

OBSERVING FLUENCY, FLEXIBILITY, ORIGINALITY AND CREATIVITY THROUGH ICT OF HARYANA FOR TECHNOLOGICAL STUDENTS AND PERSPECTIVE TEACHER

Anu Malhotra, Ph. D.

Principal, SSD Girls College of Education, Punjabi University, Bathinda.

Abstract

Education may be the key to the success of modern civilization. Twentieth-century countries have been successful in defining and implementing effective teaching methods and inclusive social work. The process of passing on the practice of sharing among less experienced teachers was considered in two cases which sought to encourage teachers to use information and communication technology (ICT) in an effective teaching method. The aims of the college are to provide new models for in-service teacher training. The program included teaching sessions, training materials presenting real-life teaching examples, and trying to get out of the classroom. For a long time, new methods have been used to improve the learning process. This paper manages the significant impact of teaching method development using data development tools.



Scholarly Research Journal's is licensed Based on a work at www.srjis.com

I. Introduction

Today, the implementation of educational communication technology and technology is needed. ICT enables to create ways to support communication efficiency and distance teaching. At the same time ICT develops the ability to read independently through interactive teaching and self-assessment of electronic devices. At the heart of the work of our university students is developing their skills in problem-solving in engineering. One of the basic concepts of that understanding is understanding mathematical theory and practicality. Students of Slovak University of Technology gains mathematical knowledge and skills within compulsory mathematics courses. However, from our own experience, some students had difficulty applying mathematical knowledge correctly, as well as developing mathematical skills through self-study. The majority of students reported [1] the lack of application information, and technical and mathematical support software. Moreover a large portion of the students could not to complete math lessons and failed to continue learning in our university. Information and Communication Technology (ICT) has become an important factor in the way we work, trade, negotiate and communicate with people, deal with personal or global conflicts, use material and cultural resources, spend leisure time, and study for more

Copyright © 2017, Scholarly Research Journal for Interdisciplinary Studies

than sixty years. Against this background of ongoing change, schools are still recognized as community organizations with a strong tendency to preserve their cultural structure, and to embrace change only through modest (and slow-moving) steps. However, much work is being done in many educational programs around the world regarding the inclusion of ICT in schools, which is promoting as important changes in the teaching system as possible learning [2]. These changes affect school life at different levels in many ways, for example, the development of new learning programs (over time and spatial planning), the development of novel educational solutions, or the expansion of online school resources. . Children under the age of 16 are members of the first generation of digital technology and are part of their childhood experience [3]. They may not have had to deal with life without a compatible TV, the Internet, or a cell phone. Children are exposed to new technological advances every day, and it is possible that these experiences are influencing their ability to build capacity through new ICT tools. Children are expected to excel in all aspects, in terms of growing knowledge of ICT tools and processes, strategic and operational skills, and cognitive skills [4]. This is best achieved through the expansion of the use of ICT and the depth of existing problems [5]. Children generally have a positive attitude towards ICT and most take every opportunity to develop their ICT skills. Both adults and children make sense of new programs and computers by playing with them to find out what they can do, how they can do it and what things they can use in it [6]. ‘Happy discovery’ is a widely used learning strategy, and children enjoy activities where they can set their own goals [7].

II. Literature Review

Maia E. et.al (1999) in this paper focuses on three issues, the formation of interdependent environments, the interaction in these contexts and the processes involved in creative collaboration. Digital networks are gaining importance as a place for learning and intelligent collaboration. Technological breakthroughs, software enhancements, and a growing number of operating principles make it possible to complete complex environments that satisfy many of the elements required for artistic collaboration [8].

Robert J. (2000) explored and critically analyzed the ability of Information and communication technologies (ICT) to improve the transmission of information. Information and Communication Technology (ICT) favors the transfer of information that can be organized and reduced to data. Of particular concern here is the role, if any, played by

information and communication technologies (ICT) in the transmission of confidential information [7].

Ewart K. (2002) examined information and communication technologies (ICT) and their impact on skills and innovation, dynamic change or dependent flexibility. Drawing on research in the areas of strategic management, marketing and human resource management, the paper outlines how information and communication technology (ICT) are disseminated, and the implications for skills [8].

