Practitioner’s Views About Receiving ‘Just in Time’ Assistive Technology Resources

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Practitioners’ Views About Receiving ‘Just In Time’ Assistive Technology Resources

Philippa Campbell, Ph.D.

Reports suggest that fairly immediate access to resources about Assistive Technology (AT) devices and strategies is one approach that may help practitioners more readily use AT with infants and toddlers. Tots-n-Tech (TNT) conducted an on-line survey to identify practitioner preferences for access to and presentation of resources, information types, and content. Survey data were used as the basis for the design and content of the TNT Help Desk, an internet-based resource that presents different types of information (e.g., handouts; videotapes) and content (e.g., ideas to use for communication, participation in bathtime) in a searchable database. The 6-item survey was distributed to the approximately 3000 individuals included on the TNT newsletter subscription list. Subscribers were sent a link to the online survey with an invitation to complete the survey and were invited to provide email addresses if they wished to be entered into a drawing for a $200 Amazon gift card. A total of 692 completed the survey including parents or professionals working with school-age children or adults. We limited analyses to 560 individuals identifying themselves as professionals working directly with children aged 0-2 or 3-5 years of age.

Professionals from 48 states completed the survey. The highest number of responses were obtained from Pennsylvania (n = 80; 14%) and Minnesota (n = 41; 7%). A majority of the respondents were teachers (196; 35%) but other disciplines were reported including speech and language pathology (113; 20%), service coordination (73; 13%), occupational therapy (63; 11%), and physical therapy (50; 9%). Sixty-five (12%) respondents identified their disciplines in the other category with a majority reporting themselves as AT specialists/consultants (n = 14; 16%).

How Do Practitioners Prefer to Access and Receive Resources?

The survey included 7 questions, two of which addressed preferences for access and delivery of resource information. As a whole, respondents selected the internet as the preferred access method and ‘within 2-3 days’ or ‘same day’ as categories describing how fast the information needed to be provided for it to be useful. Respondents rank ordered their preference for five methods of access (e.g., telephone, internet, text messaging, Facebook, or Twitter). The internet was rank-ordered in first place by 67% of the respondents followed by telephone and text messaging, almost equally rank ordered in 2nd and 3rd place, Facebook (4th) and Twitter (5th). Length of time to receive the resource or information was indicated by selecting a category. Two to three days (245; 44%) and same day (183; 33%) were selected by the majority of respondents. Only 4% (n = 21) selected within an hour and 19% (n = 104) chose within a week.

What Types of Information are Useful?
Two questions asked about types of general information (e.g., solutions, information, training, strategies to find a solution) and information specific to devices. As a whole, about a third of the respondents identified solutions (n = 169; 33%) and information (174; 33%) as most desirable resources. Another third identified training (n = 197; 38%) as least desirable and 25% (n = 136) were neutral about wanting to be able to access strategies to help locate a solution. Only 29 respondents suggested not-listed categories by writing specific responses in the ‘other’ category with a majority of these ideas related to having information available in Spanish.

Respondents were asked to rank-order six categories of information about devices from most to least important using a 7-point scale where “1” indicated most important. As can be seen in the table below, finding devices and using them so that children might be included in typical settings were tied in rank order 1 followed by using devices to improve children’s skills, rank-ordered as 2nd in importance. How to make devices was ranked as least important.

Table 1: Rank-Order Preference for Information About Devices

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How to find devices for specific problems</td>
</tr>
<tr>
<td>1</td>
<td>How to use devices so that children can be included in typical settings</td>
</tr>
<tr>
<td>2</td>
<td>How to use devices to improve children’s skills</td>
</tr>
<tr>
<td>3</td>
<td>How to embed device use in activities or routines</td>
</tr>
<tr>
<td>4</td>
<td>How to teach parents to use devices</td>
</tr>
<tr>
<td>5</td>
<td>How to make devices</td>
</tr>
</tbody>
</table>

Only 29 individuals wrote in responses under the ‘other’ category and for the most part, these responses cited the importance of all items and noted the difficulty of ranking the items.

What are Important Types of Written and Video Materials?

The two final questions solicited information about written documents and video resources. Six types of written documents were listed and rank-ordered from 1 (most) to 7 (least) important. Table 2 lists the rank order preferences. Respondents reported primary interest in handouts for parents, teachers, and caregivers. Information about how to make devices and research were ranked in the middle (e.g., score of “4”) while graphs to show effectiveness or policy documents were ranked as least important.

Table 2: Rank-Order Importance of Written Documents

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Handouts for parents</td>
</tr>
<tr>
<td>3</td>
<td>Handouts for teachers or child care providers</td>
</tr>
<tr>
<td>4</td>
<td>Written instructions for making various devices</td>
</tr>
<tr>
<td>4</td>
<td>Research articles</td>
</tr>
<tr>
<td>5</td>
<td>Graphs to illustrate effectiveness</td>
</tr>
<tr>
<td>6</td>
<td>State or federal policy documents</td>
</tr>
</tbody>
</table>

As with the question about devices, very few respondents (n=21) included information under the other category; many notations related to having information available in Spanish and a few other topics such as funding were mentioned.

