

Thinking about the Accommodations Selection Process: AccSelPro Technical Report

Luke Duesbery, San Diego State University  
Suzanne Swaffield, Minta Elsmann, Courtney Foster, South Carolina Department of Education  
Earl Colmer, SLM Software, Inc.

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In this technical report we describe the development process behind the Accommodations Selection Process (AccSelPro) Web based application, available at <http://www.accselpro.org>. AccSelPro is a research-based Web application designed to guide the user through the process of selecting accommodations for the assessment of students with disabilities. AccSelPro helps users systematize the decision making process when considering and selecting test accommodations. We hope this more systemized process will lead to better team decision making and more equitable student access to tests and curriculum. The original content of AccSelPro was conceived of, developed, and presented in the Accommodations Manual (Thompson, Morse, Sharpe, & Hall, 2005), by the Council of Chief State School Officers' (CCSSO) Assessing Special Education Students (ASES) State Collaborative on Assessment and Student Standards (SCASS).

In this report we begin with a review of accommodations for students with disabilities. Next we describe the content and software development process. We highlight three distinct phases; *initial*, *intermediate*, and *final*. We follow with a description of the technical properties of the software, and close with a description of where the development process might lead next.

### Accommodations for Students with Disabilities

Tests don't fit everyone, and this is especially true for students with disabilities. Historically, the approach to changing tests for students with disabilities was simply to excuse them. This was justified with sentiments like, *we won't learn anything new from the test, or, they are not going to get anything right*, naturally followed by, *the test would be too painful and hurt their self-esteem*. However, excusing students from tests removes accountability, and inevitably leads to excusing them from the standard curriculum (Thompson & Thurlow, 1991).

Current law (e.g., IDEA (2004) and NCLB (2001)) stipulates that all students should be included in state and district level assessment, without exception. While a small minority of students with disabilities will be provided with tests based on alternative achievement standards (1%) or tests based on modified achievement standards (2%), the majority of students with disabilities will take the same tests as students in general education. To better provide access to these tests, students with disabilities can be offered test accommodations or modifications. A test *accommodation* changes test materials or procedures to foster participation and accurate measure of student performance. The construct being tested, for example reading or math, is not changed. In contrast, a test *modification* changes what is being tested. For example, reading a passage comprehension question out loud changes the test from reading comprehension to listening comprehension. When test modifications are made, scores are invalidated and states

typically award students the lowest possible score. Clearly accommodations are the preferred mechanism for helping tests fit student needs.

Accommodations can be categorized into those implemented in the *classroom*, such as seating a student with a auditory impairment close to the teacher or providing graphic organizers of lecture material to students with learning disabilities, and those implemented during *testing*, such as providing extended administration time for students with attention difficulties or providing large print tests for students with visual impairments. While it is true that not all classroom accommodations will be permitted in standardized state testing, whenever possible classroom and test accommodations should be paralleled; those accommodations provided for testing should also be taught and available to students during classroom instruction (Helwig & Tindal, 2003).

In addition to broadly categorizing accommodations into classroom and testing contexts, they can be further subdivided into four types: presentation, response, setting, and timing/scheduling (Haladyna & Downing, 2004; Thompson, Morse, Sharpe, & Hall, 2005). *Presentation* accommodations change the way a test or assignment is delivered to a student; *the way it looks*. Increasing the font size on an assignment, or translating a test into Braille, are examples of presentation accommodations. *Response* accommodations change the way the student shows they know the answer to a question; *how the student responds*. For example, a student can be allowed to circle responses in the test booklet instead of filling in bubbles on a computer read sheet, or dictate responses instead of writing them. *Setting* accommodations change the location in which a test or assignment is delivered. Lastly, *timing and scheduling* accommodations, arguably the most common accommodations provided, increase or reorganize the allowable length of time in which a student must complete an assignment or test. *The AccSelPro software is designed to make more explicit this organizational structure, and the decision making process involved in choosing appropriate accommodations.*