Kaushilk P.D. et.al. (2004) expounds the commitment of data innovation for expansive scholastic turn of events. Two continuous activities mean to give data innovation based administrations to rustic populace in India were talked about.

Burnard P. (2007) suggested how effective music educational practice should happen in the new e-learning environments, which expand and connect communities of learners in music classroom. Several ways of driving pedagogical evolution, in ways that resemble the relationship between creativity and technology as we see in the world beyond school, are introduced [11].

Devi L.P. et.al. (2008) examines about the pertinence, difficulties and extremist change with the utilization of data and correspondence innovation (ICT) in instruction. This paper presents the studies wherein the information and communication technology (ICT) fosters another skyline in learning conditions for educators and understudies [12].

Kharade J. et.al. (2011) examines the advanced separation situation, different information and communication technology (ICT) drives and the significant difficulties and the critical arrangements in spanning the computerized partition in India [13].

III. ANALYSIS AND INTERPRETATIONS

Fluency: The analysis of fluency of teachers and students of Haryana technical education shows that 41% of respondents in the control group (n = 158) fall under the category of most high achievers (HA), while only 9% of respondents. the uncontrolled group (n = 122) falls under the category of high achievers (HA). 48% of the control group respondents fall under the category medium achievers (MA), and and 40% of the respondents of the control group fall under the category of average graduates medium achievers (MA). Only 9% of the control group respondents fall under the category of low achievers (LA), whereas 50% of the respondents of uncontrolled group come under the category of low achievers (LA). it is envisaged in the calculated results that the use of information and communication technology

(ICT) plays a key role in improving the smoothness of the teaching and learning environment of teachers and students of Haryana Province. The calculated data for Chi-Square analysis (Chi-Square = 70.73, Table Value = 5.99 and df = 2) showed that the use of information and communication technology (ICT) has a significant impact on fluent communication of teachers and students' technical education at Haryana State.

1.1 Chi-Square Crosstabulation of fluency of the perspective teachers and students of technical education of Haryana

		ACHIEVEMENT				
			1_HIGH	2_MEDIUM	3_LOW	Total
GROUP	CONTROLLED	Count	66	77	15	158
		Expected Count	43.4	71.1	43.4	158.0
	UNCONTROLLED	Count	11	49	62	122
		Expected Count	33.6	51.1	33.6	122.0
Total		Count	77	126	77	280
		Expected Count	77.0	126.0	77.0	280.0

Table 1.1 shows the cross-sectional table of the Haryana Province for teachers and students of technical education. Table 1.2 shows the results of the Chi analysis analyzed by the social science mathematical package (SPSS) 16.0. Figure 1.1 shows a bar chart showing the response of the Successful Higher, Medium and Lower Successful groups in the perspective of teachers and technical education students in the unregulated and controlled group of Haryana region.

Table 1.2 Chi-Square Analysis of fluency of the perspective teachers and students of technical education of Haryana

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	70.737 ^a	2	.000
Likelihood Ratio	76.025	2	.000
N of Valid Cases	280		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 33.55.

Figure 1.1 shows the graphical response of information and communication technology (ICT) on Fluency of perspective teachers and students of technical education of Haryana for controlled and uncontrolled group comprising of 158 and 122 students respectively.

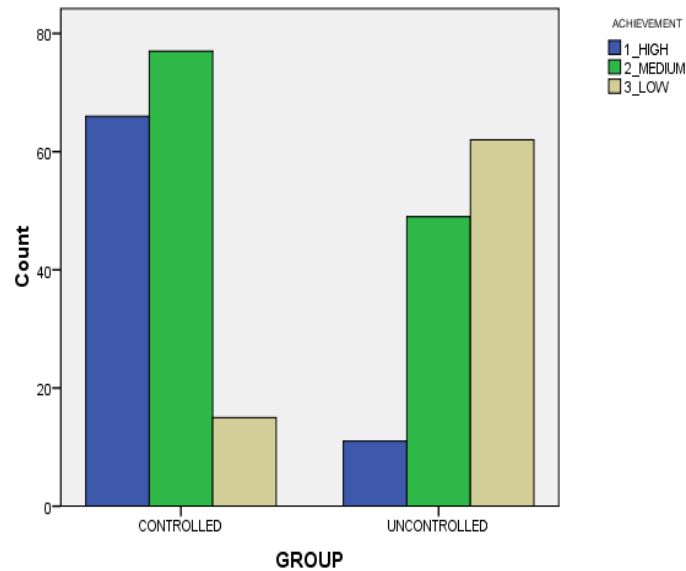


Figure 1.1 Bar Chart of fluency of the perspective teachers and students of technical education of Haryana

It is inferred from the bar chart that 66 students came under the category of high achievers (HA), 77 students came under the category of medium achievers (MA) and 15 students came under the category of low achievers (LA) out of 158 students of controlled group comprising of perspective teachers and students of technical education of Haryana. On the divergent side, 11 students came under the category of high achievers (HA), 49 students came under the category of medium achievers (MA) and 62 students came under the category of low achievers (LA) out of 122 students of uncontrolled group comprising of perspective teachers and students of technical education of Haryana.

Flexibility: The analysis of flexibility of Haryana's teachers and students' technical education studies shows that 36% of the control group respondents (n = 158) fall within the high achievers (HA), while only 22% respond. the uncontrolled group (n = 122) falls under the category of high achievers (HA). 40% of the control group respondents fall under the category of medium achievers (MA), and 36% of the respondents of uncontrolled group come under the category of medium achievers (MA). Only 22% of the control group respondents fall under the category of low achievers (LA), while 40% of the respondents of the control group fall under the category of low achievers (LA). It is envisaged in the calculated results that the use of information and communication technology (ICT) plays an important role in

Copyright © 2017, Scholarly Research Journal for Interdisciplinary Studies

promoting the Transformation of the perception of teachers and students of technology education in Haryana Province.

Table 1.3 Chi-Square Crosstabulation of flexibility of the perspective teachers and students of technical education of Haryana

		ACHIEVEMENT				
			1_HIGH	2_MEDIUM	3_LOW	Total
GROUP	CONTROLLED	Count	58	64	36	158
		Expected Count	48.0	61.5	48.5	158.0
	UNCONTROLLED	Count	27	45	50	122
		Expected Count	37.0	47.5	37.5	122.0
Total		Count	85	109	86	280
		Expected Count	85.0	109.0	86.0	280.0

Table 1.4 Chi-Square Analysis of flexibility of the perspective teachers and students of technical education of Haryana

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.475 ^a	2	.002
Likelihood Ratio	12.548	2	.002
N of Valid Cases	280		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 37.04.

The calculated figures for Chi-Square analysis (Chi-Square = 12, Table Value = 5 and df = 2) showed that the use of information and communication technology (ICT) had a significant impact on the changing perceptions of teachers and students of technology education of Haryana State. Table 1.3 shows the varied perceptions of teachers 'and students' technical education in Haryana Province. Table 1.4 shows the results of the Chi analysis analyzed by the social science (SPSS) mathematical package 16.0. Figure 1.2 shows a bar chart showing the response of the High, Medium and Lower Success groups in the Transformation of the perception of teachers and students of technical education in the unregulated and controlled group of the Haryana region. unregulated consisting of 158 students and 122 respectively.

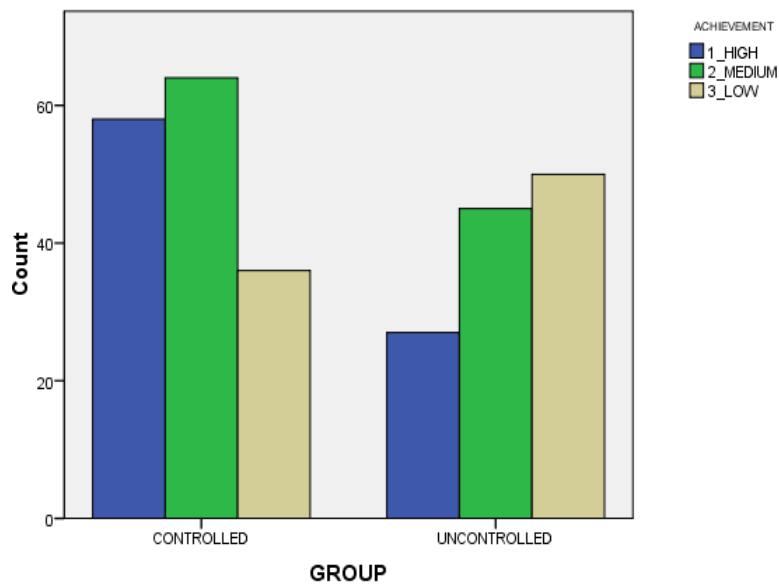


Figure 4.1 Bar Chart of flexibility of the perspective teachers and students of technical education of Haryana

