Faculty Attitudes Toward Teaching Adults with Learning Disabilities

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ABSTRACT

The attitudes of adult basic education faculty members toward teaching adults with learning disabilities are likely to influence the success of their students; however, there are no existing survey instruments that measure this construct or the practical knowledge faculty members should have to effectively serve the population. A new survey instrument was developed based on components from existing faculty surveys and other attitudinal measures. The new instrument included Likert-style items designed to assess teachers' knowledge and attitudes regarding the diagnosis, causal factors, and impact of learning disabilities on academic performance. The survey also queried these teachers about basic support and referral systems available to these students within their institutions. Five stable factors that provide some information about teachers' attitudes and knowledge were found: *Teacher Knowledge*, *Value of Diagnostic Assessment*, *Student Academic Potential*, *Student Attitudes*, and *Dependence*. Descriptive results suggest teachers maintain an overall positive service attitude, but the likelihood that teachers will refer students, whom they suspect is contending with a disability, remains low.

INTRODUCTION

Completing some form of postsecondary education is a goal for more than four out of five secondary school students with disabilities (Cameto, Levine, & Wagner, 2004). The rate of enrollment in postsecondary programs by students with learning disabilities has increased significantly in recent decades to a rate of 9% in 2009 (Newman, Wagner, Cameto, Knokey, & Shaver, 2010). During the 2008–2009 academic year, virtually all (99%) of public two and four-year institutions in the US reported enrolling students with disabilities (Raue & Lewis, 2011). Specific learning disability is the most commonly reported category among college students with disabilities (Raue & Lewis, 2011). The proportion of students with learning disabilities in higher education is increasing internationally as well (Leyser, Greenberger, Sharoni, & Vogel, 2011). This trend should be of interest to university service providers who have a fundamental goal of supporting

students through graduation. Although one recent longitudinal study found that the retention and graduation rates of students with and without disabilities were similar (Wessel, Jones, Markle, & Westfall, 2009), other studies have found that postsecondary completion for students with impairments is lower than for students without disabilities (Newman et al., 2011).

Many factors influence postsecondary retention and completion among students with learning disabilities (LD). These include, but are not limited to, academic challenges, and peer, faculty, and administrator attitudes (Rao, 2004). Indeed, Rao (2004) emphasized that faculty attitudes toward students with disabilities are "one of the important contributors to the success of students enrolled in these institutions, colleges, and universities" (p. 2). Negative attitudes exhibited by faculty members can discourage students from advocating for themselves and accessing the accommodations to which they are entitled (Denhart, 2008; Hartman-Hall & Haaga, 2002). Conversely, positive mentoring relationships between college faculty and students, even if they are informal, can encourage the development of a strong classroom identity (Beilke & Yssel, 1998) and persistence toward achievement of educational goals (CCSSE, 2004).

Staff members at postsecondary institutions likely serve as gatekeepers for college students with LD, and their actions are thought to impact student success (Lombardi & Murray, 2011). Despite the importance of faculty attitudes, when it comes to serving college students with disabilities, this construct has not been adequately researched (Rao, 2004). Prior research into faculty attitudes contends with a number of limitations including small sample sizes, lack of attention to the psychometric properties of the instruments used (e.g. reliance on campus climate surveys), and a focus on a single disability category (Lombardi & Murray, 2011). Additionally, much of the related research was conducted several decades ago (Beilke & Yssel, 1998; Houck, Asselin, Troutman, & Arrington, 1992; Nelson, Dodd, & Smith, 1990; Satcher, 1992). Also, it appears that few studies have been repeated or updated.

There are some recent studies investigating this topic. Lombardi and Murray (2011), for example, developed an instrument to measure faculty attitudes toward adopting Universal Design principles, and found these attitudes can be reliably assessed. Furthermore, Leyser, Greenberger, Sharoni, and Vogel (2011) compared the results of a faculty survey conducted in 1997 and 2007 to understand changes in faculty knowledge about attitudes and willingness to offer accommodations to students with disabilities. They found that faculty had more knowledge and communication with the offices for disability services, but there were no significant group differences in faculty willingness to provide accommodations to students. Attitudes toward students with disabilities were positive overall. Wolman, McCrink, Rodriguez and Harris-Looby (2004) developed an instrument to measure faculty attitudes in postsecondary institutions in Mexico and the United States and found no significant differences in willingness to provide accommodations among faculty. Additionally, they found that faculty in both countries held positive views about students with

disabilities. Hong, Haefner, and Slekar (2011) modified Wehmeyer, Agran, and Hughes' (2000) survey that measured faculty attitudes toward promoting self-determination in college students with and without disabilities. Hong, Haefner, and Slekar (2011) found significant differences in attitudes, knowledge and teaching skill across gender, department and academic ranks. Barnard, Stevens, Siwatu, and Lan (2008) used the *Attitude Towards Persons with Disabilities* (ATPD; Yuker & Block, 1986) to measure the relationship between faculty attitudes toward diversity and students with disabilities. Results suggested there may be an inverse relationship between diversity attitudes and attitudes toward persons with disabilities. In other words, faculty members with a more positive attitude towards diversity may hold a negative attitude toward students with disabilities; suggesting a deficit view of disability.

