Delaware Alternate Portfolio Assessment

Technical Report 1:
Raising Expectations for the School Performance of Students with Moderate to Severe Cognitive Disabilities

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Introduction

Delaware’s educational reform efforts over the past eight years have been aimed at promoting the highest quality education for all students. Consistent with the reform effort and in compliance with the re-authorization of the Individuals with Disabilities Education Act (IDEA-P.L. 105-17), Delaware’s Department of Education has sought to design a fully inclusive educational system that raises the aspirations of and expectations for ALL children. **Within special education the Delaware Department of Education has attempted to engage the interest and participation of all stakeholders in the process of raising expectations and documenting progress.**

The critical components for raising expectations include: 1) developing a shared vision and philosophy, 2) having explicit, agreed upon standards against which outcomes may be measured, 3) implementing sound assessment procedures for assessing outcomes, 4) providing for personnel development, and 5) having a meaningful accountability system.

This report briefly reviews the current status and the processes involved in achieving the first two critical components and the last two components. The bulk of the report focuses on the technical findings that underlie a “sound assessment procedure.”

Shared Vision and Philosophy

The Process

Consistent with the experience of other states, the recommendation of the National Center on Educational Outcomes, and the spirit and letter of Delaware’s educational reform, a process was initiated that ensured an **ever increasing spiral of stakeholder involvement.** The process worked both inductively and deductively with frequent opportunities for validating shared basic values and checking the directions undertaken.

Two key groups were charged with providing conceptual leadership to and monitoring the progress of the state’s implementation of IDEA in the area of alternative assessment.

**Design Group.** This small working group of 5 teachers and administrators and two university faculty members with particular expertise in severe disabilities was co-chaired by a specialist from the Delaware Department of Education and the Director of the University of Delaware Center for Disabilities Studies (CDS). The group was staffed by three CDS graduate students and met several times a month for many long hours.

**Advisory Committee.** This group provided a broader basis of input into the design of the
The thirty-six members of the group included the principals of all special schools and programs, regular education administrators, selected special and regular education teachers, related services personnel, parents and parent advocates, representatives of the Delaware Disabilities Council and the Governor’s Advisory Council for Exceptional Citizens. The Advisory Committee met monthly during the early stages of the process and has met semi-annually or “as needed” since then.

Outcomes

The initial task undertaken by the Design Group was to develop a consensus on what special education in Delaware ought to be, the philosophy and values upon which this vision is based, and assumptions underlying a system of assessment and accountability. Towards this end, as a result of discussions within and between the Design Group and the Advisory Committee, a preliminary statement of philosophy and a set of design assumptions were set forth.

Statement of Philosophy

Every student has a right to be educated in a manner and within a setting that:

− Respects individual diversity,
− Promotes meaningful personal relationships,
− Encourages freedom of choice, and
− Prepares him/her for a meaningful life.

Design Assumptions

Accountability Assumptions
1. Delaware should have one accountability system that includes all students.
2. Alternate Assessment should clearly relate to Delaware’s Academic Content Standards.
3. It is possible to bridge between Delaware’s Academic Content Standards and the functional programming that is meaningful for students with moderate to severe cognitive disabilities.
4. Alternate Assessment scores should be aggregated with those of students for accountability purposes.
5. The accountability system should provide data for decisions at the student, teacher, school, program, and the district level.
Assessment Assumptions

1. Alternate Assessment is only for those who, even with appropriate accommodations, cannot meaningfully participate in the regular administration of the Delaware Student Testing Program.

2. The IEP team, including the parent or guardian, based upon a detailed student profile, will decide participation in the Alternate Assessment (DAPA).

3. Indicators of student performance, and their assessment, should clearly relate to the student’s IEP objectives AND the opportunities to learn that are provided.

4. The assessment system for students in functional programs should be flexible, dynamic, and open to objective review.

To determine whether the philosophy and operating assumptions made sense beyond the Design Group and the Advisory Committee, and whether they could gain public endorsement, they were presented to parents and teachers during a series of state-wide information sharing sessions. Parents and teachers were asked to indicate their opinions on the assumptions in writing and to discuss their feelings on the issues in both small group and large group sharing sessions. The consistency of opinions by both parents and teachers was both surprising and reassuring (See Table 1). In these sessions parents and teachers also were asked to tell the Design Group what educational goals and aspirations they held for their children; information that would later be used for designing curriculum standards. For a more detailed analysis of the process and findings see Piscolish & Wojewodzki (1998).