It is inferred from the bar chart that 58 students came under the category of high achievers (HA), 64 students came under the category of medium achievers (MA) and 36 students came under the category of low achievers (LA) out of 158 students of controlled group comprising of perspective teachers and students of technical education of Haryana. On the divergent side, 27 students came under the category of high achievers (HA), 45 students came under the category of medium achievers (MA) and 50 students came under the category of low achievers (LA) out of 122 students of uncontrolled group comprising of perspective teachers and students of technical education of Haryana.

Originality: The analysis of Originality of Haryana technology for teachers and students of technical education shows that 21% of the respondents in the control group (n = 158) fall under the category of high achievers (HA), and only 28% of the respondents in the control group (n = 122) fall below category of high achievers (HA). 44% of the control group respondents fall under the category of medium achievers (MA), and 34% of the respondents of the control group fall under the category of medium achievers (MA). The 33% of the respondents of controlled group come under the category of low achievers (LA), whereas 36% of the respondents of uncontrolled group come under the category of low achievers (LA).

Table 1.5 Chi-Square Cross tabulation of Originality of the perspective teachers and students of technical education of Haryana

		ACHIEVEMENT			
		1_HIGH	2_MEDIUM	3_LOW	Total
GROUP CONTROLLED	Count	34	71	53	158
	Expected Count	38.9	63.8	55.3	158.0
UNCONTROLLED	Count	35	42	45	122
	Expected Count	30.1	49.2	42.7	122.0
Total	Count	69	113	98	280
	Expected Count	69.0	113.0	98.0	280.0

Table 1.6 Chi-Square Analysis of Originality of the perspective teachers and students of technical education of Haryana

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.540 ^a	2	.170
Likelihood Ratio	3.553	2	.169
N of Valid Cases	280		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 30.06.

It is based on the stated results that the use of information and communication technology (ICT) does not play any role in improving the perception of teachers and students of technology education in Haryana Province. The calculated figures for the Chi-Square analysis (Chi-Square = 3, Table Value = 5 and df = 2) showed that the use of information and communication technology (ICT) did not have a significant impact on the Origin of the Haryana State technology for teachers and students. Table 1.5 shows the actual integration of the Haryana State technology teachers 'and students' technical education studies. Figure 1.2 shows a bar chart showing the response of the Successful High, Medium and Lower real teams in the vision of teachers and technical education students in the Haryana regional unregulated and controlled group. The origins of the vision of Haryana teachers and students of technical education in a controlled and unregulated group consisting of 158 and 122 students respectively.

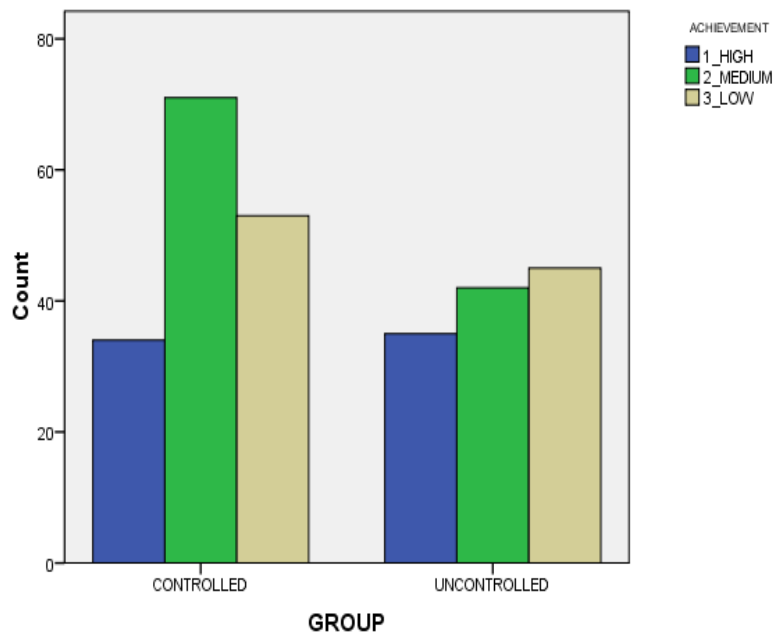


Figure 1.3 Bar Chart of Originality of the perspective teachers and students of technical education of Haryana