#### *Legal and Teacher Decision Making Context*

IDEA (2004) requires that IEP teams consider and include a statement about test accommodations necessary for the appropriate measure of the student (p.118). However, research suggests that subjectivity in teacher judgment relating to the selection of accommodations may lead to their overuse (Fuchs and Fuchs, 2001; Fuchs, Fuchs, Eaton, Hamlett, and Karns, 2000). Furthermore, more recent research uncovered a high degree of inconsistency between accommodations recommended in the IEP and individual teacher recommendations (Ketterlin-Geller, Alonzo, Braun-Monegan, & Tindal, 2007). The authors suggest that it may be a general lack of teacher knowledge about accommodations and testing that leads to poor decisions and inconsistencies. They write, “Although advances in research

have led to a better understanding of the practical applications of accommodations, for the most part, reliable systems are not in place to ensure that appropriate accommodations are being assigned and that these accommodations are consistently applied to classroom instruction and assessments". With AccSelPro we directly address this lack of knowledge by creating a tool with which IEP team members and decision makers can learn how to better select accommodations. AccSelPro explicitly addresses the alignment of accommodations recommended in the IEP and what is used in practice.

#### Initial Software Development: The Planning Stage

Our mandate was to redeliver the research based recommendations found in the Accommodations Manual (Thompson, Morse, Sharpe, & Hall, 2005) in a format that simplified learning about making accommodations decisions. As a result, during our initial development stage some of the original material needed reconceptualizing to fit in the scope of a Web based application. For example in the context of IEP decision making, we made minor revisions to text to make the language simplified and more relevant. In addition, accommodations presented in the Accommodations Manual as *test only* were presented separately as test *and* classroom accommodations in the software. Importantly, disability characteristics presented in the Accommodations Manual that presented barriers to access but which could not be eliminated by an accommodation were removed. This process of content redevelopment was also guided in part by software logic and interface constraints. We knew users would be presented with a series of questions and choices as they considered selecting accommodations for their students. This meant we needed to overlay a linear type logic framework to the recommendations found in the manual. It also meant that where some accommodations were verbose, they were simplified because of the space constraints of a computer screen.

#### *Goal and Purpose Setting*

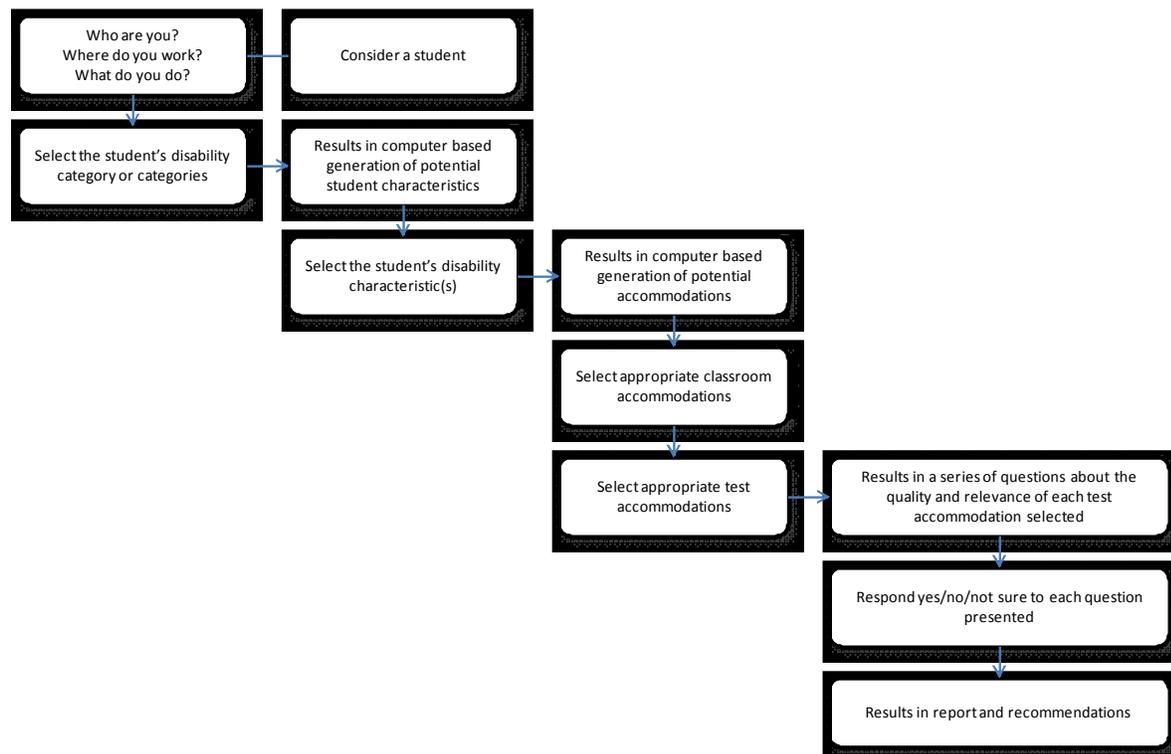
During an early meeting of the AccSelPro development team it was made clear that AccSelPro was not simply a time-saving tool for teachers, but was instead an explicit teaching tool. Teaching the tenets of selecting accommodations, found in the Accommodations Manual, was and is the primary purpose of AccSelPro. This poses a dilemma, since the user may be quite unaware of this purpose. Our guiding principal was to develop a seamless learning experience for the user. From their perspective it was a tool to help make accommodations decisions, but from ours it was a tool to help the user learn to do it on their own or with little guidance. Thus, during development our purpose was to create a Web application that fostered a more systematic way of thinking about making accommodations decisions,

