Validating the Physical Educators’ Attitude Toward Teaching Individuals With Disabilities III (PEATID III) Survey for Future Professionals

Sherry L. Folsom-Meek
Minnesota State University, Mankato

Terry L. Rizzo
California State University, San Bernardino

The purpose of this study was to assess validity and reliability of the Physical Educators’ Attitude Toward Teaching Individuals with Disabilities III (PEATID III; Rizzo, 1993) for future professionals. Participants (N = 3,464) were undergraduate students enrolled in the introductory adapted physical education course at 235 colleges and universities. Construct validity was obtained through principal components analysis with oblique rotation and supported by principal components analysis with varimax rotation. Results showed that PEATID III measures three factors: (a) outcomes of teaching students with disabilities in regular classes, (b) effects on student learning, and (c) need for more academic preparation to teach students with disabilities. Reliability, as estimated through coefficient alpha, was .88 for the total scale and .71 or greater for each of the disability subscales.

Attitude is believed to play a significant role in explaining physical educators’ actions toward teaching students with disabilities in regular classes. Although numerous theories are available to guide research concerning attitudes toward teaching students with disabilities (Tripp & Sherrill, 1991), one survey developed by Rizzo (1983, 1984) and revised two times (Rizzo, 1986, 1993) stands out because it is driven by a theoretical model. This survey is the first in adapted physical activity to use a theory for construction and use. Several researchers (Rizzo & Vispoel, 1991, 1992) have used the second version of the instrument, Physical Educators’ Attitude Toward Teaching the Handicapped II (Rizzo, 1986), or the third version, Physical Educators’ Attitude Toward Teaching Individuals with Disabilities III (PEATID III; Folsom-Meek, Groteluschen, & Nearing, 1996; Folsom-Meek, Nearing, Groteluschen, & Krampf, 1999; Hodge & Jansma, 2000; Kowalski

Sherry L. Folsom-Meek is with the Department of Human Performance, Minnesota State University, Mankato, MH 213, Mankato, MN 56001. E-mail: <sherry.folsom-meek@mnsu.edu>. Terry L. Rizzo is with the Department of Kinesiology at California State University, HPE 120, 5500 University Parkway, San Bernadino, CA 92407.
& Rizzo, 1996; Rizzo, 1993) for their attitude research. Notwithstanding the version, the survey uses the theory of reasoned action (Ajzen & Fishbein, 1980) as the theoretical basis for its construction.

The theory of reasoned action uses a linear model to predict behavior. This model proposes that intention to engage in a given behavior (e.g., teach students with disabilities in a regular class) is the best predictor of behavior. According to the theory, intention is dependent on two constructs: attitude toward the behavior (teaching students with disabilities in a regular class) and the subjective norm (beliefs about what significant others think about an individual engaging in that behavior). With the PEATID III, attitude toward the behavior is inferred from the respondent’s agreement with 12 belief statements about the behavior (teaching students with disabilities in the regular class).

Attitude toward the behavior is dependent on the beliefs of the individual regarding the outcomes or consequences of the behavior. To understand attitude, the theory of reasoned action states that it is necessary to assess underlying beliefs. Assessing beliefs underlying attitudes and social expectations provides an understanding of the tenets about teaching students with disabilities. Beliefs mediate attitudes. Consequently, beliefs do not make an independent contribution to the intention to teach students with disabilities. However, behavior and intention can only be understood and predicted when attitudes and social norms are tracked to underlying beliefs about teaching students with disabilities. Beliefs represent a person’s past experiences and knowledge and new information—considered external variables. These external variables are indirectly related to attitudes, subjective norms, intention, and behavior (Ajzen & Fishbein, 1980).

It is important to note that the social normative component of the theory of reasoned action was not used in the development of the PEATID III. Rizzo did not believe it necessary to assess this component because public laws require educators to teach students with disabilities in their regular classes to the maximum extent appropriate. That is to say, physical educators must comply with laws, and their social norms expect compliance with public laws.

A complete discussion of this theory is presented in Ajzen and Fishbein (1980) and Fishbein and Ajzen (1975). This theory has been used in applied research settings scanning a variety of subjects. For example, Riddle (1980); Sparrow, Shinkfield, and Karnilowicz (1993); and Young and Kent (1985) applied the theory to physical activity and to recreational and leisure settings.

Three versions of PEATH and PEATID III have received fairly extensive use over the past 16 years. While Rizzo and colleagues are the primary users of the instrument, others (e.g., DePauw & Goc Karp, 1990; Downs & Williams, 1994; Folsom-Meek et al., 1999; Folsom-Meek, Nearing, & Kalakian, 2000; Hodge & Jansma, 1999, 2000) have used the survey. Despite the widespread use of the three versions of the instrument, a review of the literature shows primarily content validity. During construction of the original instrument, PEATH (Rizzo, 1983, 1984) was subjected to content validation by a panel of six nationally prominent researchers with expertise in adapted physical education research. Sampling validity involved defining the domain of behavior, context, and time. The criteria for sampling validity were addressed in the preliminary stages of development of the PEATH. The procedures used were consistent with Ajzen and Fishbein (1980) for survey development, Allen and Yen (1979) for sampling validity, and Kerlinger (1986) for content validity.
Validating PEATID III

Only one study examined construct validity of the first version of the instrument (Rizzo, 1988). Participants were physical education teachers ($N = 194$) in an urban, midwestern city. Results of a principal components analysis on the original 20 items showed that four components were measured by PEATH: (a) effects of teaching students with disabilities on student learning, (b) need for special academic preparation to teach students with disabilities, (c) teacher beliefs about placement of students with disabilities in regular physical education classes, and (d) effects of teaching students with disabilities on teachers. Based on this principal components analysis, the length of the PEATH was reduced from 20 to 12 items, thereby making the survey more parsimonious. These results were presented at a national convention, but the complete findings were never published formally in a journal.

Construct validity of the PEATID III for future professionals has not yet been examined. With the widespread use of the survey, obtaining construct validity is essential and critical to meeting criteria for quality research. Moreover, it behooves professionals in adapted physical activity to identify the accessible constructs that account for attitudes of physical educators toward teaching students with disabilities given the national trend toward inclusion. As such, the purpose of this study was to assess construct validity and reliability of the PEATID III for future professionals, thereby providing data for judging the efficacy of the survey.

**Method**

**Participants**

Participants were 3,464 undergraduate students enrolled in an introductory adapted physical education course at 235 colleges or universities representing 47 states. The sampling design was purposive cluster. Criteria were preestablished for an institution of higher education to be included in the study: (a) the institution offered a physical education teaching major, (b) the institution offered an introductory adapted physical education course, and (c) the instructor was willing to ask students in the introductory adapted physical education class to participate. Student participation in the study was voluntary. Each student participant signed and dated the informed consent form attached to each survey. Of those participating in this study, 40% ($n = 1,430$) were female and 60% ($n = 2,133$) were male. The average age of all participants was 22.94 years ± 4.06. The mean age of women was 22.69 years ± 4.25, and mean age of men was 23.11 years ± 3.93.

**Instrumentation**

The data collection survey was the PEATID III (Rizzo, 1993). The survey includes standardized definitions of three disabilities: behavioral disorders, mild mental retardation, and learning disabilities. The PEATID III consists of two basic sections. One section assesses attitude toward teaching students with disabilities in regular physical education classes by measuring beliefs. The other section assesses attributes (demographic and descriptive) of participants. Attribute questions were modified to reflect the student status of participants.

The utility of the PEATID III is that it allows investigators to specify disability types and the number of disabilities they want to assess. This survey also allows
investigators to assess attributes they believe may contribute to or account for variance in attitudes toward teaching students with disabilities. The PEATID III is not bound to trendy expressions (e.g., mainstreaming, regular education initiative, inclusion, etc.) in its instruction and wording of items. It is straightforward with its purpose. Further, PEATID III is versatile enough to assess attitudes of future professionals as well as teachers with many years of teaching experience. While Rizzo wishes he could claim the foresight in developing such a versatile survey, credit is due to the theoretical model for giving it the basis for this versatility.

The first portion of the PEATID III consists of 12 statements with embedded blanks like: “Teaching students labeled as _______ in regular physical education classes with nondisabled students will disrupt the harmony of the class,” and “Having to teach students labeled ________ in regular physical education classes with nondisabled students places an unfair burden on teachers.” Under each of the 12 statements, labeled disabling conditions are listed along with a 5–point Likert scale (i.e., 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree). Respondents are instructed to mentally insert the appropriate label into the blank when answering a given item. Six items are positively phrased and six are negatively phrased. Computer software used in the statistical analyses converted negatively worded questions to positive scores. For PEATH II and PEATID III, a table of random numbers was used to order the statements of the survey. Scale scores are derived from the items, one for each disabling condition and a total score. The labels of disabling conditions and demographics (the last page of the survey) can be altered to fit individual research needs. Scale mean scores are based on the sum of the item scores for each scale divided by the number of items within the scale so that they are interpreted with reference to the original 5–point Likert scale. To derive proper scale means, the scores for statements that are negatively phrased are reversed (i.e., 5, 6, 7, 8, 9, and 10). Rizzo (1983, 1984, 1988) repeatedly used this scoring system model to show the utility of PEATID III. Typically, inferential statistics are performed on data prior to transformation to scale scores.

The original survey, PEATH (Rizzo, 1983, 1984) was subjected to content and construct validation procedures. Content validity was determined by six nationally prominent experts, all of whom had doctoral degrees—four in physical education, one in special education, and one in educational psychology. Four of the six experts were faculty members at a Midwestern university, the fifth was employed by the (former) National Institute of Education, and the sixth was the director of physical education for the school district participating in the original 1984 study. Reliability estimates on overall attitude score for teachers yielded an alpha coefficient of .85 for the PEATH (Rizzo, 1988). The survey was revised using principal components analysis with both varimax and oblique solutions after rotation with Kaiser normalization. Data were analyzed using composite scores for each question (sum of scores for the disabilities). Accordingly, the PEATH II (Rizzo, 1986, 1988) consisted of 12 rather than 20 belief items and changes in labels from learning/cognitive and physical disabilities to behaviorally disordered, educable mentally retarded [sic], and learning disabled.

For the third revision of the survey, the PEATH II was modified as the Physical Educators’ Attitude Toward Individuals with Disabilities III (PEATID III; Rizzo, 1993). This revision was necessary to reflect current terminology and word usage describing individuals with disabilities, including person-first language, replacement of the word handicapped with disabilities, and changing educable to mild (with reference to mental retardation).
Procedure

A packet including instructions for administration, surveys, and a return postage-paid folder was mailed to instructors who indicated students in their classes would participate in the study. Course instructors were asked to administer surveys during the last 2 weeks of the academic term. Following administration of the instrument to their classes, instructors returned completed surveys to the primary investigator.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) for VAX/VMS systems. The analysis followed Rizzo’s (1988) protocol for principal components analysis, composite mean scores for each question (sum of scores for each of the three disabilities), with 15 being the highest possible composite mean score. Statistical treatment consisted of descriptive statistics and principal components analyses with oblique and varimax rotations. Principal components analysis, rather than factor analysis, was used because this procedure analyzes all variance in shared variables. With factor analysis, only shared variance is analyzed. Items that loaded greater than .40 on the same component were thought to be psychologically interpretable as contributors to a given factor. Kaiser’s measure of sampling adequacy for this study was .85, which was well above the recommended minimum of .60 (Tabachnick & Fidell, 2000). Only eigenvalues greater than 1.0 were considered to be components.

Validity and Reliability

According to Goodwin (1999), construct validity is derived scientifically, whereas the other types are merely estimates of validity. Construct validity refers to how much the instrument measures a hypothetical construct (i.e., something that cannot be directly measured but which can explain its observable results). For example, the PEATID III purports to measure the psychological construct of teacher attitudes toward teaching students with disabilities in a regular physical education setting. Two methods of obtaining construct validity are principal components analysis and factor analysis (Tabachnick & Fidell, 2000; Thomas & Nelson, 2001). With these analyses, the researcher studies intercorrelations among scores to determine the number of components or factors (constructs) that account for the intercorrelations. These intercorrelations tend to cluster in groups to show which questions measure the same component or factor and the strength of that measurement. Through principal components analysis and factor analysis statistical procedures, these intercorrelations are reduced to a smaller number of components or factors. The researcher then examines the content of questions that load on the same component or factor to infer the nature of the construct being measured (Goodwin, 1999).

Reliability, the stability or consistency of a survey, is a necessary but not a sufficient condition. Validity of a survey also is essential. Both validity and reliability are judged as a matter of degree. Rather than being judged on an all-or-none basis, these values either are high, moderate, or low. Coefficient alpha (Cronbach, 1951) is the recommended measure of reliability with Likert attitude scales (Hyllegard, Wood, & Morrow, 1996; Thomas & Nelson, 2001). This technique determines intraclass reliability rather than the stability of the survey. A higher alpha coefficient (closer to ±1.0) suggests that respondents answered survey items near the same end of the scale (i.e., high or low; Hyllegard et al., 1996).
Results

Descriptive statistics of the 12 items on the PEATID III are displayed in Table 1. This table contains components with oblique rotation, item numbers, item descriptions, means, and standard deviations.

Because oblique rotations are more flexible in that they allow for natural relationships in the “real world” in a practical sense, a principal components analysis with oblique rotation was performed on the data. Based on this analysis, PEATID III measures three psychological properties (beliefs about teaching students with three disabling conditions) that explain more than 50% of the variance. These three properties concern (a) outcomes of teaching students with disabilities in regular classes, (b) effects on student learning, and (c) the need for more academic preparation to teach students with disabilities. Results show that future professionals are concerned about themselves, student learning, and the need for more academic preparation before they teach these three groups of children. The PEATID III seems to measure beliefs about teaching students with disabilities in regular classes. Beliefs, according to the theory of reasoned action, are the basis of attitudes toward teaching students with disabilities.

Table 2 depicts component loadings of the 12 PEATID III items following oblique rotation, communalities (component loadings), eigenvalues, and percentages of variance. Each of the 12 belief items loaded higher than the recommended .40 cut–off point. Using Tabachnick and Fidell’s (2000) component/factor loading interpretation scale with the oblique rotation, seven test items (3, 4, 6, 7, 8, 10, & 11) showed “excellent” loadings (.71 or greater with overlapping variance of 50% or more). One item (5) showed a “very good” loading (.63 or greater with overlapping variance of 40% or more). Three items (1, 2, & 12) showed “good” loadings (.55 or greater with 30% or more overlapping variance). Only one item (9) showed a “fair” loading (.45 or greater with 20% or more overlapping variance). No items showed “poor” loadings. These data also were supported by a separate principal components analysis with varimax rotation. Findings of this second rotation were not included in this paper because they were considered redundant. Readers wishing findings yielded by the varimax rotations may contact the first author.

Reliability was estimated through the coefficient alpha (Cronbach, 1951). The alpha coefficient was .88 for the total score, .73 for behavioral disorders, and .71 for mild mental retardation and learning disabilities. All reliability coefficients surpassed the .70 criterion for acceptability (Nunnally & Bernstein, 1994; Safrit & Wood, 1995). These values were consistent with results reported in other studies using this survey.