It is inferred from the bar chart that 34 students came under the category of high achievers (HA), 71 students came under the category of medium achievers (MA) and 53 students came under the category of low achievers (LA) out of 158 students of controlled group comprising of perspective teachers and students of technical education of Haryana. On the divergent side, 35 students came under the category of high achievers (HA), 42 students came under the category of medium achievers (MA) and 45 students came under the category of low achievers (LA) out of 122 students of uncontrolled group comprising of perspective teachers and students of technical education of Haryana.

Creativity: The analysis of Creativity of the perspective teachers and students of technical education of Haryana shows that the 30% of the respondents of controlled group (n=158) come under the category of high achievers (HA), whereas only 8% of the respondents of uncontrolled group (n=122) come under the category of high achievers (HA).

Table 1.7 Chi-Square Crosstabulation of Creativity of the perspective teachers and students of technical education of Haryana

		ACHIEVEMENT				
			1_HIGH	2_MEDIUM	3_LOW	Total
GROUP	CONTROLLED	Count	48	80	30	158
		Expected Count	32.7	75.6	49.7	158.0
	UNCONTROLLED	Count	10	54	58	122
		Expected Count	25.3	58.4	38.3	122.0
Total		Count	58	134	88	280
		Expected Count	58.0	134.0	88.0	280.0

Table 1.8 Chi-Square Analysis of Creativity of the perspective teachers and students of technical education of Haryana

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.797 ^a	2	.000
Likelihood Ratio	36.582	2	.000
N of Valid Cases	280		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 25.27.

The 50% of the respondents of controlled group come under the category of medium achievers (MA), and 44% of the respondents of uncontrolled group come under the category of medium achievers (MA). Only 18% of the respondents of controlled group come under the category of low achievers (LA), whereas 47% of the respondents of uncontrolled group come under the category of low achievers (LA). It is inferred from the computed results that the use of information and communication technologies (ICT) plays a key role in improving the Creativity of the perspective teachers and students of technical education of Haryana State. The calculated values of Chi-Square analysis (Chi-Square=34, Table Value=5 and df=2) has demonstrated that the use of information and communication technologies (ICT) has a significant effect on Creativity of the perspective teachers and students of technical education of Haryana State. Table 1.7 shows the cross tabulation of Creativity of the perspective teachers and students of technical education of Haryana State. Table 1.8 shows the results of Chi square analysis analyzed through statistical package for the social sciences (SPSS) 16.0. Figure 1.4 shows the bar chart indicating the response of High, Medium and Low achievement groups in Creativity of the perspective teachers and students of technical education for uncontrolled and controlled group of Haryana state. Figure 1.4 shows the graphical response of information and communication technology (ICT) on Creativity of

perspective teachers and students of technical education of Haryana for controlled and uncontrolled group comprising of 158 and 122 students respectively.

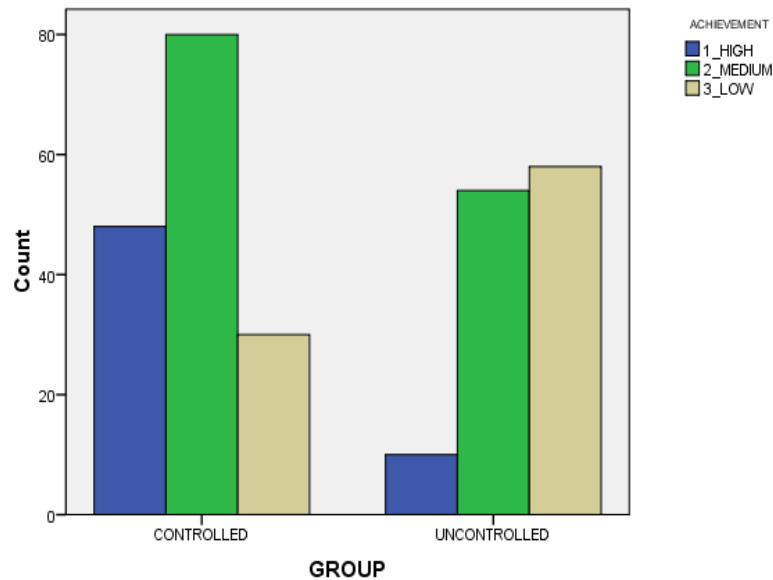


Figure 1.4 Bar Chart of Creativity of the perspective teachers and students of technical education of Haryana

