

Plan Of Inclusion Of Mobile Apps In The Teaching Of The Activities Of The Daily Life In People With Mild Intellectual Disability

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ABSTRACT

The main purpose of this research is to develop a plan for the inclusion of mobile Apps in the teaching of activities of daily living in people with mild intellectual disabilities, through the literature review on disability, the pedagogical models best suited to the teaching-learning process. The best mobile applications will be identified and selected for using in the teaching of activities of daily life, as well as, the design of the activities will be developed for the inclusion of mobile Apps in their teaching, through a quasi-experimental design, with a group of people, where two types of mobile applications will be used to support in the teaching of activities of daily life and another control group will be applied traditional teaching techniques, with the intention of determining what is the effect that these types of technologies have on the teaching of the aforementioned activities. The information will obtain from the assessment of the degree of compliance with the activities of daily life through the application of valuation scales, validated for this purpose; in addition, questionnaires will be applied to professionals who work in the foundation and parents of people with disabilities who come to this educational center, to gather information on the activities that these people can perform in an educational, family and social context. Finally, a plan will be designed to promote the inclusion of mobile technologies in the process of teaching activities of daily living in people with mild intellectual disabilities who did not have total control over them or did not achieve them autonomously as part of their normal activities within the institution or its development in your home or community.

Keywords: mobile applications, mild intellectual disability, technology for special education, traditional teaching, activities of daily life.

Introduction

In recent years, the exponential growth of Internet technologies has been evident in Information and Communication (TICs) as well as its applications in various business activities such as labor organization, human talent training (Carnoy, 2004), decision making, sales, among others. The education sector has also been immersed in this process of adoption and application of ICTs in their different processes; however, the changes generated, they have not been as significant compared to business processes.

In the education sector, the application of ICTs has mainly focused on improving the knowledge transmission processes and teacher-student interrelation. However, it has been considered that the inclusion of ICT within the teaching process has become a quasi-static process since the different institutions have been inserting within their activities related to technology and communication for education, this activity has been carried out without the pertinent considerations both in the matter of benefits, economic aspects and especially how this collaborates in the improvement of the teaching-learning process. (Benevento, 2003).

This problem is accentuated more if we consider the diversity of students in the today's schools that include those with special learning needs, who due to their own condition and lack of scenarios that adapt to their learning style, they have been mostly excluded and have not been able to carry out a learning process in equality of conditions with the rest of the

students. In the classrooms there is now a great diversity of groups heterogeneous with students who have well-defined particularities and that it is necessary to take in account for an adequate teaching-learning process.

In this sense, innovation becomes fundamental to propitiate an educational change, with the purpose of improving the quality of these processes. As mentioned (Heir Eladio Sebastian; Carralero Alba Oliva, 2014) "society changes and the school has to innovate, it is not the student who it must adapt to a teaching mode." This innovation can be supported by the use of Information and Communication Technologies (ICTs), technologies that can improve quality of teaching-learning, at the same time causing a positive influence on the academic performance of the students. Also, "ICTs are seen as essential in the skills that a person must possess." (The Partnership for 21st Century Skills, 2009).

However, ICTs by themselves do not educate, nor are they configured as the only solution that can improve the quality of the learning process, mainly for groups vulnerable as children with special learning needs. As he stated (Plowman, 2005) digital technologies are generally underutilized and, therefore, the majority of children have limited experience of them. For this reason, it is imperative to investigate how ICTs can improve the process of learning mainly for people with special needs, in this case with mild intellectual disability, focusing the analysis on the support that ICTs can provide in the teaching and development of the essential activities of daily life. This investigation will deal with to combine the

conceptual, theoretical, methodological and technological aspects to develop a comprehensive support to the learning process of people with special needs.