Discussion

The purpose of this study was to establish construct validity and subsequently reliability of the PEATID III for future professionals to provide evidence to judge the efficacy of the survey. Construct validity is different from other types of validity because it links attitude assessment with theoretical models (Kerlinger, 1986). This study was designed to identify constructs that explain the variance of future professionals’ attitudes toward teaching students with disabilities in regular class settings.
### Table 1  Description of the 12 Items on the PEATID III With Means and Standard Deviations

<table>
<thead>
<tr>
<th>Component/item #</th>
<th>Description</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcomes of teaching students with disabilities in regular classes:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–5.</td>
<td>Students labeled ________ will not be accepted by their nondisabled peers in my regular physical education classes.</td>
<td>10.94</td>
<td>2.57</td>
</tr>
<tr>
<td>–6.</td>
<td>Students labeled ________ in my regular physical education classes with nondisabled students will disrupt the harmony of the class.</td>
<td>10.21</td>
<td>2.38</td>
</tr>
<tr>
<td>–7.</td>
<td>Having to teach students labeled ________ in my regular physical education classes with nondisabled students places an unfair burden on teachers.</td>
<td>11.10</td>
<td>2.76</td>
</tr>
<tr>
<td>–9.</td>
<td>Teaching students labeled ________ in my regular physical education classes with nondisabled students means more work for me.</td>
<td>7.40</td>
<td>2.84</td>
</tr>
<tr>
<td>–10.</td>
<td>Students labeled ________ should not be taught in my regular physical education classes with nondisabled students because they will require too much of my time.</td>
<td>11.69</td>
<td>2.47</td>
</tr>
<tr>
<td>+12.</td>
<td>Students labeled ________ should be taught with nondisabled students in my regular physical education classes whenever possible.</td>
<td>11.94</td>
<td>2.43</td>
</tr>
<tr>
<td><strong>Effects on student learning:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+1.</td>
<td>One advantage of teaching students labeled ________ in my regular physical education classes with nondisabled students is that all students will learn to work together toward achieving goals.</td>
<td>11.60</td>
<td>2.21</td>
</tr>
<tr>
<td>+2.</td>
<td>Teaching students labeled ________ in my regular physical education classes will motivate nondisabled students to perform motor skills.</td>
<td>9.67</td>
<td>2.76</td>
</tr>
<tr>
<td>+3.</td>
<td>Students labeled ________ will learn more rapidly if they are taught in my regular physical education classes with nondisabled students.</td>
<td>10.16</td>
<td>2.67</td>
</tr>
<tr>
<td>+4.</td>
<td>Students labeled ________ will develop a more favorable self-concept as a result of learning motor skills in my regular physical education classes with nondisabled peers.</td>
<td>10.20</td>
<td>2.84</td>
</tr>
<tr>
<td><strong>Need for more academic preparation to teach students with disabilities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–8.</td>
<td>As a physical education teacher, I do not have sufficient training necessary to teach students labeled ________ with nondisabled students in my regular physical education class.</td>
<td>10.20</td>
<td>3.09</td>
</tr>
<tr>
<td>+11.</td>
<td>As a physical education teacher, I will need more coursework and training before I will be able to teach a physical education class with students labeled ________ with nondisabled students.</td>
<td>10.35</td>
<td>2.98</td>
</tr>
</tbody>
</table>

*Note:* The + or – before each item indicates the scoring protocol. A minus sign indicates that a 1 to 5 system should be applied. A plus sign indicates that a 5 to 1 system should be applied. Computer program converted negative items to positive.

*Means are of composite scores for each question (sum of scores for each of the disabilities), with 15 being the highest possible composite mean score.
Statistical analyses mean very little unless findings are both logical and practical. The components yielded by the principal components analysis with oblique rotation are both logical and practical. The first component, “outcomes of teaching students with disabilities in regular classes,” contained six outcome beliefs. These belief items, with regard to students with disabilities, were (a) would not be accepted by peers, (b) would disrupt harmony of the class, (c) would cause an unfair burden on teachers, (d) would cause more work for the teacher, (e) should not be taught in regular classes as require too much teacher time, and (f) should be taught in a regular class whenever possible.