Despite the recent increase in research on the topic of learning disabilities in adults, researchers in the field are calling for a more balanced approach to studying learning disabilities with a broader perspective that is inclusive of all ages, literacy levels, and with more attention focused on older adults (Gerber, 2012). Gerber's contention is corroborated by the lack of published research, which investigates the attitudes of adult education practitioners. In fact, the body of literature in general on low-literate adults with LD—those who are served by the Adult Basic Education (ABE) system—has been characterized as "sparse and lacking scientific rigor" (Gerber, 2012, p. 37).

PURPOSE

Adult Basic Education programs are funded through federal legislation (Workforce Investment Act- Title II) to provide free educational services to adults who want to improve their basic skills, learn English, improve family literacy skills, obtain a GED, or transition to postsecondary education. This manuscript presents the results of a statewide survey of the Adult Basic and Literacy Education (ABLE) programs' teachers in one Midwestern state. The purpose of the survey, which was conducted in July 2011, was to obtain a better understanding of ABLE teachers' perceptions and attitudes toward disability in general and learning disabilities in particular. Furthermore, this survey allows for initial exploration of the relationship between teacher attitude and teacher practice (i.e. willingness to provide accommodation, likelihood of referring students for diagnostic services). Indeed, Gerber (2012) reinforces the importance of a systematic approach to understanding faculty attitudes and practices, indicating that empirical evidence is needed to inform teacher practice and program implementation. To this end, we ran exploratory factor analysis on this new instrument to examine underlying constructs. It is our hope that results from this and future studies might inform future professional development activities for adult basic education teachers, and perhaps serve as a basis for enhancing instructional resources.

METHODS

We reviewed previous attitudinal survey instruments (Gething, 1994; Gilmore, 2010; Houck, Asselin, Troutman, & Arrington, 1992; Murray, Wren, & Keys, 2008; Rao, 2004; Vogel, Leyser, Wyland, & Brülle, 1999; Wishart,

& Manning, 1996) prior to developing the survey described here.[1] We identified several instruments that measured faculty attitudes towards college students with disabilities (Houck, Asselin, Troutman, & Arrington, 1992; Rao, 2004; Vogel, Leyser, Wyland, & Brülle, 1999). However, we did not identify instruments that measured the attitudes of adult basic or community education teachers toward adult students with learning disabilities, and providing services to such students who are attending adult education programs. Since the context of adult and community education can be quite different from the typical college classroom a new survey was needed. We used existing faculty surveys, and other measures of attitudes toward students with disabilities (see Appendices A and B), to develop a new and more targeted instrument designed to gather information about ABLE teachers' attitudes regarding adult students with diagnosed and undiagnosed learning disabilities. Teachers were asked to respond to 48 statements using the five-point Likert scale, which ranged from 1 (Strongly Disagree) to 5 (Strongly Agree).

We piloted the survey with a proxy sample comprised of adult education administrators in the Adult Education system of a neighboring state. With permission of the state director of adult education, we distributed the link to the online survey via email to the program directors in all 120 counties of the state, with an invitation from the Senior Associate in Professional Development and Instructional Support. We administered the survey through Qualtrics, a web-based survey management package. A total of 41 individuals responded to the survey. We calculated reliability estimates on the full scale (Cronbach's alpha = .824), which suggests reasonable internal consistency. A committee of state level professionals with expertise in serving adults with learning disabilities and survey development, analyzed and reviewed the survey results. We then refined the survey items based on committee feedback.

We sent the link to the revised online survey, administered through Qualtrics survey software (Qualtrics, Provo, UT), to the ABLE program administrators via email from the state ABLE director. The email explained the purpose of the survey and invited the program administrators to forward the survey link to their teachers. Of the 916 total ABLE teachers who indicated that teaching was their primary job responsibility, 300 completed the survey (a 29% return rate). This is in part because only 409 of those 916 teachers had valid email addresses. The return rate might have been as high as 65% if only teachers with valid email addresses were included in the sample. Demographic information collected includes highest degree completed, locale, years in ABLE (see Table 1), and number of sites per program.

