Enhancing Clients’ Communication and Students’ Professional Skills Using Computer Technology

Elissa Zylla-Jones, AU Department of Communication Disorders zyllael@auburn.edu  (334) 844-9688
Daniela Marghitu, AU Department of Computer Science & Software Engineering Daniela@auburn.edu

Introduction
The Auburn University Summer Computer Literacy and Language Camp (Comp Camp): Developed by AU Departments of Communication Disorders (CMDS) & Computer Science and Software Engineering (CSSE)
Initial program: Summer 2005 –> continued summer 2006 and summer 2007
Facilitates communication skills for children with special needs
Enhances computer skills for typical and special needs children

Benefits to Teaming
Increases leadership and learning:
CMDS students teach CSSE students to work with children with special needs
CSSE students help CMDS students use computers to meet communication goals
CMDS Students become more technologically advanced
CSSE students increase pedagogical skills

Benefits of Inclusion
Goals for children with special needs should be integrated into the classroom
Encourages generalization & peer modeling

Benefits of Computers
*Children with disabilities increase communication, cognitive and social skills using computers
*Language more accessible in printed form
*Information can be saved and retrieved
*Computers are interactive
*Pace can be adapted

Method
Student selection
4 graduate CMDS students – interested in public school employment
4 graduate CSSE students – interested in teaching & development of computer software for children

Selection of participating children – summer 2007
children = 16 typical & 8 children with special needs; Ages 7- 15

Procedures
3-week program (during month of June) 3 hours 2 times per week -> total: 6 hours per week
First day —> screening & goal selection
Program Schedule
Facilitate communication skills using traditional and specialized computer programs

Computer Programs:
A variety of traditional computer programs such as Microsoft word; Excel; Powerpoint – modified to children’s functioning level were used.
A variety of specialized SLP computer software materials and specialized equipment were also used.

Results
Summary of Previous Progress
Summer 2005 = Overall average of 17% gain for all targeted goals
Summer 2006 = Overall average of 20% gain for all targeted goals

Progress Summer 2007
Overall average of 21% gain for all goals targeted during the summer 2007

Summary of Targeted Goals
Use of Intellikeys and Touch Screen
Attention Span
Identify critical elements
Follow directions
Retell short stories
Grammar (i.e: is/are verb tense)
Articulation

Results Summary
*Overall targeted communication goals increased by 21%
*Progress was made on all targeted goals when using both specialized computer programs and traditional computer programs
*Progress was slightly higher when using specialized computer programs
*Goals targeted using specialized computer programs increased by 23%
*Goals targeted using traditional computer programs increased by 19%
*Use of computer technology to increase communication goals was more effective when targeting language goals as opposed to articulation goals
*Overall language goals increased by 26%
*Overall articulation goals (including intelligibility) increased by 15%

Student Survey – Summer 2007
Pre and post instructors’ survey results show an increase in instructor’s knowledge of clinical and academic applications of computer technology
Total increase (CMDS + CSSE) = 4.1/5.0 to 4.5/5.0
CMDS increase = 4.1 to 4.6 & CSSE increase = 4.2 to 4.5
Most improvement seen in using computer technology to increase goals; increase = 3.3 to 4.4
According to survey results, by the end of the semester, both CSSE and CMDS students reported:
* Working directly with special needs children was an effective way to increase their knowledge and understanding of disabilities
* Feeling comfortable working with and interacting with peers from a different discipline
* Increased knowledge in working with multicultural backgrounds

**Conclusions**
Summer Computer and Language Camp has been successful for three consecutive years
* Children with disabilities increased knowledge in computer skills and made improvements with targeted communication goals
* Overall communication goals increased by 21% during the summer 2007
* Both specialized computer programs and traditional computer programs were effective in increasing targeted communication goals
* Specialized computer programs were slightly more effective in increasing targeted goals (23% vs. 19%)
* Language goals (26%) increased more than articulation goals (15%)
* CMDS and CSSE students increased their understanding of disabilities
* CMDS and CSSE students increased their understanding of multicultural backgrounds
* CMDS and CSSE Students gained experience in working with peers from different disciplines
* CMDS and CSSE students learned how to use computer technology to target communication goals
Traditional vs. Specialized Computer Programs

CMDS vs. CSSE Responses

Student Survey Responses
References: