

COMPARATIVE STUDY ON GENDER DIFFERENCES IN THE USE OF THE INTERNET BY THE MEDIUM OF INSTRUCTION IN KOLKATA

Swastika Ghoshal¹ & Dr. Monika Sharma²

¹Research Scholar, Shyam University, Rajasthan, India

²Assistant Professor, Shyam University, Rajasthan, India

Received: 02 May 2022

Accepted: 06 May 2022

Published: 07 May 2022

ABSTRACT

Internet is the new way of learning. It helps students to know unknown things. It also helps in self-learning. The main aim of this study is to identify the use of the internet in education due to gender and the medium of instruction. In this study, 400 students participated. By using a multiple case study carried out in situ, the research team has gathered information from the teaching staff entrusted with the process of incorporating the Internet into the educational program at each school. It has also studied the way in which the use of the Internet in the classroom is specified. These sources have been subjected to descriptive techniques in order to increase the reliability of the results, which has enabled us to define the extent to which the gender of those running the educational implementation of the Internet in Spanish centers is influential. The results show that there are no significant differences between men and women in the impact of the Internet on the educational programs at the centers used in this study.

KEYWORDS: *Internet, Education, Gender, Medium of Instruction*

INTRODUCTION

In terms of equity, Internet access is a critical issue. As Katz and Aspden (1997) point out, government activities are becoming more accessible, job openings are promoted, and commercial chances are offered online. Furthermore, persons who use the Internet may benefit commercially because it enables for quick comparison of prices for various goods and services. Furthermore, and particularly pertinent to the youngsters who are the subject of this study, the Internet may be utilised for pleasure and education, as well as providing social benefits through communication channels like e-mail and chat rooms. As can be seen, the Internet is a critical technology whose use by youngsters should be investigated.

As can be seen, the Internet is an important technology whose usage by children should be investigated since it has the potential to both enrich their lives now and provide them with a lot of benefits in the future. Furthermore, children are an especially significant demographic to study when it comes to Internet use, as Lenhart (2000) points out that a disproportionate percentage of non-users are senior folks, whereas the young are the most likely to get online at some point. Furthermore, even a powerful institution like the UK government recognises the importance of the Internet: in their UK Online Annual Report (2002), they write, "Our goal is to ensure that everyone who wants it has access to the Internet by 2005."

Some studies concerning gender differences in Internet use have been conducted. However, research by those investigating this field such as Jackson, Ervin, Gardner, and Schmitt (2001), Odell, Korgen, Schumacher, and Delucchi (2000), Nachmias, Mioduser, and Shelma (2000) Schumacher and Morahan-Martin (2001) and Durndell and Haag (2002) does not provide consistent evidence for the presence or otherwise of a gender gap in Internet use across different groups of males and females. Results vary depending on the demographics of the sample on which the research was performed. For example, Nachmias, Mioduser, and Shelma (2000) indicated a bias toward male use of the Internet amongst Israeli schoolchildren as did Durndell and Haag (2002) amongst Romanian university students. Furthermore, Schumacher and Morahan-Martin (2001) made similar findings with a sample of American undergraduate college students. However, Odell, Korgen, Schumacher, and Delucchi (2000) found that there was virtually no gender gap in Internet use in their sample of American undergraduates as did Jackson, Ervin, Gardner, and Schmitt (2001) with their sample of Anglo-American undergraduates. Furthermore, a search of the psychological literature undertaken for this paper did not reveal any evidence regarding gender differences in Internet use amongst English children. The conflicting findings from international research and the lack of research focused on English children indicate that there is a need to provide reliable non-commercial data that can provide information about gender differences in Internet use amongst this specific group. Commercial data are not an acceptable substitute for academic research where Internet use is concerned, as Jordan (2001) has noted that this sometimes overestimates the size and growth of this technology for its purposes.

While the findings on gender disparities in total Internet use are ambiguous, several studies have replicated evidence that suggests there are some consistent differences in the purposes for which males and females use the Internet across a variety of countries and age groups. Several studies have discovered, for example, that ladies are more likely than males to use the Internet for e-mail (e.g., Odell, Korgen, Schumacher, & Delucchi, 2000; Pew Internet and American Life Project, 2000; Sherman et al., 2000; Weiser, 2000; Jackson, Ervin, Gardner, & Schmitt, 2001). Women, according to Boneva, Kraut, and Frohlich (2001), have hijacked the use of the Internet for this purpose since they have traditionally overseen sustaining relationships.