RESULTS

Results are conceptualized in the context of total survey error, which is comprised of coverage, nonresponse, sampling and measurement error (Dillman, Smyth, & Christian, 2009). Coverage error deals with the degree to which the sampling frame (i.e., list from which the sample was drawn) reflects the population of interest. Although we had information on all 916 ABLE teachers in the state, coverage concerns can arise if data collection procedures reduce the likelihood or even prevent

Table 1—*Respondent Demographics*

		Frequency	Percent	Valid Percent
Gender				
	Male	47	15.7	18.1
	Female	213	71.0	81.9
Highest Degree				
	Bachelors	140	46.7	57.1
	Masters	104	34.7	42.4
	Doctoral	1	0.3	0.4
Years in ABE				
	1	30	10	11.3
	2-5	72	24	27.2
	6-10	49	16.3	18.5
	More than 10	114	38	43
Program Locale				
	Rural	115	38.3	43.4
	Urban	92	30.7	34.7
	Suburban	58	19.3	21.9

respondents from completing a survey. This was a concern here given the aforementioned problems with email addresses. Also, there may be some nonresponse bias. We nevertheless think the response sample may be reasonably reflective of the population of interest. This is based on similarities between the responding sample and what has been documented about the state's ABLE teaching force. Descriptive analyses of demographic data reveal that the majority of respondents were female (71% female and 17% male). Overall, 47% of the respondents had Bachelor's degrees, 35% had Master's degrees and one respondent reported having a doctoral degree. Most of the respondents had taught in the ABLE system for more than six years (55%) and 38% had taught in ABLE for more than ten years. Approximately 38% of the respondents indicated that their program was located in a rural community and 31% indicated an urban locale. In the state, as reported in the 2010 state data, 0.68% of ABLE teachers hold an Associate's degree, 61% of teachers hold a Bachelor's degree, 34% hold a Master's degree, and 1.4 % hold doctoral degrees.

Measurement error deals with the degree to which the instrument does not adequately assess the topics or constructs of interest; psychometric properties were accordingly assessed. Reliability estimates using Cronbach's (1951) alpha were calculated. The alpha for the full, revised instrument was 0.822; subscale alpha's ranged from a low of 0.688 to a high of 0.839. These meet, or are close to meeting, the standard 0.70 criterion for establishing adequate internal consistency (Nunnally, 1975). See Table 2.

Table 2—*Full Scale*

Item	n	M	SD
Adults with LD are generally slow learners overall.	265	2.33	.823
Most adult students with LD are not trying hard enough to learn.	264	1.79	.795
Few students in my ABLE program have undiagnosed LD.	263	2.81	.963
Learning disabilities can be caused by bad teaching.	261	1.93	.868
Learning disabilities are not real.	261	1.32	.499
Learning disabilities can be caused by poverty.	264	2.40	1.081
Learning disabilities are overdiagnosed.	254	2.55	.807
Adults are likely to feel stigmatized by finding out they have LD.	260	2.92	.875
ABLE students who are struggling academically generally do not want to go through the LD diagnostic.	262	2.82	.784
Overall, diagnostic assessments serve no purpose for adults who may have LD.	258	1.72	.718
If an ABLE student is struggling academically, I am unlikely to refer him or her for diagnostic assessment.	262	2.56	.898
ABLE students are likely to become dependent on accommodations.	264	2.56	.801
Adults with LD need accommodations to be successful in the ABLE classroom.	265	3.77	.782
ABLE students with LD are more difficult to teach than ABLE students without learning disabilities.	260	3.00	.953
Teachers in ABLE programs do not have the time to effectively service adults with LD.	259	2.72	.969
ABLE students use LD as excuse.	260	2.39	.917
Adults with LD are not likely to be successful in college (e.g in terms of persistence, graduation).	261	2.30	.809
Adults with LD are less likely to be successful in ABLE programs than are students without learning.	260	2.72	1.058
Adults with LD will never be as successful as those without LD.	262	1.88	.698
Adults with LD have many emotional problems.	263	3.02	.746
The process of being diagnosed causes undue stress.	262	2.95	.820
ABLE students who are struggling academically generally do not want to be referred for LD diagnostic.	260	2.79	.812
ABLE students who are struggling academically generally do not want to be diagnosed with LD.	264	3.03	.902
Learning disabilities usually run in families.	261	3.36	.818
A diagnostic assessment is helpful to adults who appear to be struggling with learning.	256	4.00	.648
Results from a diagnostic assessment can help ABLE students understand their academic strengths and weaknesses.	258	4.25	.558
If an ABLE student is struggling academically , I am very likely to refer him or her for diagnostic assessment.	261	3.28	.884
Educational accommodations for learning disabilities are too costly to be practical.	261	2.49	.862

Item	n	M	SD
We can serve adults with learning disabilities with the current resources we have in our program.	263	3.09	.963
My teachers (I) have the skills to effectively serve adults with LD.	263	3.46	.859
Teachers in ABLE programs do not have the time to effectively service adults with LD.	259	2.72	.969
Adults with LD are likely to graduate from college.	261	3.08	.692
Adults with LD can be as successful as those without LD.	260	4.10	.652
Functioning with an undiagnosed learning disability causes undue stress.	262	4.06	.678
Results from a diagnostic assessment lead to increased self-awareness for ABLE students.	262	4.01	.613
Results from a diagnostic assessment empower ABLE students to play a more active role in their learning.	260	4.00	.683
I often provide accommodations for adults with LD in my ABLE classroom.	260	3.67	.860
I am aware of the students in my ABLE classroom who have a diagnosed learning disability.	260	3.72	.826
I am aware of appropriate educational accommodations to meet the needs of my students who have LD.	262	3.71	.826
I know who to contact for more information about educational accommodations for my students.	261	3.77	.850
All teachers in my program are likely to implement the required/appropriate accommodations for students.	262	3.46	.869
It is important for all teachers in my program to understand the requirements for providing accommodations.	267	4.34	.832
My teachers (I) have the knowledge to effectively serve adults with LD.	264	3.50	.885
My teachers (I) have the disposition to effectively serve adults with LD.	262	3.93	.677
Adults in ABLE programs often cannot afford the cost of a diagnostic assessment for LD.	261	4.18	.799

Missing items were handled using mean replacement, and listwise analyses did not yield distinctly different results. Three variants of parallel analyses were used to assess the number of factors in the data set. One variant was used for principal axis factoring, one for principal components and a third used a permutation approach that does not require the assumption that raw data was multivariate normally distributed. This is useful because the Likert-style response options for the survey undermine this assumption. The parallel analyses procedures used were described in O'Connor (2000). In addition, visual analyses of a scree plots were done. Regardless of the approach, a five factor solution appeared to best represent the data. Exploratory factor analyses were then conducted using maximum likelihood extraction approaches. We cross compared these results with polychoric factor analyses, since ordinal data was collected via the response stems. The differences between the techniques were trivial. The five factors are discussed below and are represented in Table 3.

Table 3—*Factors and Loading*

Survey Items (Cronbach's Alpha)	Factor Loading
Factor 1–Teacher Knowledge (α = .839)	
My teachers (I) have the knowledge to effectively serve adults with LD.	.752
My teachers (I) have the skills to effectively serve adults with LD.	.738
I am aware of appropriate educational accommodations to meet the needs of my students who have LD.	.693
All teachers in my program understand the requirements for providing accommodations for students diagnosed with LD.	.681
I know who to contact for more information about educational accommodations for my students.	.574
I often provide accommodations for adults with LD in my ABLE classroom.	.563
All teachers in my program are likely to implement the required/appropriate accommodations for students with LD.	.506
I am aware of the students in my ABLE classroom who have a diagnosed learning disability.	.459
We can serve adults with learning disabilities with the current resources we have in our program.	.416
My teachers (I) have the disposition to effectively serve adults with LD.	.400
Factor 2–Value of Diagnostic Assessment (α = .801)	
Results from a diagnostic assessment lead to increased self-awareness for ABLE students.	.749
Results from a diagnostic assessment can help ABLE students understand their academic strengths and weaknesses.	.692
Results from a diagnostic assessment empower ABLE students to play a more active role in their learning.	.617
Overall, diagnostic assessments serve no purpose for adults who may have LD.	.607
A diagnostic assessment is helpful to adults who appear to be struggling with learning.	.570
Functioning with an undiagnosed learning disability causes undue stress.	.542
Factor 3–Student Academic Potential (α = .770)	
Adults with LD are not likely to be successful in college (e.g in terms of persistence, graduation).	.765
Adults with LD are less likely to be successful in ABLE programs than are students without learning.	.622
ABLE students with LD are more difficult to teach than ABLE students without learning disabilities.	.560
Adults with LD will never be as successful as those without LD.	.553
Adults with LD are likely to graduate from college.	.513
Adults with LD can be as successful as those without LD.	.510

Survey Items (Cronbach's Alpha)	Factor Loading
Factor 4–Student Attitudes (α = .775)	
ABLE students who are struggling academically generally do not want to go through the LD diagnostic assessment.	.786
ABLE students who are struggling academically generally do not want to be referred for LD diagnostic assessment.	.755
Adults are likely to feel stigmatized by finding out they have LD.	.654
ABLE students who are struggling academically generally do not want to be diagnosed with LD.	.599
The process of being diagnosed causes undue stress.	.491
Factor 5–Dependence (α = .688)	
ABLE students use LD as excuse.	.717
ABLE students are likely to become dependent on accommodations.	.420
Learning disabilities are overdiagnosed.	.393

