AUGMENTATIVE AND ALTERNATIVE COMMUNICATION: GENERAL EDUCATION TEACHERS' ATTITUDES AND KNOWLEDGE

BY

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ABSTRACT

The purpose of this study was to determine the knowledge level and attitudes of general education teachers across the United States relative to augmentative and alternative communication (AAC). A nationwide online survey was conducted of general education teachers. Participants were 950 general education teachers who taught grades preschool-12 from 12 states. Results demonstrated that general education teachers have somewhat limited knowledge and experience with AAC and have generally positive attitudes toward having students with disabilities in their classrooms. The majority of teachers expressed that they desired more training in the area of AAC to better serve their students.

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Chapter 1

Introduction

Since the passing of the Individuals with Disabilities Education Act (IDEA) and its principle of Least Restrictive Environment (LRE), more emphasis is being placed on educating students with disabilities in the general education classroom. These students include students with significant disabilities who use augmentative and alternative communication (AAC) systems and strategies (Simpson, Beukelman, & Bird, 1995). According to the American Speech-Language Hearing Association (ASHA) (2005), augmentative and alternative communication "…is a means to compensate for temporary or permanent impairments, activity limitations, and participation restrictions of persons with severe disorders of speech-language production and/or comprehension including spoken and written modes of communication" (p. 1).

In order to ensure that students using AAC are able to access the general education curriculum, collaboration is necessary. Collaborative teaming has emerged as a service delivery model for serving students with AAC in the general education classroom. Collaborative teaming involves a group of individuals with different areas of expertise working together for a common goal (Hunt, Soto, Maier, Muller, & Goetz, 2002). When working together on behalf of AAC users, the collaborative team can include special education teachers, general education teachers, speech-language pathologists, parents, and a variety of other professionals who can add their expertise to the team. Hunt et. al (2002) investigated the effect of collaborative teaming on the

social participation and academic performance of students using AAC in the classroom. Teams were developed to support 3 elementary school students. The teams met once a month to develop curricular supports, communication supports, and social supports. The students' interactions were measured. Researchers found that collaborative teaming resulted in increased levels of student-initiated interactions, decreased levels of assistance provided by instructional assistants, and increased engagement in classroom activities for the 3 AAC users in the schools. General education teachers served on these teams along with inclusion support teachers, speech-language pathologists, and parents of the students. The inclusion of general education teachers into the education of AAC users was vital to student success in the general education classroom.

While speech-language pathologists and special education teachers have traditionally been involved in planning the curriculum for students in special education, the inclusion of general education teachers on these teams is a relatively new idea. Inclusion of general education teachers in the team process can be instrumental in the successful inclusion of AAC users, but can also present some unique challenges.

Special educators, speech-language pathologists, and other professionals who have traditionally been involved in the development and implementation of curriculum for AAC users have typically had some type of training in the student's communication system and in adapting general education curriculum. However, many general education teachers have not had this experience. This can present a

problem as general education teachers take a more active role in the education of students who use AAC.

Buell, Hallam, Gamel-McCormick, & Scheer (1999) reviewed the results of a state-wide needs assessment of special education and general education teachers serving students with disabilities. Results of the survey indicated that general education teachers did not feel confident performing many of the tasks necessary for successful inclusion, including adapting materials and curriculum. In addition, the general education teachers reported feeling that they had fewer resources and less support available to them in these areas than did special education professionals. The concerns the teachers expressed could have significant effects on how general education teachers include AAC users into their classrooms. If teachers do not feel confident working with AAC users and if they feel that they do not have adequate resources available to them they are less likely to include AAC into their classrooms.

Balandin and Iacono (1998) conducted a survey of 971 speech pathologists in Australia about their knowledge, practices, and resources regarding AAC. They found that speech pathologists cited negative attitudes, lack of resources, family and teachers' lack of AAC knowledge and skill, and the belief that AAC would inhibit speech as common reasons for avoiding recommendations that AAC be used. If professionals are not knowledgeable about AAC, it is extremely unlikely that appropriate recommendations will be made for students who need them.

Soto (1997) conducted a preliminary survey of special education teachers in a midwestern state to determine their attitudes toward AAC use by students with

disabilities. She found that these teachers identified administrative support, time, training, and support from speech-language pathologists and families as keys to successful AAC integration. She also found that teacher attitudes toward AAC use by students was the strongest variable in their willingness to incorporate AAC into the classroom. If teachers have negative attitudes toward AAC systems, they are less likely to include the systems into their classrooms.

Attitudes of general education teachers toward AAC and their level of training are closely related and both have significant impacts on the inclusion of students with disabilities into the classroom. Kent-Walsh and Light (2003) conducted interviews with 11 general education teachers who had students who used AAC in their classrooms. In the interviews, general education teachers identified several barriers to inclusion for students with disabilities. Investigators found that general education teachers had limited training in AAC and special education and that they felt that this lack of training made it difficult to successfully include the students in curricular activities. In addition, participants identified negative attitudes of teachers as barriers to successful inclusion. A positive attitude, open mind, and training in AAC were reported to be necessary for successful inclusion of students with disabilities.

Soto, Muller, Hunt, and Goetz (2001) had similar findings when they investigated educational team members' perspectives on issues regarding AAC in the classroom. Thirty educational team members with at least 3 years of experience supporting students with AAC in general education classrooms were organized into 5 focus groups. A total of 7 integration support teachers, 4 parents, 7 speech-language

pathologists, 6 classroom teachers, and 6 instructional assistants participated in the study. General education teachers participating in the research identified a lack of training as a barrier to successful incorporation of AAC in the classroom. Through their focus groups, several themes emerged that all focus groups believed were essential to successful inclusion of AAC users. These five themes included collaborative teaming, providing access to the curriculum, cultivating social supports, AAC system maintenance and operation, and building a supportive classroom community. Included within these themes were the ideas that teachers and staff will be more comfortable including students and incorporating AAC as they have more exposure to the AAC system and have some knowledge of what to do when breakdowns occur.

Several studies have also been conducted examining the results of training professionals in AAC. Patel and Khamis-Dakwar (2005) conducted a training program in AAC with Palestinian special educators. The training consisted of workshops followed by on-site observations. Goals of the training included instilling knowledge and awareness in participants so that they could more effectively utilize AAC in their classrooms. Participants were surveyed pre and post training and three barriers to successful AAC integration within the classroom were identified. Those included knowledge, practice, and attitudes. After providing training to the educators they found that all three barriers had been minimized. The researchers found that after training had been received, special education teachers reported an increase in both knowledge and attitudes toward including AAC into their classrooms.

McCall and Moodie (1998) conducted a survey of 112 professionals working with adult AAC users in Scotland. The purpose of their research was to determine which types of AAC were perceived to be available and desirable by professionals and how much training professionals had actually received. They found that professionals felt that there was a lack of training available, especially for professionals outside of the speech and language profession. However, those professionals who had received training felt that it was beneficial and desired more for both themselves and their colleagues.

Training for teachers and the positive attitudes of teachers have been identified as keys to successful inclusion of AAC users into general education classrooms. However, little research has been completed to determine how much knowledge and training general education teachers actually have relative to AAC, or their attitudes toward AAC and including students who use AAC in their classes.

The purpose of this study was to determine the knowledge level and attitudes of general education teachers across the United States relative to augmentative and alternative communication. The information gained could help support general teachers as they teach students who use AAC.

Chapter II

Method

Participants

The participants in this study were 950 general education teachers who taught in grades preschool through 12 in 12 states. Four surveys were discarded as they were completed by individuals who were not general education teachers.

Instrument

The online survey used for this study was adapted from a survey used to assess perspectives of paraprofessionals working with children who used AAC (Rebelowski, 2002). Questions from that survey were adapted to apply to general education teachers and questions were added to further assess the views of general education teachers working with children who use AAC. The survey was developed by two graduate students in speech-language pathology at the University of Kansas. The survey was reviewed by and revised with the guidance of two certified speech-language pathologists. The sections of the survey included demographics, prior knowledge of AAC, comfort level with AAC, and willingness to participate in AAC training. The survey was posted online through Survey Monkey. See survey in Appendix A.

Procedure

A national, online survey of general education teachers concerning their knowledge of and attitudes toward augmentative and alternative communication was administered and analyzed. Representatives from each of the 50 National Education

Association state chapters were contacted via email to request permission to place a link to the online survey on their websites and to request they solicit participants through their listserv and/or newsletter. See Appendix B for letter of introduction to state NEA organizations. See Appendix C for announcement emailed to teachers through the listserv. See Appendix D for the announcement posted on state NEA websites. Once permission was granted, the survey was placed online through Survey Monkey, an online survey generator. Teachers willing to participate activated a link to the survey provided by their NEA organization on either the email or website posting. The survey contained a brief explanation of the study and stated that completion of the survey indicated the participant's consent to participate. No identifying information was solicited in the survey. The survey responses were stored in Survey Monkey as long as the survey was available online, which was 3 months. After that time, responses were printed out and stored in a locked cabinet in the Schiefelbush Speech-Language-Hearing Clinic and downloaded to a password protected flash drive. Response data was analyzed descriptively. See Appendix E for information regarding Survey Monkey security.

