Ram Niwas
Lecturer in Special Education, Guest Faculty), Dept. of Special Education, NIEPID, Secunderabad, Hyderabad India

V.R.P. Sheilaja Rao
Former Head of Dept. of Special Education NIEPID, Secunderabad, Hyderabad India

Effect of Mobile Phone Usage on Communication Skills among Adolescents with Intellectual Disability

Ram Niwas, V.R.P. Sheilaja Rao

Abstract
There is a gap in Mobile phones access between the people with disabilities and the general public and persons with Intellectual disability have Difficulty in communication, understanding consequences of situations, and performing the tasks. Central findings of the study focus on the effect of utilizing mobile phone on communication skills among adolescents with intellectual disability. Quasi-experimental design was followed and six adolescent students with Mild Intellectual Disabilities were selected through purposive sampling for the intervention containing five levels, given in thirty sessions through creating situations The Pre and Post-test was conducted to find out the Mean Scores of both CCSA and MLAID by applying Wilcoxon Signed Rank Test. The results revealed that there is a significant difference between Pre and Post-test Mean Scores of both CCSA and MLAID. The difference between the Mean Scores of Pre and Post Test of CCSA is 14. It reveals the level of significance is $0.026 < 0.05$ and for MLAID the level of significance is $0.014 < 0.05$. It proves that Mobile Phone Usage is an effective method for improving communication skills. This study implies that this study should be conducted on a large population for generalization for improving not only Communication skills but also for improving personal, social, vocational and recreational skills.

Keywords: Adolescents, communication skills, mobile phone uses, mild intellectual disability

Introduction
Generally adolescents with Intellectual disability have a marked delay in their developmental milestones when compared to normal individuals. Adolescents with Intellectual disability have difficulty in managing multitasking instruction. Adolescents with Intellectual disabilities have attention deficits. They have difficulty in communication, understanding consequences of situations, and performing the tasks (Ellis, 1963). Adolescents with Intellectual disability have difficulty in operating mobile phone. There is a gap in cell phones access between the people with disabilities and the general public. (Diane Nelson Brayen, 2007)

Significance and Scope of the Study
❖ This study will be based on to find the effect of mobile phone usage on communication skills among adolescents with Intellectual disability
❖ Having access to use of mobile phone enables adolescents with Intellectual disability to develop their skills and talents in a useful and beneficial manner.
❖ Usage of mobile phones on communication skills can be helpful in Increasing attention, Increasing development in fine motor activities
❖ Supporting the adolescents with intellectual disability can use cell phones in emergency;

Objective of the Study
To find out the effect of utilizing mobile phone on communication skills among adolescents with intellectual disability

Tools
The researcher developed the following checklist for communication skills:

Correspondence:
Ram Niwas
Lecturer in Special Education, Guest Faculty), Dept. of Special Education, NIEPID, Secunderabad, Hyderabad India

1. m-Learning for the Adolescents with Intellectual Disability (MLAID).
2. Pre-Requisite Tool of m-Learning for the Adolescents with Intellectual Disability (MLAID).
3. Pre & Post Test Checklist for Communication Skills Assessment (CCSA) drawn from Functional Assessment Checklist for Programming (FACP)
4. Situations categorized for use of Mobile by Users with Mild Intellectual Disabilities.

Variables
Independent Variable: Mobile phone usage.
Dependent Variable: Communication skills.

Research Hypothesis
There will be significant increase in finding out the effect of mobile phone usage on communication skills among adolescents with intellectual disability.
There will be significant difference between the Pre and Post-Test Scores CCSA among adolescents with intellectual disability.

Operational Definitions
Effect: It refers to the appropriateness of utilizing mobile phone to develop communication skills.

Utilizing: This refers to use mobile phone to develop communication skills through mobile phone.

Communication skills: Communication skills refer to connecting distances to flow of instructions through mobile phones. In the present study Communication skills will be receptive and expressive.

Receptive Communication: For this study, receptive communication refers to how to receive a call

Expressive Communication: For the present study, expressive communication refers to how to make a call from contact and how to send message.