The first factor, *Teacher Knowledge*, includes items that relate to teacher perception of their knowledge, skills, and abilities to adequately serve adults with learning disabilities in their programs (e.g. adequate programmatic resources, awareness of educational accommodations, etc.) and included ten items. The internal coefficient alpha for the *Teacher Knowledge* factor was high (α = .839). The second factor, *Value of Diagnostic Assessment*, originally included seven items related to teacher perceptions of the value of diagnostic assessment for learning disabilities (e.g. diagnostic assessment can benefit students through increased self-awareness). The internal coefficient alpha for this factor was high (α = .801). The item "learning disabilities are not real" was eliminated from this factor. The third factor, *Student Academic Potential*, included four items that pertained to teacher perceptions about the potential for adults with learning disabilities to be achieved academically in ABLE programs and in postsecondary education (α = .770). The fourth factor, *Student Attitudes*, included four items related to teacher perceptions of student attitudes towards diagnostic assessment (e.g. students do not want to be assessed, students will feel stigmatized if they learn they have LD, the process causes undue stress, etc.). The internal coefficient alpha for this factor was high (α = .775). The fifth factor, *Dependence*, included five items related to teacher beliefs that diagnostic assessment would lead to dependence. This was a fairly weak factor overall and it had an internal coefficient factor of α = .688. Additional items need to be constructed to strengthen this factor.

Teacher Behavioral Responses

In addition to the attitudinal items, the survey queried teachers about their awareness and behavior related to diagnostic assessment for learning disabilities. Almost half (47%) of the respondents reported that they had not referred any ABLE students with suspected learning disabilities for further diagnostic assessment, and 37% reported referring between one and five students for further assessment since the beginning of the fiscal year (see Table 4). Most respondents (57%) did not know the name of a professional in their community who offered diagnostic services, and did not have brochures from a diagnostician to distribute to students (75%), but most reported that they knew how to find someone who could offer diagnostic assessments (69%).

Table 4—*Teacher Referral Behavioral Responses*

	Frequency	Percent	Valid Percent
Students referred			
None	142	47.3	50.5
Between 1 and 5	110	36.7	39.1
Between 6 and 10	16	5.3	5.7
More than 10	13	4.3	4.6
Students with suspected LD			
None	142	47.3	50.5
Between 1 and 5	110	36.7	39.1
Between 6 and 10	16	5.3	5.7
More than 10	13	4.3	4.6
Know the name of a psychologist who offers diagnostic testing			
Disagree	172	57.3	61.9
Agree	106	35.3	38.1
Know how to find someone who offers diagnostic testing			
Disagree	69	23	25
Agree	207	69	75
Have brochures from local diagnostician			
Disagree	224	74.7	81.8
Agree	50	16.7	18.2

Perceived Value of Diagnostic Assessment

The 18 survey items related to diagnostic assessment pertained to teachers' attitude towards the value of diagnostic assessment for learning disability. The majority of respondents (49%) agreed or strongly agreed (mean = 3.28) when asked if they were "very likely" to refer a struggling student for diagnostic testing. The mean score (4.00) on "*A diagnostic assessment is helpful to adults who appear to be struggling with learning*" indicates that most believe diagnostic assessment is helpful. Similarly, there was strong agreement (mean = 4.25) to "*results from a diagnostic assessment can help ABLE students understand their strengths and weaknesses.*" Most respondents agreed (mean = 4.06) with the statement, "*Functioning with an undiagnosed learning disability causes undue emotional stress.*" Over 71% of respondents agreed or strongly agreed (mean = 4.18) with the statement that "*adults in ABLE programs often cannot afford the cost of diagnostic assessment for LD.*" The results indicate that teachers believe cost for testing is a barrier for adult students.

Perceived Student Academic Potential

Nine of the survey items were related to teachers' perception of the potential academic success of adults with learning disabilities. Overall, the results suggest a fairly positive attitude toward the potential of adults with learning disabilities to be successful academically. The statement, "*Adults*

with LD are likely to graduate from college," had a mean response of 3.08, which is close to neutral (3). The item "*Adults with LD can be as successful as those without LD*," had stronger agreement (mean = 4.10) than the previous statement. These statements, however, contrast with mean responses on two other items in this subscale, suggesting some ambivalence in teacher attitudes toward students with LD. "*Adults with LD are less likely to be successful in ABLE programs than are students without learning disabilities*" (mean = 2.72) indicated disagreement. Similarly, the statement "*Adults with LD are not likely to be successful in college (e.g. in terms of persistence and graduation)*" had slightly stronger disagreement, but it was still weak (mean = 2.30).