Chapter III

Results

This study was designed to determine the knowledge and attitudes of general education teachers about augmentative and alternative communication (AAC). Section 1 of the survey collected demographic information about the participants of the study. Of the 50 state chapters of the National Education Association contacted about participation in the study, 16 agreed to either post a link to the survey on their website or email their members with information. Those states agreeing to post the survey on their websites were Alabama, Arizona, Arkansas, Colorado, Connecticut, Iowa, Minnesota, South Dakota, Tennessee, Wisconsin, and Wyoming. Those states agreeing to email their members with a link to the survey included Missouri, Nebraska, and Oregon. Two states agreed to post information on their website in addition to emailing their members. Those states were Michigan and Oklahoma. Of the 16 states that agreed to participate, surveys were completed by teachers from 12 of those states. See Table 1 for a distribution of surveys completed by members of each state.

Table 1

Distribution of Participants by State

State	%	#
Connecticut	0.1	1
Iowa	0.1	1
Michigan	6.6	63
Minnesota	0.1	1
Missouri	6.9	66
Nebraska	80.5	765
Oklahoma	3.1	30
Oregon	1.6	15
South Dakota	0.1	1
Tennessee	0.1	1
Wisconsin	0.1	1
Wyoming	0.5	5

Participant Demographics

The majority of the teachers who responded to the survey had taught more than 20 years. See Table 2. The majority of teachers participating in the survey taught in school districts with more than 30 schools. See Table 3. Most teachers taught in schools of 101-1000 students. See Table 4. The majority of teachers who participated in the survey taught in the secondary grades. See Table 5.

Table 2

Participant Years of Experience

Years of Experience	#	%
1st year teacher	40	4.2
1-5 years	182	19.2
6-10 years	178	18.8
11-20 years	223	23.5
More than 20 years	325	34.1

Table 3

Number of Schools in Participant's District

Number of Schools in District	#	%
1-5 schools	314	33.3
6-15 schools	210	22.3
16-30 schools	96	10.2
More than 30 schools	323	34.2

Table 4

Number of Students in Participant's School

Number of Students in School	#	%
0-100 students	50	5.3
101-500 students	481	51.0
501-1000 students	259	27.4
More than 1000 students	154	16.3

Table 5

Grades Taught by Participants

Grades	# responses
Kindergarten	170
1st grade	177
2nd grade	186
3rd grade	186
4th grade	200
5th grade	204
6th grade	193
7th grade	206
8th grade	222
9th grade	278
10th grade	296
11th grade	317
12th grade	310

Note. Participants were instructed to choose all options that applied.

Teachers were asked to identify which types of disabilities they have had experience with in the classroom. Participants were instructed to choose all that applied to their situation. The majority of teachers had had students with learning disabilities in their classes with students with behavioral challenges second. See Table 6. Participants who chose "other" identified Hearing Impairments, Fetal Alcohol Syndrome, Speech and Language Impairments, ADHD, Visual Impairments,

Multiple Sclerosis, Epilepsy, Attachment Disorders, Bipolar Disorders, Traumatic Brain Injuries, Emotional Impairments, and Other Health Impaired.

Table 6

Disabilities Served by Participants

Disability	# responses
Autism Spectrum Disorders	443
Behavioral Impairments	727
Learning Disabilities	883
Severe Language Impairments	303
Mild/Moderate Mental Retardation	544
Severe/Profound Mental Retardation	120
Orthopedic Impairments	365
Developmental Disabilities	438
Other	168

Note. Participants were instructed to choose all options that applied.

Knowledge Base

Section 2 of the survey was designed to determine prior knowledge teachers had about augmentative and alternative communication (AAC). One hundred fourteen of the teachers who responded to the survey reported that there was presently a child in their classroom who used AAC, while 627 did not. Of those who did not have children in their classroom who used AAC, 220 reported that they had had children who used AAC in their classroom in the past, while 432 had never had children in their classroom who used AAC. The most common type of AAC that students in

participants' classrooms used included gestures, pointing, facial expressions, speech sounds, and body language. See Table 7.

Table 7

AAC in the Classroom

A child in my classroom has used:	# responses
Sign Language	214
Communication Books/Boards/Wallets	221
Gestures/Pointing/Facial Expressions/Speech Sounds/Body Language	315
High Technology Equipment	72
Computer-based systems	126
Low Tech Voice Output Devices	76
Mid-Range Devices	77
PECS	86
Picture Schedule	178
Other	42

Note. Participants were instructed to choose all options that applied.