When selecting a suitable application for the teaching of activities of daily life what which is intended to start the Protection and Rest Foundation located in the city of Riobamba, can count on a help tool for this learning, allowing the teacher and the student to interact more dynamically, thus facilitating the educational process, also through this application the person with disabilities will be able to related to the technology, and to the time will be achieved to improve their learning skills, their self-esteem and can learn from Interactive. As a fundamental part of this investigation, the imperative need for people with special abilities are included in the technological education system which is currently of the utmost importance within society and must be met to guarantee an equitable development and the full enjoyment of human rights to which all persons have access.

General Objective

Prepare an inclusion plan for mobile Apps for teaching the activities of the daily life in people with mild intellectual disability.

Specific Objectives

1. Review literature on disability, the pedagogical models most appropriate to the teaching-learning process, the inclusion of technology, the relationship of mobile applications for activities of daily living in people with special abilities and the current legal framework for Ecuadorian special education.
2. Determine the degree of compliance with the activities of daily life of people with mild intellectual disability through the application of validated tests and surveys.
3. Identify and select the best mobile applications for use in teaching activities of daily living for people with mild intellectual disabilities.
4. Design the activities to be developed for the inclusion of mobile Apps in the teaching of activities of daily life in people with mild intellectual disability.

Methodology

The methodology that is going to be used is quantitative of the quasi-experimental type Pretest-post - test with control group, since we are going to have 2 groups of people with intellectual disability in which a pre-test will be applied that will allow to evaluate the dependency level in the activities of daily life; After this action, the use of mobile applications will be used in a group to encourage the development of activities of daily life carried out by people with mild intellectual disabilities. Finally, we will apply a post-test that will allow us to evaluate the development of activities of daily life in the group of people where the mobile Apps were included in the teaching-learning process and all the necessary inputs will be available to be able to see correlations between the independent variable and dependent, that is, if there is a positive effect on the use of mobile apps aimed at developing the daily activities of people with mild intellectual disabilities.

Temporary Planning

For this section it has been determined to carry out a work in different phases, these will allow development in all the activities planned in a specific order:

Phase 1: Review of bibliography and selection of mobile Apps to be used, this is an initial phase where the majority of the characteristics that will be required at the time of the application of the proposal, both of the people and the applications that will be used and the access that you can have to them.

Phase 2: Initial assessment of people with mild intellectual disability, at this stage they will apply the validated tests to determine if they present difficulty in the execution of the activities of daily life.

Phase 3: Application of the mobile Apps in the selected group, after choosing the group of work that in this case will be random, since all people have mild intellectual disabilities, will proceed to work with each of them in the application or use of the Apps.

Phase 4: Final assessment of people with mild intellectual disabilities who used the Apps mobile, this moment will allow determining if the people who used the applications improved the execution of activities of their daily life; At the same time, the group that does not made use of the applications to compare the results obtained initially.

From the phases and activities, a timetable for the application of each one of the these are described below in a table where you can find a reference of the times that will be used in the development of the proposal; It is worth mentioning that, like this one, has not been applied can have changes in the activities, times and development of them.

Conclusions

As indicated in the previous sections, this is a proposal to elaborate a plan of inclusion of apps; therefore, the results show the perspectives in terms of certainty to be an effective work; while the results are not real, measurable and observable.

This proposal has made it possible to develop a plan for the inclusion of mobile apps and contribute to knowledge related to disability, the pedagogical models most suited to the process teaching, the inclusion of technology, and the relationship of mobile applications to the activities of daily life in people with special abilities, taking into consideration the current legal framework for Ecuadorian special education.

The best mobile applications have been identified and selected to be developed in the process of teaching the activities of daily life for people with mild intellectual disability and insert them into educational scenarios, making this type of technology can be configured as an adequate support to improve education in these vulnerable groups.

Through the application of validated tests and surveys, compliance with the activities of the daily life of people with mild intellectual disabilities, the same as generate social conditions of inclusion that favor the performance and achievement of goals of integral way, therefore, making this right effective means that everyone has access to a quality education on equal opportunities and conditions.