Furthermore, according to Boneva, Kraut, and Frohlich (2001) and Weiser (2000), e-mail may suit the emotionally expressive style of communication that women prefer in maintaining their relationships, and Allen (1995) has discussed how women may prefer to use e-mail for certain purposes because it allows them to communicate without the gender dynamics that influence other forms of communication. Some studies have suggested that females are more likely than males to use the Internet for education and research (Odell, Korgen, Schumacher, & Delucchi, 2000; Weiser, 2000; Durndell & Haag, 2002), albeit this difference may only occur in younger age groups (Weiser, 2000; Durndell & Haag, 2002).

This report seeks to describe children's general Internet behaviors as well as gender variations in Internet use among English schoolchildren. The reason for this is that, while data on Internet-related activities among adults in the UK has been collected (e.g., by the Office for National Statistics, 2002a,b,c), a literature search revealed no non-commercial data on English children's general Internet use. Even in the Government's UK Online Annual Report (2002)'People' chapter (Chapter 4) which examines the public's usage of the Internet, adult use is emphasised far more than that of youngsters. '99 percent of all schools now have access to the Internet, compared to 28% in 1998,' according to the report.

To sum up, the following descriptive survey of Internet use among English secondary school students was conducted, first, to identify whether there are any gender inequalities in this activity. Second, the information is useful. a general summary of children's Internet usage that will be used to inform future decisions and additional in-depth examinations of various aspects of this activity.

THE OBJECTIVE OF THE PRESENT STUDY

- To study the use of Internet Impact on Learning varies due to Gender
- To study on the use of the Internet Impact on Learning varies due to the Medium of instruction

Null Hypothesis

- H_01 : There is no significant difference in the Impact of the Internet on Learning due to Gender.
- H_02 : There is no significant difference in the Impact of the Internet on Learning due to the Medium of instruction.

METHODOLOGY

Variables

- **Independent:** ICT
- **Dependent:** Impact of the study

Sampling Method

The researcher wants to use a simple random sample in this study. At first, a researcher approached all the secondary schools situated in Kolkata. Then those schools responded earlier and wanted to participate in this study. The researcher included those schools as a sample.

Sample Distribution

Table 1

Category	English	Bengali
Boys	100	100
Girls	100	100
Total	200	200

This was a descriptive survey.

The resulting questionnaire had 32 questions about Internet usage with 'checkbox' replies.

The survey asked about a variety of topics related to children's Internet use. In addition to asking whether children use the Internet, the questionnaire also asked why they did not use it, to encourage them to participate in the positive parts of this activity in the future. These included the quantity of time spent on the Internet, as well as the amount of money spent on it.

Furthermore, the reasons for Internet use by schoolchildren were regarded as a significant topic for inquiry, as this would reveal whether they used it as a powerful tool in many aspects of their lives, or if they only used it for a few functions. Several questions on the survey addressed this, the most obvious being one that inquired as to why children used

the Internet, but others were also pertinent, such as one that looked at the frequency with which children used the Internet for e-mail and the worldwide web, and another two that inquired as to whether they had a personal e-mail address and/or webpage.

ANALYSIS

Here researcher used inferential statistic parametric and non-parametric methods.

Table 2: Multiple Factors ANOVA for I.I.L (ANOVA for Gender, Medium of Instruction)

Tests of Between-Subjects Effects					
Dependent Variable: I.I.L					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	92566.347 ^a	24	3856.931	39.126	.000
Intercept	778394.670	1	778394.670	7896.342	.000
Gender	95.330	1	95.330	.967	.326
Medium of instruction	121.786	1	121.786	1.235	.267
Gender * Medium of instruction	22.318	1	22.318	.226	.689
Error	50766.956	515	98.577		
Total	6058256.000	540			
Corrected Total	143333.304	539			

R Squared = .646 (Adjusted R Squared = .629)

- There is no significant difference in the impact of the Internet on Learning due to **Gender**. ($P \geq .05 = .326$) Therefore H_{01} is **retained**.
- There is no significant difference in the impact of the Internet on Learning due to the Medium of instruction. ($P \geq .05 = .267$) Therefore H_{02} is **retained**.