Five hundred eighty three teachers reported that they did not believe that AAC could inhibit a student's development of speech, while 158 believed that it did. While answers varied, the majority of teachers reported that AAC was most appropriate for students on the autism spectrum. See Table 8.

Table 8

AAC Services/Attitudes

AAC is most appropriate for students who have:	#
Autism Spectrum Disorders	423
Behavioral Impairments	166
Learning Disabilities	282
Severe Language Impairments	544
Mild/Moderate Mental Retardation	329
Severe/Profound Mental Retardation	363
Orthopedic Impairments	193
Developmental Disabilities	355
Other	70

Note. Participants were instructed to choose all options that applied.

More teachers felt that speech-language pathologists were needed for implementing AAC services more than any other professional. See Table 9.

Table 9

Collaborators Needed for AAC Implementation

Which individuals are needed for implementing AAC services?	#
General Education Teachers	618
Speech-Language Pathologists	690
Occupational Therapists	502
Families	637
Special Education Teachers	673
Paraprofessionals	580
Physical Therapists	414

Note. Participants were instructed to choose all options that applied.

Five hundred seventy of the teachers who responded reported that they had not ever received training in AAC, while 171 had. Of those who had, 69 had received one-on-one training, 60 had attended a workshop, conference, or inservice, 31 had taken a university course, and 30 had received some other type of training. Of those who had received training, 168 teachers reported that they felt it was helpful, while 16 did not. Six hundred sixty four of the teachers reported that they had not recently read any material related to AAC, while 77 had. Teachers were familiar with a variety of AAC systems and strategies, with the most common being gestures, pointing, facial expressions, speech sounds, and body language. See Table 10.

Table 10

AAC Familiarity

Please specify the AAC systems/strategies that you are familiar with:	# responses
Sign Language	512
Communication Books/Boards/Wallets	418
Gestures/Pointing/Facial Expressions/Speech Sounds/Body Language	568
High Technology Equipment	125
Computer-based systems	225
Low Tech Voice Output Devices	137
Mid-Range Devices	144
PECS	136
Picture Schedule	266
Other	24

Note. Participants were instructed to choose all options that applied.

Attitudes and Comfort Level with AAC

Section 3 of the survey was designed to determine participants' attitudes toward AAC and their comfort level with it. All items in this section were statements that participants were asked to respond to on a scale of 1 to 5 with 1 being strongly agree and 5 being strongly disagree.

The majority of participants reported that they believed that all students, regardless of their disability, have the potential to learn to communicate more effectively. In addition, the majority of participants reported that they felt it was fundamental to provide students with severe disabilities ways to communicate more effectively. Most participants disagreed with the statement that some of their students do not have the cognitive potential to learn how to communicate more effectively. Most participants believed that working on communication skills is a critical part of educating students with disabilities and that they are confident that some of their students can learn to communicate more effectively. See Table 11 for the percentage of teachers responding to each item.

Table 11

Communication

	SA	A	N	D	SD
All students can learn communication	58.4	27.3	1.8	0.4	0.4
Students need ways to communicate	63.1	33.8	2.4	0.1	0.6
Some students do not have cognition to communicate	0.7	9.8	19.3	47.9	22.3
Communication skills are critical in education	45	51.3	3.3	0.1	0.3
Some of my students can communicate	46	50.3	3.6	0.3	0

The majority of participants reported that their educational training programs did not give them the skills needed to implement AAC in their classrooms. However, the majority reported that they do have the skills to include children using AAC. Most participants reported that they were neutral on whether or not they felt confident implementing AAC into their students' daily routines. The majority of teachers also reported that they would benefit from additional training in AAC. See Table 12 for the percentage of teachers responding to each item.

Table 12

Confidence with AAC

	SA	A	N	D	SD
Education provided inclusion skills	5	20.1	24.4	35.1	15.4
I have skills to include students with AAC	12	37.1	24.9	20.8	5.2
I feel confident implementing AAC	4.3	23.1	34.3	28.3	9.9
I would benefit from AAC training	26	54.6	16.2	2.2	1

The majority of teachers reported that they felt that they were responsible for addressing communication skills in the classroom. They also reported that they felt that they can help a student more effectively communicate in class when they exert a little extra effort. Most teachers disagreed with the statement that they are not responsible for communication intervention in the classroom. In addition, the majority of teachers reported that they have the ability to improve the communication skills of their students. See Table 13 for the percentage of teachers responding to each item.

