Approaches and Algorithms*. New York: Hold, Rinehart and Winston.
- Hauser, J. R., & Koppelman, F. S. (1979). Alternative Perceptual Mapping Techniques: Relative Accuracy and Usefulness. *Journal of Marketing Research*, 1, 495-506.
- Hauser, J. R., & Wisniewski, K. (1979). *Consumer Analysis for General Travel Destination*. (Technical Report) Evanston, IL: Northwestern University, Transportation Center.
- Hauser, J. R., & Urban, G. (1977). A Normative Methodology for Modeling Consumer Response to Innovations. *Operations Research*, 25, 579–619.
- Hsieh, H. M. (2002). Identifying Brand Image Dimensionality and Measuring the Degree of Brand Globalization: A Cross-National Study. *Journal of International Marketing*, 10(2), 46-67.
- Huber, J., & Holbrook, M. B. (1979). Using Attribute Ratings for Product Positioning: Some Distinctions Among Compositional Approaches. *Journal of Marketing Research*, 16, 507-15.
- Macdonald, J. (2002). *Assessing Online Collaborative Learning: Process and Product*. Edinburgh, UK: Open University in Scotland.
- Kaiser, H. F. (1974). An Index of Factorial Simplicity. *Psychometrika*, 39, 32–36.
- Kim, K. J., & Bonk, C. J. (2010). *The Future of Online Teaching and learning in Higher Education*. In <<http://net.educause.edu/ir/library/pdf/EQM0644.pdf>>. Accessed on 5th April, 2010.
- Levy, S. J. (1978). *Marketplace Behavior*. New York: AMACOM.
- Liaw, S. S., Huang, H. M., & Chen, G. D. (2007). Surveying Instructor and Learner Attitudes toward e-learning. *Computers & Education*, 49, 1066-1080.
- Manhas, P. S. (2010). Strategic Brand Positioning Analysis through Comparison of Cognitive and Conative Perceptions. *Journal of Economics, Finance and Administrative Science*, 15(29), 15 – 33.
- Manhas, P. S. (2010). Building Brand Positioning Strategies through Internet: Implications for Future. *Proceedings of the International Conference on Informatics – Communication Technologies in Linguistics, FLT and Cross – Cultural Communication, Moscow, Russia*, 4, 305-320.
- Manhas, P. S. (2009). Virtual Collaborative Learning Environment and Online Education: An Emerging Branding Paradigm for Higher Educational System. *Proceedings of the 2nd GPE Annual Conference Beijing 2009, China*, 19-25.

- Milani, M. (2008). Cultural Impact on Online Education Quality Perception, Electronic. *Journal of E-Learning*, 6(2), <<http://www.ejel.org/Volume-6/v6-i2/Milani.pdf>> Accessed on 1st April, 2010.
- Nagy, A. (2005). The Impact of E-Learning, In P. A. Bruck, A. Buchholz, Z. Karssen, & Zerfass, A. (Eds) *E-Content: Technologies and Perspectives for the European Market*. Berlin (79-96). Germany: Springer Verlag.
- Rafi, M. (2010). Advantages of Online Education for Students. <http://www.stripes.com/shop_pages/pages/education/documents/story2.pdf>. Accessed on 1st April, 2010.
- Rosina, C., Poe, E., & Manhas, P. S. (2008). An Interactive Virtual Global Cultural Course: Building a Real Time Cost Effective Global Collaborative Learning Environment. *International Journal: emerging technologies in Learning*, 3 (1).
- Scagnoli, N. (2005). Impact of Online Education on Traditional Campus-Based Education. *International Journal of Instructional Technology and Distance Learning*, 2(10). <http://www.itdl.org/Journal/Oct_05/article06.htm>. Accessed on 30th March, 2010.
- Smith, R., Clark, T., & Blomeyer, R. (2005). A Synthesis of New Research on K-12 Online Learning Napperville, IL: LearningPoint Associates. <<http://www.ncrel.org/tech/synthesis/synthesis.pdf>> p. 4, accessed on May 4, 2010.
- Tavangarian, D., Leypold, M., Nölting K., & Röser, M. (2004). Is e-learning the Solution for Individual Learning? *Journal of e-learning*. <<http://kba-ips.com/tag/tavangarian-d-leypold-m-nolting-k-roser-m-2004-is-e-learning-the-solution-for-individual-learning-journal-of-e-learning-2004/>>.