When the item contributions of component 1 are evaluated, it is obvious that these items represent issues that directly affect teaching and ultimately student learning. This component accounts for 31.7% of the variance. For example, students with or without disabilities who are not accepted by their peers will more than likely feel isolated. Social isolation will lead to social retardation and will adversely affect assimilation for students. Social acceptance facilitates learning and is something physical educators can (and must) address (Jansma & Decker, 1992; Place & Hodge, 2001). Changing the learning environment to promote understanding and respect of individual differences is something to plan when teachers have students with disabilities in regular classes (Ferguson, 1995).
The other items (disrupt harmony of the class, burden on teachers, cause more work for teachers, and requiring too much teacher time) are also related to acceptance of students with disabilities and are usual concerns of teachers (Lipsky & Gartner, 1989; Marston & Leslie, 1983; Rizzo, 1988). It is common knowledge that the working conditions of physical educators sometimes are less than desirable. In many schools, classes are large and assistance to teachers in the form of teaching partners or even teacher assistance is lacking (Lienert, Sherrill, & Myers, 2001). These conditions increase the likelihood of increased behavior problems (Lienert et al., 2001), thereby making physical educators less likely to accept students with disabilities in their regular classes. Today, managing student behavior is a major concern for teachers. These data present a definite rationale for preparing physical educators with behavior management strategies. Effective class management will have a positive effect on learning (Boyce, 1997; Lavay, French, & Henderson, 1997).

Teaching students with disabilities in regular classes does present physical educators with challenges, especially if conditions recommended for implementation are not met. These strategies are discussed elsewhere (Block, 2001; Brown et al., 1991; Sherrill, 1998), but physical educators must know them if they intend to implement inclusion. Unfortunately, not all physical educators and/or school administrators know the criteria and/or may choose to ignore these basic strategies. Although physical educators seem willing to accept students with disabilities in their regular classes, knowing how to implement inclusion should help students with and without disabilities learn and may even help improve teaching conditions (Block, 1999; Block, 2001; Lienert et al., 2001; Rizzo & Lavay, 2000).

Specifically, these findings suggest a need for higher education professions to infuse the knowledge base of individuals with disabilities into more than one introductory adapted physical education course (Kowalski & Rizzo, 1996). Teacher educators must prepare future physical educators to assume the responsibilities that teaching students with disabilities brings. Teacher education programs in physical education/kinesiology should infuse information about individuals with disabilities throughout college/university curriculum and research (DePauw & Doll-Tepper, 2000; Kowalski & Rizzo, 1996; Rizzo, Broadhead, & Kowalski, 1997). These programs must prepare physical educators for the future. Not to do so is tantamount to academic negligence and a travesty for students with disabilities. However, to prepare physical educators to teach students with disabilities in regular classes, factual information, not conjecture, is needed to give direction and guidance for effective teaching. Obviously, these facts must come from dependable lines of research in the subfields of physical education/kinesiology and special education.

The second component, effects on student learning, contained four items: (a) both groups of students work together, (b) working together motivates students without disabilities, (c) students with disabilities will learn more rapidly in classes with peers, and (d) students with disabilities will have more positive self-concept as a result of students being successful in regular classes. The items represent students with varying abilities learning together in physical education. Interestingly, these items are dependent on Component 1 (outcomes of teaching students with disabilities in regular classes) and represent logical and practical issues present in physical education classes. The items in this factor capture the essence of our social world at school and contain elements of cooperative learning, which needs
to be emphasized more in education. Notwithstanding environmental constraints (large class size, limited/lack of equipment, facilities, etc.), all students working together, learning, and developing a positive self-concept should result if teachers believe they must meet the needs of all students. These ideals are fundamental to teaching students with disabilities in regular classes (Block, 1999; Block, 2001; Sherrill, 1998).