No parametric Statistic method was also applied in this study which also identified the same result as per the parametric test. We used Kruskal Wallis Test to identify the result.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of total is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.271	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of total is the same across categories of Medium of instruction.	Independent-Samples Mann-Whitney U Test	.082	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Figure 1

From the above table, the researcher showed that there is no significant difference in using the internet in education due to gender and medium of instruction.

CONCLUSION

'There are no significant disparities between men and women in terms of the using the Internet in educational programs.' However, we believe it is necessary to develop deeper into the subject.

Qualities that a hypothesis investigation reveals, As a result, the greatest possible contribution of this research will lead to scientific information about the subject. Both the preparation materials and the classroom performance emphasize the fact that The Internet is an integral part of the instructional program in the schools participating in this research study. The level of integration is medium-high, and there is no discernible difference across the group gender is a factor and medium of instruction. Nonetheless, it is worth noting that the centers that are coordinated by women are the most effective. Reveal a significant change in values that, on the whole, represent the use of novel methods to incorporate the Internet into the curriculum in schools where a female is in charge of ICT. The coordinators believe that curricular integration is more important than academic integration. The remainder of the teaching staff places a high emphasis on it. This is owing to the fact that in their comments, they take the time to think about what they're saying. As a point of reference, they can use their own teaching experience. In this regard, there are differences: the coordinators, as part of their teaching responsibilities, incorporate the Internet to a higher extent in the curriculum than the teachers and the other members of the teaching staff.

The midpoints that incorporate educational technology integration in their general planning papers receive a higher rating than those that do not or those that give it a lower priority. As a result, a centre project is an important tool for integrating the Internet in a broader sense.

BIBLIOGRAPHY

1. Aguaded JI and Tirado R (2010) *Ordenadores en los pupitres: informática y telemática en el proceso de enseñanza-aprendizaje en los centros TIC de Andalucía*. Revista *Píxel-bit* 36. Available at: www.sav.us.es/pixelbit/pixelbit/articulos/n36/1.html (accessed 10 January 2012).
2. Aires L, Teixeira A, Azevedo J, et al. (2006) *Alteridad y emociones en las comunidades virtuales de aprendizaje*. *Revista electrónica Teoría de la Educación* 7(2): 74–91. Available at: www.usal.es/~teoriaeducacion/rev_numero_07_02/n7_02_luisa_aires.pdf (accessed 25 January 2012).
3. Almerich G, Suárez J, Orellana N, et al. (2005) *Diferencias en los conocimientos de los recursos tecnológicos en profesores a partir del género, edad y tipo de centro*. *RELIEVE* 11(2): 127–146. Available at: www.uv.es/RELIEVE/v11n2/RELIEVEv11n2_3.htm (accessed 16 January 2012).
4. Alonso LE (1999) *Sujeto y discurso: el lugar de la entrevista abierta en las prácticas de la sociología cualitativa*. In: Delgado JM and Gutiérrez J (eds) *Métodos y técnicas cualitativas de investigación en ciencias sociales*. Madrid: Síntesis, pp.225–240.
5. Area M (1991) *Los medios, los profesores y el currículo*. Barcelona: Sendai Ediciones.
6. Area M (2004) *Los Medios y las Tecnologías en la Educación*. Madrid: Ediciones Pirámide.
7. Area M (2008) *La integración y uso de las Tecnologías de la Información y Comunicación en los centros educativos. Análisis de casos en Canarias*. Available at: <http://webpages.ull.es/users/manarea/>