Table 13

Responsibilities

	SA	A	N	D	SD
Improving communication skills is teacher responsibility	26.7	48.3	20.6	3.7	0.7
Teacher effort helps students communicate effectively in class	42.3	50.3	6.2	1	0.1
Teachers are not responsible for communication intervention	1.5	7.4	13.9	51	26.1
I can not improve communication of some students	0.7	5.5	15.7	56.8	21.2

The majority of participants felt that they would be more likely to use AAC techniques if they had a speech-language pathologist to consult with. However, most teachers reported that they do not have the time to learn AAC systems. The majority of teachers were neutral about meeting with team members regularly to discuss students who use AAC. See Table 14 for percentage of teachers responding to each item.

Table 14

Support

	SA	A	N	D	SD
Would use AAC with SLP consultation	23.4	56.5	18	1.9	0.1
Have time to learn AAC systems	2.4	14.5	24.3	37.8	20.9
Meet with team often to discuss student with AAC	0.8	10.8	50.4	21.8	16

Future Training Opportunities and AAC

Section 4 was designed to determine if teachers were willing to participate in AAC training. Eight five percent of the teachers reported that they would be willing to participate in an AAC training course if one were offered in their school district, while 14.6% reported that they would not. Of those who would participate in training, 33.1% reported that they would be willing to spend 0-2 hours in training, 33.5% would spend 3-4 hours in training, 11.4% would spend 5-6 hours in training, and 22.0% would spend 6 or more hours in training. Ninety four percent of teachers reported that they would be more willing to implement AAC techniques in their classrooms if they had training in AAC, while 6% reported that they would not.

The last question of the survey gave teachers the opportunity to describe the information they would like to know about AAC. Responses to this question were varied but included how to use specific systems, AAC maintenance, types of systems that are effective for different disabilities, ideas for implementation into special classes, such as foreign language classes, how to use with AAC users while still spending sufficient time with the rest of the class, what to do with a limited budget, and where to go for help when the system is not working properly.

Chapter IV

Discussion

This survey, completed by general education teachers across the country, provides useful information about the knowledge and attitudes of these teachers toward augmentative and alternative communication. The information provided can be beneficial when designing training programs for general education teachers relative to AAC and when serving students with disabilities in the general education classroom.

Knowledge

Interestingly, the majority of teachers reported that they do not currently, nor have they ever had students in their classrooms who used AAC systems. This could be due to a number of factors. Perhaps, students who use AAC are not being included in general education classrooms or perhaps students who could benefit from AAC systems are not receiving them. Another possibility is that collaboration is not taking place between professionals regarding students using AAC. If this is the case, general education teachers may not be knowledgeable about the systems or the fact that some of their students are using them. Perhaps this trend could be changed by providing general education teachers knowledge and training in AAC and greater collaboration between all professionals when working with students with significant disabilities.

In addition, the majority of teachers reported that they have not ever received any training in AAC nor had they read any materials related to AAC. However, of those who had received training, the majority felt that it was beneficial. The fact that

teachers feel this type of training is beneficial to them is important. Because of the time constraints on teachers, it is important that training and materials related to AAC are readily available to them. School speech-language pathologists, who should be experts in the school on AAC, must be prepared to provide teachers with the knowledge that they need and value. The majority of teachers who received training reported that their training came from either a workshop or inservice, or was one-on-one training. It is likely that the one-on-one training was conducted as students using AAC were placed in their classrooms. Of those who reported having students using AAC in their classroom, approximately half of them reported having received some type of training. This is problematic as the success of AAC intervention depends, in part, on the knowledge and skill of AAC by those working with the students. If teachers are not provided with sufficient training in AAC, it is unlikely those students with disabilities can be fully and successfully integrated into all aspects of the classroom curriculum or that the teachers can advocate for them.

Attitudes

In general, most teachers participating in the survey had positive attitudes toward the learning abilities of students with disabilities and the addition of AAC to include those students into curricular activities. The majority of participants reported that students with disabilities do have the ability to learn to communicate more effectively and that it is necessary to provide those students with a means to communicate. In addition, most teachers reported feeling a sense of responsibility toward improving the communication of their students with disabilities. The fact that

most teachers feel a sense of responsibility toward improving their students' communication skills is positive as traditionally, students with disabilities have mostly been served by special education teachers, with general education teachers having little involvement. As the trend toward inclusion increases, more students will be served in general education classrooms and it is necessary that teachers feel that responsibility toward them.