Mobile phone: Mobile phone is technology based communication system that helps in transferring own ideas to listener.

Adolescents: For the present study adolescents refers to human age range between 11-18 years

Intellectual disability: In the present study, intellectual disability refers to adolescents between 11-18 years with significant limitations in adaptive behaviour and IQ between 55- 70.

Methodology
Research Design
One group pre-test and post-test design was used to find out the effect of utilizing mobile phones among adolescents with intellectual disability.

Sampling
Sample Size: The sample of the present study included 6 adolescents with intellectual disability age ranging from 11-18 years.
Sample technique: Non- probability and Purposive sampling technique.

Procedure for Collecting Data
The procedure of collecting data was based on 5 levels.
Level-1: Receiving a Call that consists of five items.
Level-2: Calling by Selecting Number from Contact Directory that consists of seven items.
Level-3: Calling on Selected or Given Number that consists of four items.
Level-4: Sending Message from Templates that consists of nine items.
Level-5: Creating and Sending Message that consists of eight items.

Settings
In the present study intervention was conducted in classroom settings.

Sessions
In the present study intervention was carried out for 30 sessions.

Statistical Analysis
The data was analysed by Wilcoxon Signed Rank Test through SPSS.

Table-3: Mean Scores of Each Level of Pre and Post Test of MLAID

Name	Pre Test of CCSA	%	Post Test of CCSA	%	Difference
A	10	27.8	23	63.9	36.1
B	11	30.6	25	69.4	38.8
C	13	36.1	29	80.6	44.5
D	13	36.1	26	72.2	36.1
E	9	25	23	63.9	38.9
F	12	33.3	26	72.2	38.9

Table-4: Wilcoxon Signed Rank Test

	CCSA posttest - CCSA pre test	level_1 posttest - level_1 pre test	level_2 posttest - level_2 pre test	level_3 posttest - level_3 pre test	level_4 posttest - level_4 pre test	level_5 posttest - level_5 pre test
Z	-2.232b	-2.449b	-2.449b	-2.449b	-2.449b	-2.449b
Asymp. Sig. (2-tailed)	.026	.014	.014	.014	.014	.014

Major Findings
MLAID had positive impact on communication skills among adolescents with Intellectual Disability in this study as shown in results analysed in table-which reveals the p value to be $0.026 < 0.005$.
This proves that Mobile Phone Usage enables the

Adolescents with Intellectual Disability in improving Communication Skills.

The correlation between Pre and Post Test scores of CCSA is positive significant among adolescents with Intellectual Disability.

Limitations of the Study
The findings of this study cannot be generalized on a large population due to small sample size.

More sessions and duration of time were required to get accustomed to the new situations to develop communication skills for making functional independent to the students in the community.

Future Implications
There is scope for a study on large sample group for a longer duration, so that generalization of the results can be established.

Awareness of Mobile Phone Usage should be created among parents, family members, friends, siblings, and relatives on the basis of the obtained results.

The Effect of Mobile Phone Usage can be compared with conventional method of teaching.

This study can be selected for different age groups of students belong to various levels of intelligence, socio-economic status and educational background.

The study on the Effect of Mobile Phone Usage can also be seen on parental involvement among children with intellectual disability.