8. TICSEresumen.pdf (accessed 24 January 2012).
9. Area M (2009) *Introducción a la tecnología educativa*. Universidad de la Laguna. Available at: <https://campusvirtual.ull.es/ocw/file.php/4/ebookte.pdf> (accessed 3 March 2015).
10. Bardisa T (1995) *Participación democrática en las instituciones educativas*. In: García J and Delgado F (eds) *Los retos de la educación ante el siglo XXI*. Madrid: Editorial Popular, pp.125–142.
11. Barquín J and Melero MA (1994) *Feminización y profesión docente*. *Internalización del trabajo*. *Investigación en la escuela* 22: 125–142.
12. Barroso J and Cabero J (2010) *La investigación educativa en TIC*. Madrid: Narcea.
13. Bautista A (2004) *Las nuevas tecnologías en la enseñanza*. Madrid: Akal.
14. Beltrán J (2001) *La nueva pedagogía a través de Internet*. *Actas I Congreso Nacional de Educared*. Madrid: Educared.
15. Blázquez F, Carioca V, Cubo S, et al. (2000) *Las actitudes del profesorado ante la informática. Un estudio comparativo entre Extremadura y el Alentejo*. *Revista de Educación* 323: 455–474.
16. Bostock SJ and Lizhi W (2005) *Gender in student online discussions*. *Innovations in Education and Teaching International* 43: 73–85.
17. Braak JV (2001) *Factors influencing the use of computer mediated communication by teachers in secondary schools*. *Computers and Education* 36(1): 41–57.
18. Buckingham D (2002) *Crece en la era de los medios electrónicos*. Madrid: Morata.
19. Cabello R and Levis D (2007) *Medios informáticos en la educación a principios del siglo XXI*. Buenos Aires: Prometeo.
20. Cabero J (2010) *Usos del e-learning en las universidades andaluzas: estado de la situación y análisis de buenas prácticas*. Sevilla: Grupo de investigación didáctica.
21. Cabero J (2000) *Y continuamos avanzando. Las nuevas tecnologías para la mejora educativa*. Sevilla: Kronos.
22. Cabero J, Marín V and Vázquez AI (2011) *La mujer y la investigación en tecnología educativa. Análisis de su presencia en la autoría de artículos científicos*. *TESI* 12(1): 122–148.
23. Castaño C (2007) *Observatorio e-igualdad, informe final*. Madrid: Universidad Complutense.
24. Castaño C, Maiz I, Beloki N, et al. (2004) *La utilización de las TICs en la enseñanza primaria y secundaria obligatoria: necesidades de formación del profesorado*. Available at: www.lmi.ub.es/edutec2004/pdf/69.pdf (accessed 3 March 2015).
25. Castells M (2000) *La era de la información*. Madrid: Alianza.
26. Castells M and Díaz M I (2001) *Diffusion and uses of Internet in Catalonia and in Spain*. Available at: <http://www.artnodes.com/index.php/in3-working-paper-series/article/download/n1-castells-diaz-de-isla/n1-castells-diaz-de-isla> (accessed 22 November 2014).

27. CEO Forum (2001) *The Power of Digital Learning: Integrating Digital Content. The CEO Forum School Technology and Readiness Report, Year Three*. Washington, DC.
28. Chadwick C (1979) *Why educational technology is failing (and what should be done to create success)*. *Educational Technology* 19(1): 7–19.
29. Cuban L (2003) *Why is it so Hard to get Good Schools?* New York: Teachers College Press.
30. De Pablos J (1996) *Tecnología y Educación*. Barcelona: Cedecs.
31. De Pablos J (2001) *Los estudios culturales y la comunicación. Algunas herramientas conceptuales para interpretar la mediación tecnológica*. In: Area M (ed.) *Educaren la sociedad de la información*. Bilbao: Descleé de Brouwer, pp.145–178.
32. Del Moral E, García Menéndez JI and Jacobson MC (1998) *TIMÓN: Sistema de navegación a través de servidores de Web con interés educativo para la explotación didáctica de estas fuentes de recursos*. En Y(ed.) *Creación de materiales para la innovación educativa con nuevas tecnologías: Edutec97*. Málaga: Universidad de Málaga, pp.122–127.
33. Eurydice (2001) *TIC@Europe.edu: Les technologies de l'information et de la communication dans les systèmes éducatifs européens*. Bruxelles: Eurydice.
34. Fernández C and Cebreiro B (2003) *La integración de los medios y nuevas tecnologías en los centros y prácticas docentes*. *Revista PixelBit* 20. Available at: www.sav.us.es/pixelbit/pixelbit/articulos/n20/n20art/art2003.htm (accessed 4 September 2011).
35. Fernández M and Mena E (2011) *Tutor 2.0. Aplicaciones para entornos virtuales de aprendizaje*. Málaga: Aljibe.
36. Fox-Wolfgramm SJ (1997) *Towards developing a methodology for doing qualitative research: The dynamic comparative case study method*. *Scandinavian Journal of Management* 13(4): 439–455.
37. Fundación Telefónica (2012) *La sociedad de la información en España 2011*. Barcelona: Ariel. Available at: http://elibros.fundacion.telefonica.com/sie11/aplicacion_sie/ParteA/pdf/SiE_2011.pdf (accessed 31 January 2012).
38. Gallego MJ (1994) *La práctica con ordenadores en los centros educativos*. Granada: Universidad de Granada.
39. Gallego J (2001) *Internet: estrategias para una innovación educativa*. *Actas I Congreso Nacional de Educared*. Madrid: Educared.
40. Gargallo B, Suárez J and Belloch C (2003) *La división digital en el proceso de integración de las NTIC en la educación. Diferencias de género entre alumnos de E.S.O. de la comunidad valenciana*. *Revista electrónica Teoría de la Educación: Educación y Cultura en la Sociedad de la Información* 4. Available at: http://campus.usal.es/~teoriaeducacion/rev_numero_04/n4_art_gargallo-suarez-belloch.htm (accessed 16 January 2012).