Teacher Knowledge of Causal Factors

Five items related to teachers' perception of the factors that cause learning disabilities. The responses to the five items on the causal factors subscale suggest that ABLE teachers do think learning disabilities are "real" and are not caused by bad teaching or lack of effort or laziness. However, the statement "*learning disabilities are caused by poverty*" (mean = 2.40) had only weak disagreement.

DISCUSSION

The results of the survey suggests that overall ABLE teachers have a positive attitude towards issues relating to serving adults with learning disabilities, including referral for diagnostic assessment. Despite awareness of the value of diagnostic assessments, and having positive attitudes toward providing such assessments for adults in the state's ABLE programs, almost half of the respondents had not referred anyone for further assessment; perhaps due to the prohibitive cost of diagnostic assessment. This conclusion can be supported by the strong agreement (mean = 4.18) to the statement "*Adults in ABLE cannot afford the cost of a diagnostic assessment.*"

Lack of awareness or availability of local providers may also be a barrier to providing diagnostic services. Most respondents (57%) did not know the name of a diagnostician in their community who offers diagnostic services, and did not have brochures from a diagnostician to distribute to students (75%). Most reported that they knew how to find someone who could offer diagnostic assessments (69%); perhaps referring to an online network of diagnosticians that is available through the Board of Regents. Further investigation is needed in this area.

While more responding programs identified their program location as rural, the survey results did not indicate a significant difference between the administrator's ability to identify a diagnostician based on their program location. In other words, it is not significantly more difficult to identify a diagnostician in a rural area than in an urban location.

The subscales indicate that respondents agree, but less strongly, with the statements regarding performance expectations. For example, the statement, "*Adults with LD are likely to graduate from college,*" had a mean response of 3.08, close to neutral (3). The item "*Adults with LD can be as successful as those without LD*," had a stronger agreement (mean = 4.10) than the previous statement. This could indicate reluctance on the part of the respondents to provide a response that is not socially acceptable.

CONCLUSION

As far as we are aware, this is the first effort to survey ABE teachers, in general, and ABLE teachers, in particular, about their perceptions of community college students with learning disabilities. We were able to identify five factors: Teacher Knowledge, Value of Diagnostic Assessment,

Student Academic Potential, Student Attitudes, and Dependence. The survey items loaded on to the factors in a logical manner and in a way that is consistent with the literature. While this survey needs refinement and additional testing, these early results provide some initial evidence that we are able to assess teacher attitudes and perceptions. Overall, the results suggest that ABLE instructors in this state have a positive attitude towards issues related to providing services to adults with learning disabilities. The discrepancy between their positive attitude toward diagnostic assessment and their reported rate of referral suggests that the teachers perceive barriers. Indeed, the respondents indicated that the cost of diagnostic assessment is a prohibitive factor for many adult students. There are multiple implications for policy and for practice including professional development.

While this survey provides some initial understanding into the perceptions and attitudes of ABLE teachers, the study does suffer from several limitations. There is some evidence that the responding sample is reflective of the target population, but the overall nonresponse rate and limited teacher email addresses leaves this in doubt. Additionally, there were some missing data, but analyses using mean replacement and listwise analyses did not yield distinctly different results. Overall, the study should be replicated with a new sample that would allow further refinement, particularly with an eye toward addressing the weakest factor—Dependence. Although these limitations are present, the utility of this initial work exists in its primary insight into the possibility of measuring teachers' perceptions and attitudes toward serving adult students with learning disabilities, and the potential to explore the relationship between teacher attitudes and behavior.

Further investigation could reveal a relationship between attitude and behavior, specifically whether teachers' beliefs about potential financial barriers is inhibiting them from referring eligible students for these services. Additional research with ABLE students about their own perceptions and attitudes toward learning disabilities would extend the research reported in this proposed paper, and provide further insight into barriers to diagnostic assessment, accommodations to which students with disabilities are entitled, and ultimately, academic persistence.

Endnote:

1. Surveys were identified through an EBSCO search (2011).

REFERENCES

Barnard, L., Stevens, T., Siwatu, K., & Lan, W. (2008). Diversity beliefs as a mediator to faculty attitudes toward students with learning disabilities. *Journal of Diversity in Higher Education*. *1*(3), 169-175.

Beilke, J. R., & Yssel, N. (1998). Personalizing disability. *Journal for a Just and Caring Education*, *4*(2), 212-223.