Most teachers reported that they would implement AAC techniques more readily if they had training in AAC and most were willing to participate in an AAC training program. Teachers also reported that they do not have time to effectively learn AAC techniques. This information will be useful when designing teacher training programs. It is important to consider the time constraints of teachers. Perhaps AAC training courses should be offered on inservice days when teachers are already spending their time in training. In addition, speech-language pathologists should be available to teachers if questions arise. Finally, teachers must be important members of teams for students with disabilities. If they are left out of these types of groups, there is no way that they can effectively include AAC systems into their classrooms.

Clinical Implications

As AAC is in the scope of practice for speech-language pathologists, it is logical that they should be considered the AAC experts in the schools. Unfortunately, many speech pathologists may lack the knowledge needed to assist students and teachers with AAC. In addition, the traditional service delivery model of pull-out speech and language services does not lend itself to effective collaboration between

speech pathologists and general education teachers. School speech-language pathologists must be willing to re-evaluate their roles and service delivery models. Speech pathologists must make time to get to know students who use AAC as well as their systems and then spend time in the classroom passing on their knowledge and expertise to general education teachers.

In addition, speech-language pathologists must develop effective methods of training general education teachers in AAC. Through the survey, teachers expressed that they desire training in this area; it is up to the speech pathologist, then, to provide them with that training or to arrange for it to be provided. Teachers expressed that they wanted to know how to use AAC systems. Speech pathologists must be able to provide teachers with information about the basic use of AAC systems, as well as basic maintenance techniques to use when the system stops working. This is particularly important so that teachers do not have to wait on someone to come and provide basic technical support while a student cannot access the curriculum.

In addition, teachers need to be provided with ideas as to how to include AAC into curricular activities and how to adapt curricular content for AAC users. The implementation of AAC is often a trial and error process so general education teachers and speech pathologists must be in frequent contact to discuss how things are going and how things could be improved. Speech-language pathologists must be willing to spend time in the classroom using the AAC system with the student and the teacher. Meetings should occur regularly with all members of the AAC team. This

will ensure that as problems or questions arise about the use of AAC in the classroom, steps can be taken promptly to adjust things as needed.

Limitations

While the study did provide insight into the knowledge and attitudes of teachers across the nation about augmentative and alternative communication, the results may not be representative of the entire nation as the majority of teachers that responded to the survey were from the Midwest in general and Nebraska in particular. With this in mind, the results of the survey may not be generalized beyond the Midwest section of the United States. While this is the case, the study does include participants from eleven other states, and does provide valuable information about the knowledge and attitudes of general education teachers in general.

Future Research

As we now know that general education teachers desire knowledge and training in AAC, further research could include finding which types of information and formats of instruction are most effective for teachers. In addition, it would be beneficial to find how much time speech-language pathologists are spending in the general education classrooms and how comfortable they feel training teachers.

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APPENDIX A

Survey

Augmentative and Alternative Communication: General Education Teachers' Attitudes and Knowledge

The Department of Speech-Language-Hearing: Sciences and Disorders at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to better understand general education teachers' knowledge and attitudes about augmentative and alternative communication. This will entail your completion of a survey. The survey is expected to take approximately 15 minutes to complete.

The content of the survey should cause you no more discomfort than you would experience in your everyday life. Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of general education teachers' knowledge and attitudes about augmentative and alternative communication. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.

Completion of the survey indicates your willingness to participate in this project and that you are over the age of eighteen. If you have additional questions about your rights as a research participant, you may call (785) 864-7429 or (785) 864-7385 or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email dhann@ku.edu or mdenning@ku.edu.

Sincerely,

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Augmentative and Alternative Communication (AAC) is a means to compensate for temporary or permanent impairments, activity limitations, and participation restrictions of persons with severe disorders of speech-language production and/or comprehension including spoken and written modes of communication.

Section I: Identifying Information

1. I teach in:

Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
New Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

2. How long have you worked as a teacher?
   This is my first year.
   1-5 years
   6-10 years
   11-20 years
   More than 20 years

3. What grades do you teach? (Check all that apply)
   Kindergarten
   1st grade
   2nd grade
   3rd grade
   4th grade
   5th grade
   6th grade
   7th grade
   8th grade
   9th grade
   10th grade
   11th grade
   12th grade

4. My school has:
   0-100 students
   101-500 students
   501-1000 students
   1000+ students

5. There are ____ schools in my district.
   1-5 schools
   6-15 schools
   16-30 schools
   More than 30 schools

6. I have had students with _____in my classroom. (Check all that apply)
   Autism Spectrum Disorder
   Behavioral impairment
   Learning Disability
   Severe Language Impairment
   Mild/Moderate Mental Retardation
   Severe/Profound Mental Retardation
   Orthopedic Impairment
   Developmental Disability

Other (Please Specify)

Section II: Prior Knowledge of Augmentative and Alternative Communication

7. Is there presently a child in your classroom who utilizes AAC? (AAC systems/strategies include any communication mode used as a supplement to or as an alternative to oral language, including gestures, sign language, picture symbols, the alphabet, and computers with synthetic speech.)