## Decision Logic

Our initial logic framework was conceptualized by a small content team, and for the most part was the logic framework that remained over the course of the project. In the software we planned to begin by collecting demographic information from the user, and then pose a series of questions that would help us to identify the disabling characteristics of the student in question; those characteristics that might prevent free access to the tested construct. Based on user responses to these questions, we would next present a series of potentially beneficial accommodations from which the user could choose. This list of accommodations comes, for the most part, from the Accommodations Manual (Thompson, Morse, Sharpe, & Hall, 2005). The user would next be asked to consider the appropriateness of the accommodation(s) selected. In the end, the user would be given a report summarizing the choices and decisions made during the process, and provided with a series of recommendations based on responses provided. This original logic was later interpreted and reconceptualized by the software development team in light of interface design issues, however, only minor revisions were implemented beyond the original framework. An overview of the logic is presented in Figure 1, and a more detailed early version of the framework is provided in Appendix A.

Figure 1.

### Original decision-making logic



### *Interface Design*

Once the logic was well established the development team began creating paper based, then graphics based, and later Web based simulations. All simulations were made available to the development team during the course of this initial stage via a password protected Web page. Depictions of the simulations created during this development process are presented in Appendix B. The approach of slowly building more accurate simulations raised questions about navigation, interface design, and occasionally content related issues. It was this process of considering the viability of simulations that lead to a refined piece of software in the end. During the final simulation stage, every screen to be presented in the ultimate Flash based application was already conceptualized.

### *Data Collection*

Early questions about data management and record keeping also arose as the simulations were considered. We decided that collecting personally identifiable information with the software might serve to undermine our efforts, so we decided to collect background aggregated data only. When using the software, no personal identifying student information is recorded. Our database of records, thus, is keyed on a sequentially assigned identification number.

Despite not collecting personally identifiable information we were nevertheless intent on collecting information that could be used to improve the condition of testing in our state. For this reason we collected school, district, and user information that could be tied to the accommodations selected. In the future, with this data we could answer questions like - how often would test accommodations not parallel classroom accommodations, or how often did administrators use the software in a given time period. The answers to these questions could potentially guide the professional development agenda of the State Department of Education's Department of Assessment.

### *Video Based Support*

It was our expectation that users would not need to know the background rationale for selecting accommodations in order to use the software. However, the rationale would be available in the form of video based tutorials. If the user wanted more information about the accommodations area being addressed, for example disability characteristics, they could choose to watch a brief video. Users were provided with the option of reviewing this material, but were never required to. A full text transcription was provided alongside each video, and accompanied by the option to increase or decrease font size.

### *Target Audience*

During the initial planning stage, it became apparent that we needed to clearly identify who our target user was going to be. Since we expect AccSelPro will be a decision making tool used by the Individualized Education Planning (IEP) team, the audience is likely to be made up of members of the IEP team; teachers, school psychologists, administrators, parents, caregivers, and students with disabilities.

The software can be used for students in all grades; and does not rely upon grade-specific or age-specific information. The time (e.g., during IEP team meeting or not) and frequency of AccSelPro use is on an as-needed basis for users.

### Intermediate Software Development: The Programming Stage

We had laid our best plans and were ready to begin the programming stage of development. During this stage we would select the programming platform, refine and build the interface, construct the server side database that provides for dynamic content delivery, develop supporting video, and conduct an early pilot test event.

### *Platform Selection*

There were a number of potential programming environments that suited this project. Since we were working with a Department of Education grant to the South Carolina Department of Education, however, we faced a number of constraints. The South Carolina Department of Education was in the midst of an initiative to make material accessible in Flash format. Flash is a delivery format that can provide dynamic and video based content within a single Web delivered package. Moreover, most Web browsers, e.g., Internet Explorer, Safari, and Mozilla, can natively load Flash material with the use of a free plug-in. The development tool of choice for the State was Adobe Flex, and the State had already made a substantial fiscal commitment to its use. Because Flex is a relatively new programming platform, finding experienced Flex developers proved difficult. But, while Flex may be novel the algorithm logic needed for our application was not. In the end, the project team selected an experienced programmer with the expectation that the programmer would need to learn to use Flex.

### *Interface Design and Programming*

AccSelPro is freely available on the Internet, and delivered in the accessible Adobe Flash format. Almost all interface features are driven by a set of dynamic database tables. For example, the color scheme chosen for South Carolina is derived from an editable table. If the software were to be ported to another state, adjustments to the underlying tables could be

made instead of changing hard code. A master state level variable could control the dynamic table selection process. Similarly, the *contact us* interface was constructed to automatically email the relevant technical or content support person found in a database table. Whenever possible, components that had the potential to change were soft-coded into these tables and pulled by the software when needed.

#### *User Support: Video and Glossary*

In addition to the development of the main application interface, we were also, at the same time, working with a major video component. This video would be approximately one hour in length, and review content related material. The video was filmed in multiple locations in studio and in the field. Willing administrators, educators, and students from several states participated. This video was later broken down into smaller more manageable components which were also embedded in correspondingly relevant locations in the software. Thus, users had the option to watch the entire video up front, or piece by piece as they progressed through AccSelPro.

In addition to the video support we also included a glossary of assessment terms. This glossary was a combination of an ASES SCASS document and a more comprehensive word list developed by the IRIS Center team of Vanderbilt University. Permission was obtained to use the IRIS list of words in our glossary, so long as we provided credit for its authorship.

#### *Early Pilot Test*

In this intermediate development stage we showed a beta version of AccSelPro to stakeholders at a national conference. We solicited participant feedback with the help of a survey designed to measure perception of both content and interface design. At this stage in development we still had the opportunity to make changes.

Feedback in general was positive, and users expressed eagerness to see the finished product and use it in their own states. A few users expressed interest in the possibility of turning AccSelPro into a tool that states could customize for themselves. Although our grant did not give us enough time to include this level of sophistication, we were open to this kind of development given additional funding. Indeed, our dynamic database tables were well suited to accomplish the degree of customization desired. The survey and a more detailed description of feedback are provided in Appendix C.

## Final Software Development: The Polishing Stage

In our final development stage we invited a small sample of teachers and graduate students to review and comment on the interface and content. These comments lead directly to the creation of a series of frequently asked questions embedded in the software.

### *Review and Tutorial Development*

User feedback was also used to guide the construction of a short demonstration video. We intended for this video to be used as a tutorial of the features and navigation procedures used in AccSelPro. While most users would not need or want to view the video, we did recognize that some would be more comfortable with additional guidance. The video tutorial was developed by combining motion and still screen-captures. Later a running audio commentary was added.

### *Technical Report and User Manual*

We had originally planned to write a brief user manual, which would parallel the tutorial video. In the end, however, we decided to also write a more comprehensive technical report. This report (you are currently reading) would provide for continuity into later phases of the project, and also detail the procedure we used during development. Given this more detailed technical report, the User Manual could then simply focus on how to use the AccSelPro interface and features.

## The Future of AccSelPro

AccSelPro is scheduled for release in South Carolina in the fall of 2009; As such, it is currently housed on the South Carolina Department of Education's servers. It was and still is our intention to make the system design applicable in (and available to) any state, since it derives from the ASES SCASS Accommodations Manual which was created by a multistate consortium. However, because a lot of variation exists from state to state in what is considered a legally permissible accommodation (Thompson & Thurlow, 2003), there is a potential gap in the utility of AccSelPro. We know stakeholders are unclear about the legality of selecting accommodations (Ketterlin-Geller, Alonzo, Braun-Monegan, Tindal, 2007), so ultimately when we scale-up from South Carolina to the nation we will need to incorporate these state differences; the dynamic database driven nature of AccSelPro makes this possible. It is conceivable that each state might customize the accommodations available to users in their own state. This would allow for the better integration of state laws around permissible accommodations. This level of customization also allows for more detailed reporting capabilities at the state level, and the potential for student level tracking.

## APPENDIX A - Initial logic devised during the initial stage of the project

### SECTION I: INTRODUCTION (Opening screen selections)

1. User is presented with a summary of the AccSelPro Process purpose
2. User is presented with opportunity to pursue profession development before using the software. Most of this information will also be available within the software when needed.
  - i. User can choose to view all material
  - ii. User can select individual topics later
3. User is asked if they would like a brief tutorial on how to use AccSelPro
  - i. If yes, a short video (Flash) demos the site features (3 mins)
  - ii. If no, continue

### SECTION II: IDENTIFY STUDENT DISABILITY (leading to need for accommodations)

1. Is this the first time you have used AccSelPro? (\*\* store response and generate EventID)
  - i. If no, reminded that they may want to view the tutorial
  - ii. If yes, welcome back
2. User is asked to identify their state
3. User is asked to think of a student
4. User is asked to identify the district in which the student is receiving services
  - i. "other" prompts a keyed response
5. User is asked to identify the school name from a list (based on district selection)
  - i. "other" prompts a keyed response
6. User is asked to mentally gather information about the student. Sources might include,
  - i. classroom observations
  - ii. past and present test performance / scores, sometimes referred to as PLEPs
  - iii. Past and present IEPs
  - iv. General academic performance
  - v. Parent/guardian/student discussions
  - vi. Information from other teachers / staff
7. User is asked to identify student difficulty areas
  - i. Vision, Hearing, Fine motor, Communication, Reading, Writing, Math, Physical, attention
8. Based on which of the above are selected, user is presented with a series of prompts (5-20) asking which specific access skill needs addressing, (Deaf HH example to follow) - dichotomous (yes/no).
9. User is presented with a summary of their selections and asked if they want to proceed

10. User is presented with list of all possible instructional then test accommodations based on previous input (source Revised FactSheet 5), and asked which ones they want to use – can choose one or none or all of them.

### SECTION III: ACCOMMODATIONS EVALUATION

For each selected accommodation, a series of “evaluation questions” (EQs) are presented: most are yes/no, some can be yes/no/don’t know. Yes – simply reports what they have done. No or not sure generate recommendation.

1. Does the student currently use this accommodation?
2. In general, is the accommodation logistically feasible?
3. Have appropriate staff be taught how to implement the accommodation during testing?
4. Has the student been taught how to use this accommodation?
5. In general, does the student perceive the accommodation to be useful?
6. Does the accommodation help the student participate in testing?
7. Does the accommodation help the student show you how much they know?
8. One purpose of providing test accommodations is to help the student learn what kinds of accommodations they might need in daily life. Does this accommodation, in general, lead to increased student independence?
9. Does your state permit this accommodation to be used during state assessment?

### SECTION IV: RECOMMENDATION/REPORT

1. User is presented with a downloadable text and PDF output summarizing results
  - i. Present user disability/access characteristics
  - ii. Present list of chosen accommodations
  - iii. Present summary of Accommodations Evaluation
  - iv. Highlight discrepancies
  - v. Provided sources of further information
2. District/school/and response patterns are saved to database for future analysis. Possible questions include:
  - i. Does selection depend on location
  - ii. Does selection depend on student disability?
  - iii. Do discrepancies found depend on location?
  - iv. Do discrepancies found change over time?

APPENDIX B - Progression of interface simulations

Figure 2. Early sketch of startup screen

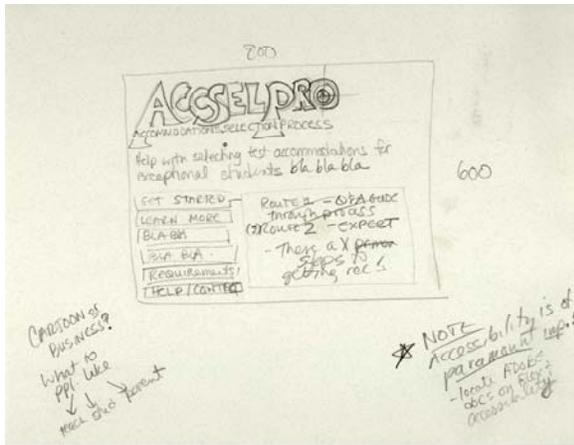


Figure 3. Early sketch of navigation and interface

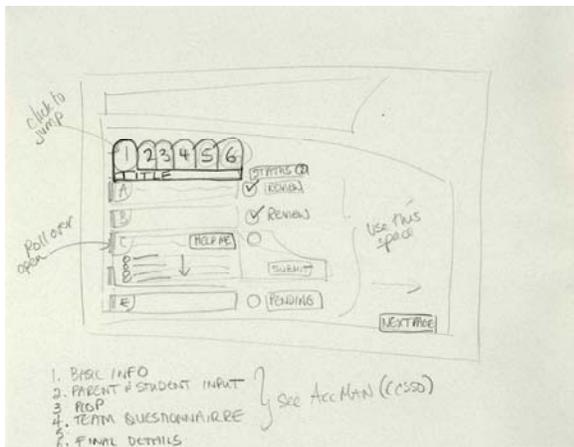


Figure 4. Early graphics based mockup of startup screen



Figure 5. Early graphical based mockup of interface layout

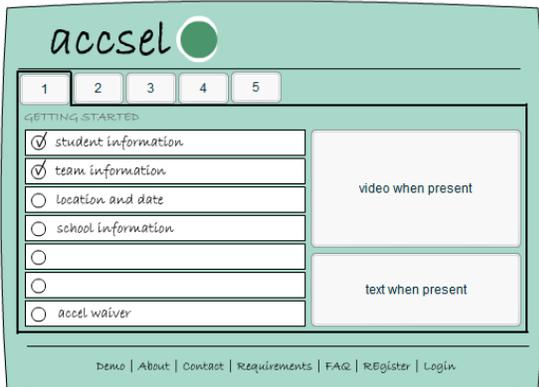


Figure 6. Early graphical based mockup of navigation scheme

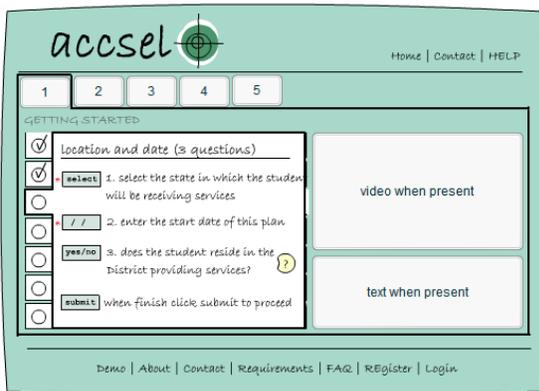


Figure 7. Early web based mockup of interface dimensions



Figure 8. Early web based mockup of entry screen



Figure 9. Final Web based mockup of demographics collection interface



Figure 10. Final mockup example



## APPENDIX C

## Pilot survey

Thank you for evaluating the AccSelpro Webtool; we appreciate your time and effort. The purpose of this survey is to allow *you* to give us feedback about AccSelpro, so we can make improvements. The survey should not take you more than 15 minutes. Please indicate if and how much you agree with the following statements:

<b>Content</b>					
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Don't Know</b>
The introduction to AccSelPro video was useful					
The 60 minute content video was useful					
AccSelPro seemed to cover everything I needed					
I would use AccSelPro in my work					
I learned about the accommodations decision making process					
After using AccSelPro, I can make better accommodations decisions					
The Helpettes sufficiently answered questions I had					
Helpettes were easy to understand					
I would recommend AccSelPro to other professionals					
<b>Please give us your suggestions to improve <i>AccSelPro</i> content:</b>					
<b>Interface</b>					
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Don't Know</b>
The Web-based tool was fun to use					
I like the way I could use Helpettes					
I liked the look of AccSelPro					
Text in AccSelPro was easy to read					
Things were well placed and easy to find in AccSelPro					
I like to use Web based tools like AccSelPro					
I like the video content available in AccSelPro					
AccSelpro worked well on my computer					
I felt comfortable with Web based tools like					

AccSelPro					
Please give us your suggestions to improve the <i>AccSelPro interface</i> (be specific about problems you may have had):					
<b>Manual</b>					
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Don't Know</b>
The manual was easy to find					
The manual was easy to read					
The manual was useful					
The help options were useful.					
The linked websites were useful.					
The linked documents were useful.					
The linked activities were useful.					
The video vignettes were useful.					
Please give us your suggestions to improve the <i>AccSelPro manual</i> (be specific):					
<b>Comments</b>					
What I liked most about AccSelPro:					
What I liked least about AccSelPro:					
What I liked most about the video content					
What I liked least about the video content:					
Would you recommend this tool to a colleague? Why or why not?					
Other comments:					

Survey results (note: these results based on a portion of the aforementioned survey)

<b>Content</b>					
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Don't Know</b>
AccSelPro guides the user through an effective and reliable accommodations decision-making process.			(5)	(7)	
I would use AccSelPro in my work	(1)		(3)	(7)	(1)
I would recommend AccSelPro to other professionals			(3)	(8)	(1)
<b>Interface</b>					
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Don't Know</b>
I like the look of AccSelPro		(1)	(6)	(4)	(1)
Text in AccSelPro is easy to read			(7)	(2)	(3)
Things are well placed and easy to find in AccSelPro			(5)	(2)	(4)
I like to use Web-based tools like AccSelPro			(4)	(6)	(2)
I feel comfortable with Web tools like AccSelPro			(4)	(6)	(2)

### **Positive Feedback:**

#### Comments on Utility:

- Several participants commented that AccSelPro would make a great tool for training first year teachers, IEP teams, and for accommodations training in local school systems.
- Some participants noted that AccSelPro would also be useful in supporting self-determination and self-advocacy for students.
- One participant commented that it would be a good idea to use AccSelPro for monitoring.
- Several participants noted the utility of AccSelPro at various levels: state-level, district-level, school-level, IEP teams, testing directors, parents, etc.

#### General Positive Comments:

- Several participants expressed an interest in trying AccSelPro out and urged making AccSelPro publicly available as soon as possible.
- Several participants indicated that they would recommend AccSelPro to colleagues.

#### Comments on AccSelPro Features:

- One participant indicated that the ability to collect information on schools and districts would be helpful.
- One participant expressed appreciation for the multiple sources of information (glossary, frequently-asked questions, responses to evaluation questions) that AccSelPro provides.
- A few of the participants commented that the system as a whole appears to be well-organized and user-friendly.
- A few participants responded positively to AccSelPro's ability to provide immediate feedback to the users.
- Some participants expressed appreciation for the inclusion of text to accompany the video.
- Several participants responded positively to the video (one in particular expressed appreciation for the inclusion of actual students in the video).