Cameto, R., Levine, P., & Wagner, M. (2004). *Transition planning for students with disabilities*. Menlo Park, CA. SRI International. Retrieved from http://www.nlts2.org/reports/2004_11/index.html

Community College Survey of Student Engagement (CCSSE). (2004). *Engagement by design: Summary of 2004 findings*. Retrieved from http://www.ccsse.org/publications/CCSSE_reportfinal2004.pdf.

Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*, 297-334. doi:10.1007/BF02310555

Denhart, H. (2008). Deconstructing barriers: Perceptions of students labeled with learning disabilities in higher education. *Journal of Learning Disabilities*, *41*(6), 483-497.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. Hoboken, NJ: Wiley.

Gerber, P. (2012). The impact of learning disabilities on adulthood: A review of the evidence-based literature for research and practice in adult education. *Journal of Learning Disabilities*, *45*(1), 31-46.

Gething, L. (1994). The interaction with disabled persons scale. *Journal of Social Behavior and Personality*, *9*(5), 23-42.

Gilmore, L. (2010). Community knowledge and beliefs about ADHD. *Australian Educational and Developmental Psychologist*, *27*(1), 20-30.

Hartman-Hall, H. M., & Haaga, D. A. (2002). College students' willingness to seek help for their learning disability. *Learning Disability Quarterly*, *25*, 263-274.

Hong, B., Haefner, L., & Slekar, T. (2011). Faculty attitudes and knowledge toward promoting self-determination and self-directed learning for college students with and without disabilities. *International Journal of Teaching and Learning in Higher Education*, *23*(2), 175-185.

Houck, C. K., Asselin, S. B., Troutman, G. C, & Arrington, J. M. (1992). Students with learning disabilities in the university environment: A study of faculty and student perceptions. *Journal of Learning Disabilities*, *25*, 678-684.

Leyser, Y., Greenberger, L., Sharoni, V., & Vogel, G. (2011). Students with disabilities in teacher education: Changes in faculty attitudes toward accommodations over ten years. *International Journal of Special Education*, *26*(1), 162-174.

Lombardi, A.R., & Murray, C. (2011). Measuring university faculty attitudes toward disability: Willingness to accommodate and adopt Universal Design principles. *Journal of Vocational Rehabilitation*. *34*, 43-56.

Murray, C., Wren, C., & Keys, C. (2008). University faculty perceptions of students with learning disabilities: Correlates and group differences. *Learning Disability Quarterly*, *31*, 95-113.

Nelson, J., Dodd, J., & Smith, D. (1990). Faculty willingness to accommodate students with learning disabilities: A comparison among academic divisions. *Journal of Learning Disabilities*, *23*(3), 185-189.

Newman, L., Wagner, M., Cameto, R., Knokey, A-M., & Shaver, D. (2010). *Comparisons across time of the outcomes of youth with disabilities up to 4 years after high school. A report of findings from the National Longitudinal Transition Study (NLTS) and the National Longitudinal Transition Study-2 (NLTS-2)* (NCSER 2010-3008). Menlo Park, CA: SRI International.

Newman, L., Wagner, M., Knokey, A.-M., Marder, C., Nagle, K., Shaver, D., Wei, X., Cameto, R., Contreras, E., Ferguson, K., Greene, S., & Schwarting, M. (2011). *The post-high school outcomes of young adults with disabilities up to 8 years after high school. A report from the National Longitudinal Transition Study-2 (NLTS2)* (NCSER 2011-3005). Menlo Park, CA: SRI International.

Nunnally, J.C. (1975). *Introduction to statistics for psychology and education*. New York: McGraw Hill.

O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instrumentation, and Computers*, *32*, 396-402.

Rao, A. (2004). Faculty attitudes and students with disabilities in higher education: A literature review. *College Student Journal*, *38* (2), 191-198.

Raue, K., & Lewis, L. (2011). *Students with disabilities at degree-granting postsecondary institutions* (NCES 2011–018). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

Satcher, J. (1992). Responding to employer concerns about the ADA and job applicants with disabilities. J*ournal of Applied Rehabilitation Counseling*, *23*(30), 37-40.

Vogel, S.A., Leyser, Y., Wyland, S., & Brülle, A. (1999). Students with learning disabilities in higher education: Faculty attitudes and practices. *Learning Disabilities Research & Practice*, *14*, 173-186.

Wehmeyer, M. L., Agran, M., & Hughes, C. (2000).A national survey of teachers' promotion of self-determination and student-directed learning. *Journal of Special Education*, *34*, 58-68.

Wessel, R.D., Jones, J.A., Markle, L., & Westfall, C. (2009). Retention and graduation of students with disabilities: Facilitating student success. *Journal of Postsecondary Education and Disability*, *21*(3), 116-125.