Actions have been designed to allow the inclusion of mobile Apps in the teaching of activities of daily life in people with mild intellectual disability taking into account the digital era in which we live, the complexity of applications increases and the challenge grows to manage them, but also the opportunity to get people with disabilities to access to what these technologies contribute, can even influence their participation in social life, each more time linked to the use of apps.

The proposed objectives, both general and specific, have been met when establishing the plan to include mobile apps; as well as the execution of an analysis of the pedagogical models suitable for the teaching-educational process that can be applied with people who have mild intellectual disability, the legal basis, and the most adequate in terms of applications that allow the integration of technology in daily life of this sector of the population, thus complying with the social order.

References

1. AAMR. (1992). Definition, classification, and systems of supports, 10th e. Discapacidad Intelectual. Madrid: Alianza Editorial
2. Alonso, M. Á. V. (2003). Análisis de la definición de discapacidad intelectual de la Asociación Americana sobre Retraso Mental de 2002. Siglo cero: Revista Española sobre discapacidad intelectual, 34(205), 5-19.
3. Arceo, F. D. B., Rojas, G. H., & González, E. L. G. (2002). Estrategias docentes para un aprendizaje significativo: una interpretación constructivista (p. 465). Mexico: Mcgraw-hill.
4. Argudín, Patiño. (2010). Enfoques educativos / Modelo centrado en el profesor. Recuperado en febrero 2018 de: <http://hadoc.azc.uam.mx/menu/menu.htm>
5. Bao, X. G., Zainudin, S., Ibrahim, H. M., & Chun, L. M. (2017). A Bahasa Malaysia Interactive Book App as a Speech-Language Therapy Tool for Children with Language Delay. *Asia-Pacific Journal of Information Technology and Multimedia*, 6(1).
6. Barberger-Gateau P, Chaslerie A, Dartigues JF., (1992). Health measures correlates in a French elderly community population: the PAQUID study. *Journal of Gerontology; social sciences*, 47(2): 588-95.
7. Baztán, J.J., González, J.I., & del Ser, T. (1994). Índice de Barthel. Nombre original: The Barthel Index. Autores: Mahoney y Barthel.
8. Benvenuto, A. (2003). Las Tecnologías de la Información y comunicaciones (TIC) en la Docencia Universitaria. *Theoria: Ciencia, Arte y Humanidades*, 12(9), 109-118.
9. Bevan R (2003) Another way on? A search for an alternative path into learning for people with a learning disability. *Br J Spec Educ*, 30, 100-106.
10. Camacho, S. (2014). Mi opinión: Silvia Camacho. Recuperado en febrero de 2018 de: <https://www.blogger.com/profile/18415369938870641109>
11. Carnoy, M. (2004). Las TIC en la enseñanza: posibilidades y retos. Lección inaugural del curso académico 2004-2005. Recuperado de <http://www.uoc.edu/inaugural04/dt/esp/carnoy1004.pdf>