Yes
No

If NO, have you *ever* had a child in your classroom who utilized AAC?

Yes
No

8. AAC is most appropriate for students who have: (Check all that apply)

Autism Spectrum Disorder
Behavioral impairment
Learning Disability
Severe Language Impairment
Mild/Moderate Mental Retardation
Severe/Profound Mental Retardation
Orthopedic Impairment
Developmental Disability
Other (Please Specify)

9. Please specify the augmentative and alternative communication (AAC) systems/strategies you are familiar with:

Sign Language
Communication Books/Boards/Wallets, etc.
Gestures/Pointing/Facial Expressions/Speech Sounds/Body Language
High technology equipment (DynaVox, Vanguard, Pathfinder, etc.)
Computer-based systems
Low tech voice output devices (Big Mack, Cheap Talk, etc.)
Mid-range devices (MACAW, AlphaTalker, etc.)
PECS (Picture Exchange Communication System)
Picture Schedule
Other (Please Specify)

10. A child in my classroom has used:

Sign Language
Communication Books/Boards/Wallets, etc.
Gestures/Pointing/Facial Expressions/Speech Sounds/Body Language
High technology equipment (DynaVox, Vanguard, Pathfinder, etc.)
Computer-based systems
Low tech voice output devices (Big Mack, Cheap Talk, etc.)
Mid-range devices (MACAW, AlphaTalker, etc.)

PECS (Picture Exchange Communication System)
Picture Schedule
Other (Please Specify)

11. Do you think that augmentative and alternative communication can inhibit a student's development of speech?
Yes
No

12. Which individuals are needed for implementing AAC services? (Check all that apply)
General Education Teachers
Speech-Language Pathologists
Occupational Therapists
Families
Special Education Teachers
Paraprofessionals
Physical Therapists

13. Have you recently read any material related to AAC?
Yes
No

14. Have you ever received training in AAC (hands-on or classroom setting)?
Yes
No

15. If so, what type have you received?
Workshop/Conference/Inservice
University course
One-on-one training
Other

16. If so, was it helpful?
Yes
No

Section III: Comfort Level with AAC. Please share your opinions of the following statements.

17. All students, regardless of the severity of their disability, have the potential to learn how to communicate more effectively.
Strongly Agree
Agree
Neutral

Disagree
Strongly Disagree

18. My education training program and/or experience has given me the necessary skills to include students who use AAC in the curricular activities of my classroom.
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

19. I feel that part of my responsibility, as a general education teacher, is to work on improving the communication skills of my students using AAC.
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

20. I think it is fundamental to provide students with severe disabilities ways to communicate more effectively.
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

21. I feel that when I exert a little extra effort, I can help a student communicate more effectively in class.
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

22. I feel I have the skills to include children who use AAC into the curricular activities more effectively using AAC.
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

23. I would use augmentative communication techniques in the classroom if I had a speech-language pathologist to consult with.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

24. I am not responsible for communication intervention in the classroom.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

25. Some of my students do not have the cognitive potential to learn how to communicate effectively.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

26. Working on communication skills is a critical part of educating students with severe disabilities.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

27. I am confident that some of my students can learn to communicate more effectively.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

28. I feel confident implementing AAC into my students' daily routine.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

29. I feel I would benefit from additional training in the area of augmentative communication in my job.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

30. I have enough time to learn and become comfortable with augmentative communication systems to use with my students.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

31. I meet with team members regularly to discuss my student who uses an AAC system.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

32. There is not much I can do to improve the communication skills of some of my students.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

Section IV-Future Training Opportunities in AAC

33. I would be willing to participate in an AAC training course if one were offered in my district.

Yes

No

If yes, I would be willing to spend this amount of time in training:
0-2 hours
3-4 hours
5-6 hours
More than 6 hours

34. I would be more willing to implement AAC techniques into my classroom if I had training in AAC.
Yes
No

35. These are things that I would like to learn about AAC:
_____
_____
_____
_____.

Thank you for your participation!
For any questions or comments, please feel free to email me at karenand@ku.edu.