41. Gargallo B, Suárez J, Morant F, et al. (2004) *Un primer diagnóstico del uso de Internet en los centros escolares de la Comunidad Valenciana. Procesos de formación y efectos sobre la calidad de la educación.* IVECE (Instituto Valenciano de Evaluación y Calidad Educativa). Available at: <http://wwwn.mec.es/cide/espanol/publicaciones/investigacion/estudios/inv2004tic/02.pdf> (accessed 21 March 2009).
42. Grünbaum L, Pederson M and Nielsen S (2004) *Study on innovative learning environments in school education. Final report for the European Commission DG Education and Culture.* Rambold Management.
43. Instituto Nacional de Estadística (INE) (2009) *Encuesta sobre Equipamiento y Uso de Tecnologías de la Información y Comunicación.* Madrid: INE. Ministerio de Trabajo y Asuntos Sociales.
44. Kellner D (2000) *New technologies/new literacies: Reconstructing education for the new millennium.* *Teaching Education* 11(3): 245–265.
45. Kempt JE (1987) *Perspectives on the instructional technology (IT) field.* *Educational Technology* 27 (9):8–12.
46. Kerr T (1996) *Toward a sociology of educational technology.* In: Jonassen DH (ed.) *Handbook of Educational Communications and Technology.* New York: Macmillan.
47. Kerrey R (2000) *The power of Internet for learning. Moving from promise to practice. Report of the Webbased Education Commission to the President of the Congress of the United States.* Available at: <https://www2.ed.gov/offices/AC/WBEC/FinalReport/WBECReport.pdf>
48. Marchesi A and Martín E (2003) *Tecnología y aprendizaje. Investigación sobre el impacto del ordenador en la aula.* Madrid: Ediciones SM.
49. Marina JA (1999) *El timo de la sociedad de la información.* In: Marina JA, Joyanes L, Toharia M (eds) *Educación e Internet.* Madrid: Santillana, pp.13–19.
50. McMillan K, Hawkins J and Honey M (1999) *Review Paper on Educational Technology Research and Development.* New York: Education Development Center/Center for Children and Technology. Available at: http://cct.edc.org/sites/cct.edc.org/files/publications/research_rp99.pdf (accessed 22 November 2014).
51. November 2014).
52. Megarry J (1983) *Educational technology: Promise and performance.* *Innovations in Education & Training International* 20(2): 133–137.
53. OECD (2001) *Learning to Change: ICT in Schools/Les nouvelles technologies à l'école: Apprendre à changer.* París: OECD.
54. Orellana N, Almerich G, Belloch C, et al. (2004) *La actitud del profesorado ante las TIC: un aspecto clave para la integración.* Actas del V Encuentro Internacional Anual sobre Educación, Capacitación Profesional y Tecnologías de la Educación, Virtual Educa 2004, Barcelona. Available at: http://www.uv.es/bellochc/ute/doc/VE2004_5_6.htm (accessed 3 March 2015).