12. Castillo, S. (2008). Propuesta pedagógica basada en el constructivismo para el uso óptimo de las TIC en la enseñanza y el aprendizaje de la matemática. *Revista latinoamericana de investigación en matemática educativa*, 11(2), 171-194.
13. Cid-Ruzafa, J, Damian-Moreno, J., (1997). Valoración de la discapacidad física: el índice de Barthel. *Rev. Esp. Salud Publica*, vol.71, no.2, p.127-137. ISSN 1135-5727. 99
14. Debaryshe, B., & Binder, J. C. (1994). Development of an Instrument for Measuring Parental Beliefs about Reading Aloud to Young Children. *Sage Journals*, 1994, 157-170.
15. Decreto Ejecutivo No. 811, publicado en el Suplemento del Registro Oficial No. 635 de 25 de noviembre de 2015. Asamblea Nacional, 22 de octubre de 2015; p: 64-65. Reglamento General a la Ley Orgánica de Educación Intercultural. Ecuador: Suplemento del Registro Oficial.
16. Decreto Legislativo s/n, de 20 de octubre de 2008, Asamblea Constituyente. (2008, p: 36-38). Constitución de la República del Ecuador.
17. Delors. (1996). "Los cuatro pilares de la educación" en La educación encierra un tesoro. Informe a la UNESCO de la Comisión internacional sobre la educación para el siglo XXI, Madrid, España: Santillana/UNESCO. (91-103). España: Santillana.
18. Fernández, A., Roldán, L.M., González, J.L., Rodríguez, M.J., Hurtado, M.V., Medina, (2009) N. Generador Sc@ut: Sistema de Creación de Comunicadores Personalizados para la Integración. IEEE-RITA - Revista Iberoamericana de Tecnologías del Aprendizaje. Vol.4, Num.3. pp: 199-205. Ferreyra, J. A., Méndez, A., & Rodrigo, M. A. (2009). El uso de las TIC en la Educación Especial: Descripción de un sistema informático para niños discapacitados visuales en etapa preescolar. *Revista Iberoamericana de Tecnología en Educación y Educación en Tecnología*. 3, 55-62.
19. García, M. (2010). De cómo la teoría puede mejorar el conocimiento y dirigir la práctica escolar en atención a la diversidad. *Revista de Teoría y Didáctica de las Ciencias Sociales*, 16, 29-51 Hasselbring, Glaser. (2000). Use of Computer Technology to Help Students with Special Needs. *The Future of Children CHILDREN AND COMPUTER TECHNOLOGY*, 102-119.
20. Hasselbring, T. S., & Glaser, C. H. W. (2000). Use of computer technology to help students with special needs. *The Future of Children*, 102-122.
21. Heredero Eladio Sebastian; Carralero Alba Oliva. (2014). Experiencias y recursos con las tics para la atención al alumnado con necesidades educativas especiales. *Acta Scientiarum*, 279.
22. Johnson, A. (2007). Parents' perceptions of their children's participation in home reading activities. Master thesis, University of Pretoria.
23. Jonassen, D. H. (1991) Objectivism versus constructivism: do we need a new philosophical paradigm? *Educational Technology Research and Development*, 39 (3), 5-14.
24. Lawton MP, Brody EM., (1969). Assessment of older people: self-maintaining and instrumental activities of daily living. *Gerontologist*, 9: 179-86.
25. López. (2013). De las TICs a las TACs: La importancia de crear contenidos educativos., En *Revista Didáctica, Innovación y Multimedia*, 27,1-15.