APPENDIX B

Letter of Introduction to State NEA Organizations

Date

Dear state chapter of the National Education Association:

I am a second year graduate student in Speech Language Pathology at the University of Kansas participating in the Augmentative and Alternative Communication in the Schools (ACTS) grant. I am completing a thesis exploring general education teachers' prior knowledge of augmentative and alternative communication (AAC), comfort with AAC, and willingness to incorporate AAC into their classrooms.

This correspondence is to request your assistance with locating general education teachers in your organization with or without prior experience with AAC. In order for my research to be effective, I need your assistance in emailing members of your organization the attached letter and link to my survey.

I understand the busy schedules that general education teachers face in school settings, so I greatly appreciate your assistance with my research. If you have any questions, or if you would like a copy of my results, please do not hesitate to contact me at: karenand@ku.edu.

Thank you in advance for your help with my research!

Sincerely Yours,
Karen Andrews, B.S.
Graduate Student

APPENDIX C

Announcement to Participants used in Emails or Listserves

Attention All General Education Teachers:

I am completing a thesis about general education teachers' knowledge and attitudes toward augmentative and alternative communication (AAC). Please help me by completing an anonymous online survey. Follow this link to access the survey: http://www.surveymonkey.com/s.asp?u=823512587226. Thank you for your help!

Sincerely,

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APPENDIX D

Website Announcement

Attention all General Education Teachers:
How much do you know about augmentative and alternative communication (AAC)?
Please help with a nationwide research study examining general education teachers' knowledge and attitudes toward AAC. Follow this link to an online anonymous survey:
http://www.surveymonkey.com/s.asp?u=823512587226
Your help is greatly appreciated!

APPENDIX E

Survey Monkey Security

Information Collection

We will not use the information collected from your surveys in any way, shape, or form. In addition, any other material you provide us (including images, email addresses, etc.) will be held in the strictest confidence.

In addition, we do not collect personally identifiable information about you except when you specifically provide this information on a voluntary basis. We will make every effort to ensure that whatever information you provide will be maintained in a secure environment.

However, even if you opt out of receiving any communications from SurveyMonkey.com, we reserve the right to contact you regarding your account status or any other matter that might affect our service to you and/or our records on you.

Information Use

SurveyMonkey.com reserves the right to perform statistical analyses of user behavior and characteristics. We do this in order to measure interest in and use of the various areas of the website.

SurveyMonkey.com collects IP addresses for system administration and record keeping. Your IP address is automatically assigned to your computer when you use the World Wide Web. Our servers record incoming IP addresses. The IP addresses are analyzed only in aggregate; no connection is made between you and your computer's IP address. By tracking IP addresses, we can determine which sites refer the most people to SurveyMonkey.com. (Think of an IP address like your zip code; it tells us in general terms where you're from.)

Cookies

"Cookies" are small text files a website can use to recognize repeat users. SurveyMonkey.com uses cookies to recognize visitors and more quickly provide personalized content or grant you unimpeded access to the website. With cookies enabled, you will not need to fill in password or contact information.

Information gathered through cookies also helps us measure use of our website. Cookie data allow us to track usage behavior and compile data that we can use to improve the site. This data will be used in aggregate form; no specific users will be tracked.

Generally, cookies work by assigning a unique number to the user that has no meaning outside of the Web site that he or she is visiting. You can easily turn off cookies. Most browsers have a feature that allows the user to refuse cookies or issues a warning when cookies are being sent. However, our site will not function properly without cookies. Enabling cookies ensures a smooth, efficient visit to our website.

Opting Out

Upon request, SurveyMonkey.com will allow any user to opt out of our monthly newsletter. Also, upon your request, SurveyMonkey.com will delete you and your personal information from our database; however, it may be impossible to delete all of your information without some residual data because of backups and records of deletions.

Should you wish to opt out of any mailing from SurveyMonkey.com, click on the 'Account Info' tab, or please contact **technical support**.

Safe Harbor and EU Data Protection Requirements

We have met the Safe Harbor requirements on 11/29/2004 02:29:37 PM SurveyMonkey.com has been placed on the Safe Harbor list of companies accordingly. This list can be found at:
http://web.ita.doc.gov/safeharbor/SHList.nsf/WebPages/Oregon.

General Security Policy

SurveyMonkey.com is aware of your privacy concerns and strives to collect only as much data as is required to make your SurveyMonkey experience as efficient and satisfying as possible, in the most unobtrusive manner as possible.