55. Padilla MT (2008) *Opiniones y experiencias en el desempeño de la dirección escolar de las mujeres directoras en Andalucía*. RELIEVE 14. Available at: www.uv.es/RELIEVE/v14n1/RELIEVEv14n1_1.htm (accessed 30 January 2012).
56. Peñalva A (2007) *El uso de Internet en el aula como medio didáctico y como contenido de aprendizaje*. I Congreso Internacional Escuela y TIC. Alicante: Universidad de Alicante.
57. Peris R (2007) *Ponencia inaugural. Jornada sobre Igualdad de Género en la Sociedad de la Información*. Madrid: Ministerio de Igualdad.
58. Plomp T (1996) *International encyclopedia of educational technology*. New York: Pergamon.
59. Rebollo M^aA, García R, Barragán R, et al. (2008) *Las emociones en el aprendizaje online*. RELIEVE 14.
60. Available at: www.uv.es/RELIEVE/v14n1/RELIEVEv14n1_2.htm (accessed 22 November 2011).
61. Rhode GI and Shapiro R (2000) *Falling through the Net: Towards Digital Inclusion*. Report NTIA-ESA. Washington DC: US Department of Commerce.
62. Rodríguez Mondéjar P (2000) *Las actitudes del profesorado hacia la informática*. Revista Pixel-Bit 15. Available at: www.sav.us.es/pixelbit/pixelbit/articulos/n15/n15art/art158.htm (accessed 21 January 2012).
63. Salomé T (2010) *Uso de TIC en la práctica docente de los maestros de educación básica y bachillerato de la ciudad de Loja*. Revista Electrónica de Tecnología Educativa 33. Available at: http://edutec.rediris.es/Revelec2/Revelec33/uso_tics_practica_docente_maestros_basica_bachillerato_universidad_loja.html (accessed 12 January 2012).
64. Sánchez E (2010) *Uso de aplicaciones existentes en Internet*. In: Sánchez J and Ruiz J (eds) *El profesor como productor-consumidor de contenidos multimedia*. Sevilla: Eduforma, pp.39–66.
65. Sánchez J and Ruiz J (2010) *El género como factor influyente para integrar las TIC en la práctica docente*. Revista Píxel-bit 37. Available at: www.sav.us.es/pixelbit/pixelbit/articulos/n37/6.html (accessed 15 January 2012).
66. Shassaani L and Khalili A (2001) *Gender and computers: Similarities and differences in Iranian college students' attitudes towards computers*. Computers and Education 37: 363–375.
67. Solomon DL (2000) *Towards a post-modern agenda in instructional technology*. Educational Technology Research and Development 48(4): 5–20.
68. Spitzer DR (1987) *Why educational technology has failed*. Educational Technology 27: 18–21.
69. Stake RE (1999) *Investigación con estudio de casos*. Madrid: Morata.
70. Stenhouse L (1990) *Case study methods*. In: Walberg HJ and Haertel GD (eds) *The International Encyclopedia of Educational Evaluation*. Londres: Pergamon Press, pp.640–646.
71. Tezanos JF (2001) *La sociedad dividida. Estructuras de clases y desigualdades en la sociedad tecnológica*. Madrid: Biblioteca Nueva.

72. Ursini S, Sanchez G, Orendain M, et al. (2004) *El uso de la tecnología en el aula de matemáticas: Diferencias de género desde la perspectiva de los docentes*. *Enseñanza de las ciencias* 22(3): 409–424.
73. Vázquez R, Angulo F and Rodríguez C (2007) *Las mujeres y el mundo de la computación y la informática. Aportaciones de una investigación cualitativa*. *Revista Píxel-bit* 30. Available at: www.sav.us.es/pixelbit/pixelbit/articulos/n30/n30art/art304.htm (accessed 21 January 2012).
74. Voithofer R and Foley A (2002) *Post-IT. Putting postmodern perspectives to use in instructional technology—a response to Solomon’s “Towards a post-modern agenda in instructional technology”*. *Educational Technology Research and Development* 50(1): 5–14.
75. Yin RK (1984) *Case Study Research Design and Methods*. Beverly Hills, CA: Sage Publications.