Suggestions for materials to be included in a video library were solicited via an open ended question. A total of 295 (53%) individuals responded and provided 452 suggestions. These responses were reviewed to create a set of primary and secondary categories into which suggestions were grouped. Ideas represented eight primary categories related to AT devices including an ‘other’ category (n= 163) into which 36% of

the ideas were grouped. The remaining ideas represented the following categories: communication (n = 87; 19%); general ideas related to any type of unspecified AT (n = 64; 14%); positioning and adapted equipment (n = 50; 11%); high technology devices (n = 42; 9%) including the iPad; switches (n = 29; 6%); and low tech devices (n = 24; 5%).

Following assignment to primary categories, each of the 452 ideas were reviewed a second time to identify specific content considerations for the video library. Each idea was described in terms of a primary content feature. Descriptions were then further grouped into defined categories such as the type of device (e.g., equipment), task (e.g., eating), or activity (e.g., parent or child teaching). A total of 14 content categories emerged from the review including a category of “not applicable” which included 57 suggestions that could not be further categorized (e.g., potty training; therapy techniques; time out) due to insufficient description.

Table 3 illustrates the percent of the 401 content-coded ideas included within the eight primary AT device categories. Video examples showing a device of any type (e.g., general) or showing a communication device (e.g., AAC; specific communication device; PECS) represented slightly more than a third (36%) of the total number of suggestions. More than 10% of the ideas related to examples of a variety of devices being used in homes and community settings, child care programs and preschools. Illustrations of device use within particular tasks such as toy play or eating or by children with particular types of disabilities (e.g., physical disabilities or of particular age groups (e.g., infants-toddlers) each made up about 7% of the total number of video library ideas. An additional 8% of the suggestions related to use of the iPad with infants and young children, in a variety of settings, and for various purposes. Finally, 6.5% of the ideas suggested video illustrations of how to examples for situations such as programming a communication device or fabricating a low tech or positioning device.

Table 3: Suggestions for Content for the Video Library Films by Percent of Total (n = 401)

<table>
<thead>
<tr>
<th></th>
<th>Communication</th>
<th>Adapted Equipment</th>
<th>High Tech</th>
<th>Low Tech</th>
<th>Switches</th>
<th>Any</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAC Device (General; Unspecified)</td>
<td>11.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.2</td>
</tr>
<tr>
<td>PECS</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>Specific Brand or Type of Communication Device</td>
<td>5.5</td>
<td>.2</td>
<td>.2</td>
<td>.2</td>
<td>6.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sitting; Mobility Equipment</td>
<td>9.0</td>
<td>.2</td>
<td>.2</td>
<td>.2</td>
<td>9.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Item (e.g., listening device)</td>
<td>.2</td>
<td>1.2</td>
<td>1.2</td>
<td>3.7</td>
<td>6.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iPad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.0</td>
</tr>
<tr>
<td>How to Do Something with Device</td>
<td>.2</td>
<td>.5</td>
<td>.2</td>
<td>.2</td>
<td>.7</td>
<td>4.5</td>
<td>6.5</td>
<td>8.0</td>
</tr>
<tr>
<td>Illustrations of Teaching Child or Teaching Parent, Teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.2</td>
<td>3.2</td>
</tr>
</tbody>
</table>


### Discussion

Professionals need quickly accessible resources in order to use AT with infants and young children easily. In this survey, a national convenience sample of 560 professionals from 48 states suggested that resources be accessed via the internet within the same or a few days. Resources with content information and solutions were viewed as most desirable, and strategies for finding solutions or training opportunities were reported as least desired. Finding devices for specific problems and using devices to promote children’s inclusion were ranked as highly important while teaching parents to use devices or actually making devices were ranked as least important. Handouts for parents, teachers, or child care providers were ranked as the most important written materials while graphs illustrating effectiveness of AT or state or federal policy documents were viewed as least important. Many suggestions were made for video materials for consumers to download from or view directly on the internet. A high number of suggestions were made for videos illustrating a variety of types of devices and for those showing actual device use in home, community, and school settings and with children with a variety of disabilities and of different age groups. Multiple types of devices were mentioned suggesting needs for real life, concrete, examples where potential users (consumers or families) could see a device in operation, view tutorials about how to make, repair, or program various devices

<table>
<thead>
<tr>
<th></th>
<th>Communication</th>
<th>Adapted Equipment</th>
<th>High Tech</th>
<th>Low Tech</th>
<th>Switches</th>
<th>Any</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Device in Particular Task</td>
<td></td>
<td>.2</td>
<td>.2</td>
<td></td>
<td></td>
<td>6.5</td>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td>Testimonial; Illustration of Successful Child Use</td>
<td>.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.2</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Use of Device in the Community</td>
<td>1.7</td>
<td>.2</td>
<td>.5</td>
<td>5.7</td>
<td>3.0</td>
<td>11.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use with a Child of Particular Age Group or Disability</td>
<td>.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.2</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>General Use</td>
<td>2.2</td>
<td>1.2</td>
<td>3.7</td>
<td>4.7</td>
<td>4.2</td>
<td>.5</td>
<td>16.7</td>
<td></td>
</tr>
<tr>
<td>Administration; Assessment; Funding</td>
<td></td>
<td></td>
<td>1.2</td>
<td></td>
<td></td>
<td>3.0</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21.7</td>
<td>12.7</td>
<td>10.5</td>
<td>6.0</td>
<td>6.7</td>
<td>15.0</td>
<td>27.4</td>
<td></td>
</tr>
</tbody>
</table>