### **Constructive Feedback:**

#### Comments on the Interface:

- A few participants expressed concern over the choice of background and text color, specifically with respect to users who might have visual impairments. It was suggested that we consult the American Printing House Recommendations for formatting guidance. A few participants simply didn't like the screen color
- A decision still needs to be made as to whether the *p* in *AccSelPro* will be capitalized; the final decision must be reflected consistently in all instantiations of *AccSelPro*.

#### Suggestions for Additional Features:

- Several participants stressed the importance of adding "other" to the list of accommodations, so the user can manually enter other accommodations not listed in the system. An alternative to this would be a disclaimer that not all accommodations are listed in the system, but that the decision-making process can be applied to non-listed accommodations as well.
- One participant suggested adding a "remember me" button to the initial page so that users would not have to fill in their information each time they used the system.
- One participant suggested adding a feature which would allow users to directly access definitions of key vocabulary terms used in AccSelPro by mousing over or clicking on those terms (e.g., pop-up definitions or direct link to glossary entry).

- One participant suggested adding Web links to each state department of education's Web site.

#### Comments and Questions about the Purpose of AccSelPro:

- One participant expressed concerns about the amount of time and work required to complete AccSelPro: "While it's comprehensive, it is a bit cumbersome. Since this is part of the IEP process which is a long process, I find that it might be challenging to do. I'd want the student and parent involved. If teachers thought they had to use this, and add another thing to their already list of things to prepare, write, and review IEPs, they would flip out."
- One participant expressed the concern that information in AccSelPro and the video did not seem to benefit Special Ed. teachers. The participant indicated that the video could be more helpful to Gen Ed. teachers, if it included information on how to implement accommodations, and what accommodations are intended to do for the student (as opposed to just a list describing each accommodation).
- One participant indicated that if AccSelPro is not intended for long-term use, then it might not be a good tool for collecting data on accommodation selection decision-making at the school and district level.
- Other participants indicated that AccSelPro would make an excellent introductory and training tool.

## References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). Standards for educational and psychological testing. Washington, DC: Author.
- Fuchs, L. S., & Fuchs, D. (1992). Identifying a measure for monitoring student reading progress. *School Psychology Review*, 21, 45-58.
- Fuchs, L. S., & Fuchs, D. (1999). Fair and unfair testing accommodations. *School Administrator*, 56(10), 24-29.
- Fuchs, L. S., & Fuchs, D. (2001). Helping teachers formulate sound test accommodation decisions for students with learning disabilities. *Learning Disabilities Research & Practice*, 16, 174-181.
- Fuchs, L. S., Fuchs, D., Eaton, S. B., Hamlett, C., Binkley, E., & Crouch, R. (2000). Using objective data sources to enhance teacher judgments about test accommodations. *Exceptional Children*, 67, 67-81.
- Fuchs, L. S., Fuchs, D., Eaton, S. B., Hamlett, C. L., & Karns, M. (2000). Supplementing teacher judgments of mathematics test accommodations with objective data sources. *School Psychology Review*, 29, 65-85.
- Haladyna, T., & Downing, S. M. (2004). Construct irrelevant variance in high stakes testing. *Educational Measurement: Issues and Practice*, 23(1), 6-16.
- Helwig, R., & Tindal, G. (2003). An experimental analysis of accommodation decisions on large-scale mathematics tests. *Exceptional Children*, 69, 211-225.
- Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. [section] 1400 et seq. (2004) (reauthorization of Individuals with Disabilities Education Act of 1990)
- Ketterlin-Geller, L., Alonzo, J., Braun-Monegan, J., & Tindal, J. (2007). Recommendations for accommodations: implications of (in)consistency. *Remedial and Special Education* xx.xx
- No Child Left Behind Act of 2001, 20 U.S.C. [section] 6301 et seq.
- Thompson, Morse, Sharpe, & Hall (2005). *Accommodations manual: How to choose and use accommodations for students with disabilities*. Washington, DC: Council of Chief State School Officers.