References
1. "Supporting Families of Young Children with Disabilities Using Technology- Journal of Education and Training in Autism and Developmental Disabilities, 2010, 45(4), 552-565.
2. Abascal, J. and Civit, A. (2000). Mobile communication for people with Disabilities and older people: New opportunities for autonomous life. In Proceedings of the 6th ERCIM Workshop on User Interfaces for All, 255-268.
3. Accessibility-New frontier for mobile technologies. (www.disabledworld.com/ communication/ mobile-technologies.php).
4. American Psychological Association. (2001). Publication manual of the American Psychological Association. (5th ed.). Washington, DC: Author.
5. An Evaluation of World Bank Group Activities in Information and Communication Technologies. (http://www.ibaby123.cc/http://ieg.worldbankgroup.org/CLedwMnT06wcFYUc6wod2wbiqQ).
6. Ary, Doland. Jacobes, C.L. Razavieh, A. Sorensen, K.C. (2010). Introduction to Research in Education (8th ed.): Wadsworth Publishing Company.
7. Assistive techniques and devices for hearing impairment-http://en.wikipedia.org/ wiki/ hearing impairent).
8. Ayers, K. (2010). "Should I Give my Child with a Disability a Cell Phone?" http://www.disaboom.com/children-with-disabilities/should-i-give-my-child-with-a-disability-a-cell-phone.
9. Bennett, Robert. P. (2007). Talking Cell Phones for the Blind. (http://www.disaboom.com/ children-with-disabilities/should-i-give-my-child-with-a-disability-a-cell-phone).
10. Blackberry. (2011). Text Based Mobile Communications Usability Study Results. www.rim.com.
11. Bryen, D. N. (2007). "Cell phone usage by adults with intellectual disability". Journal of Intellectual and Developmental Disabilities, 45, (1), 1-19. Carmines & Zeller. (1979). Reliability and Validity. http://www.okstate.edu/ag/agedcm4h/academic/aged5980a/5980/newpage18.htm.
12. Fu, K., White, J., Chan, Y., Zhou, L., Zhang, Q. and Lu, Q. (2010). "Enabling the disabled: media use and communication needs of people with disabilities during and after the Sichuan earthquake in China", Int. J. Emergency Management, 7(1), 75–87. -(http://rthk.hk/mediadigest/20100814_76_122642.html).
13. K. Moyse. (2009). How to encourage children to use mobile phones safely. Department of Psychology, University of Lincoln. www.lincoln.ac.uk.
14. Kane, S. K. (2009). Context-Enhanced Interaction Techniques for More Accessible Mobile Phones: The Information School, DUB Group, University of Washington. Sigaccess Newsletter, 93.
15. KiDA. (2011). "Mobile Technology: A Major Leap for Autism". (http://www.kida.com/2011/09/mobile-technology-a-major-leap-for-autism/).
16. Kothari.C.R. (2004). Research Methodology Methods and Techniques, Second Revised Edition, New Age International.
17. Leblois, Axel. (2010). "Areas of Opportunities for ICT Accessibility". ICT Accessibility for Persons with Disabilities: G3ict.
18. Lorenzo, Rob D. (2011)."Mobile Devices and the Flipped Classroom Model". http://themobilelearner.wordpress.com/
19. Mangal, S.K. (2012). Statistics in Psychology and Education, PHI Learning Private Limited.
20. Mobile Learning Technologies for 21st Century Classrooms. (http://www.scholastic.com/browse/article.jsp?id =3754742).
21. Problems encountered by disabled people and the ageing population using mobile telephones. (2009). http://www.tiresias.org/research/guidelines/telecoms/mobile.htm
22. Providing opportunities through communication. (http://www.pacer.org.).
23. Rai, D. & Natwar, M. S. (2005). "MSMDC, New Delhi: Technology and its various facets in the disability rehabilitation". NIMH Newsletter, 18, 2&3.
24. Revathy, T. (2009). Thakur Hari Prasad Institute of Research and Rehabilitation. Web site: www.thakurhariprasad.org
25. Teaching Learners with Multiple Special Needs. (2010). www.kajeet.com/172/
26. The effect of mobile phone text-message reminders on Kenyan health workers' adherence to malaria treatment guidelines: a cluster. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736 (11)60783-6/abstract).
27. Toan Nguyen. (2009).Training children with physical disabilities to use mobile phones. http://www.novita.org.au/Project/Detail.aspx?p=572&id=25

28. Trochim, M.K. (2011). The Effects of a Supported Employment Program on Psychosocial Indicators for Persons with Severe Mental Illness: Cornell University.
29. Uden, L. (2007) 'Activity theory for designing mobile learning', Int. J. Mobile Learning and Organisation, 1 (1), 81–102.
30. Wiersma, W. (1991). Research Methods in Education (3rd Ed.).
31. Wylie, J. (2011). "Mobile Learning Technologies for 21st Century Classrooms". http://www.scholastic.com/browse/article.jsp?id=3754 742.