It is inferred from the bar chart that 48 students came under the category of high achievers (HA), 80 students came under the category of medium achievers (MA) and 30 students came under the category of low achievers (LA) out of 158 students of controlled group comprising of perspective teachers and students of technical education of Haryana. On the divergent side, 10 students came under the category of high achievers (HA), 54 students came under the category of medium achievers (MA) and 58 students came under the category of low achievers (LA) out of 122 students of uncontrolled group comprising of perspective teachers and students of technical education of Haryana.

IV. Conclusion

It is inferred from fluency 66 students came under the category of high achievers (HA), 77 students came under the category of medium achievers (MA) and 15 students came under the category of low achievers (LA). In Flexibility 58 students came under the category of high achievers (HA), 64 students came under the category of medium achievers (MA) and 36 students came under the category of low achievers (LA). In Originality 34 students came under the category of high achievers (HA), 71 students came under the category of medium achievers (MA) and 53 students came under the category of low achievers (LA). In last

Creativity 48 students came under the category of high achievers (HA), 80 students came under the category of medium achievers (MA) and 30 students came under the category of low achievers (LA)

References

- Miš'ut, M. – Miš'utova', M. *ICT as an element of teaching model. IKT ako prvok modelu vyuč'ovania. In: Proceedings of the 14 th International Scientific Conference CO-MAT-TECH 2006. Trnava: MTF so sí'dlom v Trnave, 2006. s. 895 – 900. ISBN: 80-227-247 2-6*
- Pierce, R., & Ball, L. *Perceptions that may affect teachers' intention to use technology in secondary mathematics classes. Educational Studies in Mathematics, 71(3), 299–317, 2009*
- Kennewell, S. and Morgan, A. (2003) *Student teachers' experiences and attitudes towards using interactive whiteboards in the teaching and learning of young children'. In Young Children and Learning Technologies, J. Wright,*
- Kennewell, S., Parkinson, J., and Tanner, H. (2000) *Developing the ICT Capable School. RoutledgeFalmer, London*
- Birnbaum, I. (1989) *IT and the National Curriculum: Some Fundamental Issues. Resource, Doncaster.*
- Moyles, J. (1989) *Just Playing? Open University Press, Milton Keynes.*
- Facer, K., Furlong, J., Furlong, R., and Sutherland, R. (2003) *Screen Play: Children and Computers in the Home, RoutledgeFalmer, London.*
- Maia E., Andre M. (1999), "Digital Environments for Learning and Collaboration- Architecture, Communication, Creativity", *In the Proceedings of the Conference of Association for Computer-Aided Design in Architecture, Salt Lake City, U.S.A., October 1999*
- Roberts J. (2000), "From Know-How to Show-How? Questioning the Role of Information and Communication Technologies in Knowledge Transfer", *Technology Analysis and Strategic Management, 12(4), pp.429-443.*
- Ewart, C. K., Jorgensen, R. S., Suchday, S., Chen, E., & Matthews, K. A. (2002). *Measuring stress resilience and coping in vulnerable youth: The social competence interview. Psychological Assessment, 14(3), 339–352. https://doi.org/10.1037/1040-3590.14.3.339*
- Burnard P. (2007), "Reframing Creativity and Technology: Promoting Pedagogic Change in Music Education", *Journal of Music, Technology and Education, 1(1), pp.37-55.*
- Devi L.P., Bimol S. (2008), "ICT: A new Horizon of School Education", *in the proceedings of 2nd National Conference – India Com – 2008.*
- Kharade J., Sharma G. (2011), "Bridging the digital divide in India: Challenges and opportunities", *in the proceedings of 5th National Conference – India Com – 2011.*