Items contributing to the third component, need for more academic preparation to teach students with disabilities, also are necessary for future physical educators. Although just two items comprised this factor, both related to the need for additional coursework and academic preparation. The need to prepare physical educators to meet the demands they will encounter in public schools is well documented (Block, 2001; Kelly, 1994; Kelly & Gansneder, 1998; Lienert et al., 2001; Murata & Little, 1995). Unquestionably, infusion at colleges and universities is one way to change the culture of preparing physical educators (DePauw & Doll-Tepper, 2000; Kowalski & Rizzo, 1996; Rizzo et al., 1997) so they will effectively implement curriculum notwithstanding the diversity of learners in their classes. Physical educators also must not only know how to teach students with disabilities in their regular classes (i.e., inclusion), but they must also educate colleagues about implications of teaching students with the various disability conditions and effective ways of teaching students with disabilities in regular classes. While the task of doing so is daunting, it is the next step in the movement toward equality in physical education. Many things must change, but teacher educators must work for the day when all teachers will meet Sherrill’s (1998) longstanding call that all physical education become adapted. Perhaps a time will come when all physical educators will be adapted physical educators.

**Limitations**

We must acknowledge three limitations of the present study. One obvious limitation was that the survey was completed during class time, putting the data at risk for socially desirable responses. Theoretically, researchers have known about response bias for a long time (Cronbach 1946, 1950; Guilford, 1954). Consequently, most researchers try to account for this error in measurement with specific design strategies of a survey and statistical applications. Nonetheless, from a practical perspective, having someone give responses that we want to hear is not necessarily bad. For us, it is best that participants know that society expects them to teach many students with disabilities in the regular physical education class. Perhaps giving a socially desirable response is a first step in developing a favorable attitude.

Another limitation is that the study did not account for the influence of gender or experience with people with disabilities prior to entering the college or university. Although we did not eliminate anyone based on certain attributes, some participants in this survey may have been advocates of integrating students with disabilities in regular physical education classes or other integrated settings. Third, there is a possibility that separate principal components analyses on gender might yield different results because some research shows gender differences in attitude. Last, this study did not address the assumption of the theory that beliefs and attitudes help contribute to predicting intention and behavior. That is, this study was
delimited to the first two components of the four-component model depicting reasoned action theory.

**Future Research**

Obviously there is a need to continue validity research with the PEATID III and the theory of reasoned action. The utility of the PEATID III is that a researcher can specify one or more conditions of disability and compare attitudes. This survey allows researchers to determine if a linear hierarchical structure of beliefs and attitudes exists toward teaching students with disabilities in regular class settings. However, results of this study are generalizable only when PEATID III contains the following disabilities: behavioral disorders, mild mental retardation, and learning disabilities. Clearly, further research needs to address construct validity of PEATID III containing other disabilities. Secondly, the next step in research is to establish concurrent validity of the PEATID III. Also, it behooves us to identify variables that are associated with favorable beliefs to help explain the variance associated with attitudes toward teaching students with disabilities. Perhaps most importantly, research is needed on the actual inclusion behaviors of teachers so that correlation and regression analyses can be applied to determining if attitudes do, indeed, predict behaviors.

**Conclusion**

This study is significant in adding to the knowledge base regarding assessment of future professionals' attitudes toward teaching students with disabilities for at least three reasons. First, no published study reports construct validity for the PEATID III. However, there are many studies with reliability estimates of the PEATID III in the research literature (viz., Folsom-Meek et al., 1999; Folsom-Meek et al., 2000; Kowalski & Rizzo, 1996). The only previously constructed construct validity study used the first version, the PEATH, with practicing physical education teachers a number of years ago (Rizzo, 1988), and that paper was never submitted for formal review and publication. Second, due to the increasingly popular use of the PEATID III, construct validity and reliability give credibility to research examining attitudes toward teaching students with disabilities. Third, the results of this study describe characteristics of the PEATID III. Results from this study show that the PEATID III (Rizzo, 1993) is a valid and reliable survey for use with future professionals.

**References**


Acknowledgment

The authors would like to acknowledge Walt Groteluschen and Harry Krampf of Minnesota State University, Mankato and Ruth J. Nearing of St. Cloud State University for their assistance with various aspects of this project.