Wishart, J. G., & Manning, G. (1996). Trainee teachers' attitudes to inclusive education for children with down's syndrome. *Journal of Intellectual Disability Research*, *40*, 56-65.

Wolman, C., McCrink, C.S., Rodriguez, S.F., & Harris-Looby, J. (2004). The Accommodation of University Students with Disabilities Inventory (AUSDI): Assessing American and Mexican faculty attitudes toward students with disabilities. *Journal of Hispanic Higher Education*, *3*(3), 284-295.

Workforce Investment Act of 1998, Public Law No. 105–220, sec. 212, U.S. Government Printing Office (1998).

Yuker, H.E., & Block, J.R. (1986). *Research with the Attitude Toward Disabled Persons Scales: 1960-1985*. Hempstead NY: Hoftstra Center for the Study of Attitudes Toward Persons with Disabilities.

Appendix A. Existing Attitundinal Scales Used in Development of ABE Scale

1. Knowledge of the disability (Gilmore, 2010; Murray, Wren & Keys, 2008; Wishart, & Manning, 1996)
2. Knowledge of related laws (Murray, Wren & Keys, 2008)
3. Characteristics (Gilmore, 2010)
4. Causal Factors (Gilmore, 2010)
5. Diagnostic issues (Gilmore, 2010)
6. Willingness to provide accommodations (Vogel, Leyser, Wyland, & Brülle,1999; Murray, Wren & Keys, 2008; Houck, Asselin, Troutman, & Arrington, 1992)
7. Resource constraints (Murray, Wren & Keys, 2008)
8. Performance expectations (Murray, Wren & Keys, 2008; Houck, Asselin, Troutman, & Arrington, 1992))
9. Disclosure and believability (Murray, Wren & Keys, 2008; Houck, Asselin, Troutman, & Arrington, 1992)

Appendix B. Breakdown of Attitudinal Components

1. **Characteristics** (Gilmore, 2010)
   a. Adults with LD are generally slow learners.
   b. Adult students with LD do not try hard enough to learn.
   c. Few students in my ABLE program have undiagnosed LD.
2. **Causal Factors** (Gilmore, 2010)
   a. Learning disabilities can be caused by bad teaching.
   b. Learning disabilities are not real.
   c. Students from poor families are more likely to have learning disabilities.
   d. Learning disabilities are inherited.
3. **Diagnostic issues** (Gilmore, 2010)
   a. Learning disabilities are overdiagnosed.
   b. A diagnostic assessment can be helpful to adults with LD.
   c. Adults are likely to be stigmatized by finding out they have LD.
   d. Adults in ABLE programs cannot afford the cost of a diagnostic assessment for LD.
   e. ABLE students who may have LD do not want to get diagnosed.
   f. Diagnostic assessments serve no purpose for adults who may have LD.
   g. The process of being diagnosed with an LD is empowering for adults.
   h. Functioning with an undiagnosed LD causes undue emotional stress.
   i. The process of being diagnosed causes undue emotional stress. I am unlikely to refer an ABLE student who may have an LD, for diagnostic assessment.
   j. I am very likely to refer an ABLE student who may have an LD, for diagnostic assessment.
4. **Willingness to provide accommodations** (Vogel, Leyser, Wyland, & Brülle,1999; Murray, Wren & Keys, 2008; Houck, Asselin, Troutman, & Arrington, 1992)
   a. I am willing to provide accommodations for adults with LD in my ABLE classroom. ABLE students will become dependent on accommodations.
   b. Educational accommodations are too costly.
   c. Adults with LD need accommodations to be successful in the ABLE classroom.
   d. Teachers in my ABLE program are reluctant to provide educational accommodations to adults with LD.
5. **Resource constraints** (Murray, Wren & Keys, 2008)
   a. We can serve adults with learning disabilities with the current resources we have in our program.
   b. Adults with LD are hard to teach in ABLE programs.
   c. My teachers have the skills to effectively serve adults with LD.
   d. Teachers in ABLE programs do not have the time to effectively service adults with LD.
6. **Performance expectations** (Murray, Wren & Keys, 2008; Houck, Asselin, Troutman, & Arrington, 1992)
   a. ABLE students use LD as excuse.
   b. Adults with LD are not likely to be successful in college (e.g. in terms of persistence, graduation).
   c. Adults with LD are likely to graduate from college.
   d. Adults with LD are not likely to be successful in ABLE programs than those without LD.
   e. Adults with LD will never be successful as those without LD.
   f. Adults with LD can be successful as those without LD.
   g. Adults with LD have many emotional problems.