26. Luckasson, y cols. (2002). *Mental Retardation. Definition, classification and systems of supports*. Washington, DC: Alianza.
27. Macias, M. I. (2005). *Gabinete Logopédico y Pedagógico*. Recuperado en febrero 2018 de: <http://www.logopedia-granada.com/>
28. Mahoney FI, Barthel DW. (1965). Functional evaluation: The Barthel index. *Md Med J* 1965; 14: 61- 65.
29. Marco, J., Cerezo, E., & Baldassarri, S. (2013). Bringing tabletop technology to all: evaluating a tangible farm game with kindergarten and special needs children. *Personal and ubiquitous computing*, 17(8), 1577-1591.
30. Mergel, B. (1998). *Diseño instruccional y teoría del aprendizaje*. Universidad de Saskatchewan, Canadá. Recuperado de: www.usask.ca/education/coursework/802papers/mergel/esp/anol.Pdf.
31. Miralles, Romero. (2005). *Actividades de la vida diaria*. España: Elsevier.
32. MOBILE MARKETING ASOCIATION. (2011). *EL libro blanco de apps/guía de apps móviles*. España: Digital Media Agency. *Modelos Pedagógicos*. (2018).
33. *Modelos Pedagógicos*. Recuperado el 22 de febrero de 2018 de: <https://modelospedagogicos.webnode.com.co/modelo-pedagogico-historico-cultural>
34. Naciones Unidas, (2017). *Declaración Universal de los Derechos Humanos*. Recuperado el 22 de febrero de 2017 de: <http://www.un.org/es/universal-declaration-human-rights/>
35. Organización Mundial de la Salud (2017), *Discapacidad*. Recuperado en febrero de 2018 de: <http://www.salud.gob.ec/tag/organizacion-mundial-de-la-salud/>.
36. Paredes, C. (2015). *Modelos pedagógicos aplicados a la educación preventiva para la salud, mejorando la calidad de vida de los ecuatorianos, tomando en cuenta los cuatros pilares de la educación*. Modelos pedagógicos aplicados a la educación preventiva para la salud, mejorando la calidad de vida de los ecuatorianos, tomando en cuenta los cuatros pilares de la educación. Universidad Católica de Santiago de Guayaquil, Ecuador. Recuperada de: <http://www.repositorio.ucsg.edu.ec>.
37. Pinedo, D. (2011). *Análisis de Desarrollo de Aplicaciones Móviles Multiplataforma*. Tampere.
38. Plowman L, Stephen C (2005) Children, play, and computers in pre-school education. *Br J Educ Technol*, 36(2):145-157
39. Plowman, (2005). *Aprendizaje y mediación pedagógica con tecnologías digitales*, 1.
40. *Protección y Descanso*, (2017). *Fundación Protección y Descanso*. Recuperado de: http://www.proteccion-descanso.de/index.php?es_partnerverein-in-ecuador.
41. Registro Oficial N° 796. Consejo Nacional para la Igualdad de Discapacidades, martes 25 de septiembre de 2012; p: 6, 7,11. *Ley Orgánica de Discapacidades*. Quito, Pichincha, Ecuador: Suplemento, Obtenido de Consejo Nacional para la Igualdad de Discapacidades, recuperado: http://www.consejodiscapacidades.gob.ec/wpcontent/uploads/downloads/2014/02/ley_organica_discapacidades.pdf
42. Registro Oficial N° 417, jueves 31 de marzo del 2011, *Ley Orgánica de Educación Intercultural (LOEI)*, recuperado: <https://educacion.gob.ec/ley-organica-de-educacion-intercultural-loei/>
43. Romero, D. (2007). *Actividades de la vida diaria*. *Anales de psicología*, 23(2), 264-271.
44. Sánchez, J. (2000). *Nuevas tecnologías de la información y comunicación para la construcción del aprender.*, Santiago de Chile: LMA Servicios Gráficos.
45. SCRIBD. (2017). *Modelos educativos*. Recuperado en febrero de 2018 de <https://es.scribd.com/doc/50572422/MODELO-TRADICIONAL-1>
46. Sobrino, A. (2011). *Proceso de enseñanza-aprendizaje y web 2.0: valoración del conectivismo como teoría del aprendizaje post-constructivista*. *Estudios sobre Educación*. 20(8), 117-140.
47. *Terapia Ocupacional Blog*, (2011). *Actividades de la vida diaria - Definición y clasificación*. Recuperado de <http://terapeutas.blogspot.com/2011/07/actividades-de-la-vida-diaria.html>
48. *The Partnership for 21st Century Skills*. (2009). *Framework for 21st Century Learning*. Tucson, AZ: The Partnership for 21st Century Skills.
49. Valderrama E, Pérez Del Molino J., (1997). *Una visión crítica de las escalas de valoración funcional traducidas al castellano*. *Rev. Española de Geriatria y Gerontología*, 32 (5): 297-306.
50. Valverde, S. (2015). *El aprendizaje de las Tecnologías de la Información y la Comunicación en personas con síndrome de Down*. (Tesis doctoral) Universidad Complutense, Madrid. Recuperada de <http://eprints.ucm.es/7248/1/T28915.pdf>
51. Villanueva, Varela., (2017). *Portal de Trabajo Social*. Recuperado el 20 de febrero de 2017 de: <https://portaltrabajosocial.wordpress.com/guia-de-recursosociales/colectivos/discapacitados/definicion-de-discapacidad/>