After sharing the philosophy and assumptions with the state supervisors of special education and the State Board of Education, they were adopted as the basis for all further design activity. As such they represented important outcomes of the process.
Table 1
Endorsement of
Assumptions for Alternate Assessment and Accountability
By Parents and Educators

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>One accountability system that includes all students</td>
<td>7%</td>
<td>4%</td>
<td>29%</td>
<td>60%</td>
<td>3.43</td>
<td>.88</td>
</tr>
<tr>
<td>System conceptually related to Academic Content Standards</td>
<td>10%</td>
<td>17%</td>
<td>47%</td>
<td>26%</td>
<td>2.88</td>
<td>.92</td>
</tr>
<tr>
<td>Possible to Abridge@ to Academic Content Standards</td>
<td>0%</td>
<td>12%</td>
<td>41%</td>
<td>47%</td>
<td>3.34</td>
<td>.69</td>
</tr>
<tr>
<td>Data aggregated as part of total accountability system</td>
<td>13%</td>
<td>24%</td>
<td>39%</td>
<td>24%</td>
<td>2.74</td>
<td>.97</td>
</tr>
<tr>
<td>Data provided for decision-making at all levels</td>
<td>2%</td>
<td>0%</td>
<td>24%</td>
<td>74%</td>
<td>3.71</td>
<td>.56</td>
</tr>
<tr>
<td>Eligibility should be limited</td>
<td>6%</td>
<td>13%</td>
<td>39%</td>
<td>42%</td>
<td>3.18</td>
<td>.86</td>
</tr>
<tr>
<td>IEP team decides participation</td>
<td>4%</td>
<td>18%</td>
<td>26%</td>
<td>53%</td>
<td>3.28</td>
<td>.88</td>
</tr>
<tr>
<td>Assessment tied to IEP objectives and learning opportunities</td>
<td>3%</td>
<td>2%</td>
<td>17%</td>
<td>78%</td>
<td>3.69</td>
<td>.68</td>
</tr>
<tr>
<td>System open, flexible, dynamic</td>
<td>0%</td>
<td>0%</td>
<td>15%</td>
<td>85%</td>
<td>3.88</td>
<td>.36</td>
</tr>
</tbody>
</table>

Eligibility Guidelines

Another important outcome of the process was the adoption of a clear set of eligibility guidelines for the alternate assessment (see Peters, Dock, Stewart & Comfort, 1998). While the National Center on Educational Outcomes (NCEO) and our consultants from the Mid-South Regional Resource Center at the University of Kentucky had made it clear that a set of eligibility
guidelines were a concern that needed to be considered early, the increasing number of stakeholders made it essential. Without delimitating the population being discussed, it was impossible to get everyone on the same page for assessment. Hence there is a close relationship between the assumptions for assessment and the adopted eligibility guidelines (See Box 1).

**Box 1**

**Delaware Alternate Assessment Eligibility Guidelines**

Members of the IEP Team agree that the student is eligible for the Delaware Student Testing Program Alternate Assessment and this documented on the student’s current IEP.

The student’s record must have sufficient data to support ALL of the following:

- Student demonstrates cognitive ability and adaptive skill levels, which prevent completion of the academic curricula even with modifications and accommodations;

- Student requires extensive direct instruction in multiple settings to accomplish the application and transfer of skills;

- Student is unable to use academic skills at a minimal competency level when instructed through typical classroom instructions;

- The student’s inability to complete the academic curricula is not the result of excessive or extended absences, or primarily the result of visual, auditory, or physical disabilities, emotional-behavioral disabilities, specific learning disabilities, or social, cultural, and economic differences.

- For students 14 years of age or older, the student is unable to complete a regular diploma program even with modification, is unable to acquire, maintain, or generalize skills and demonstrate performance without intense, individualized instruction, and the student is working towards a modified diploma or certificate of completion.

**Explicit Standards**

As discussed above, there was general agreement among the various groups of stakeholders that there be a one system, conceptually linked through a process of “bridging” to the Academic Content Standards in the areas of *English Language Arts, Mathematics, Social Studies* and *Science* that had been adopted by the state. However, discussions with parents, teachers and others during the state-wide information sharing sessions clearly indicated that many of the goals and objectives that are part of educational programs for students with moderate to severe cognitive disabilities were not included in the Academic Content Standards. Students in “life skills” or “functional” programs need to be assessed against standards that address what they are taught. Hence, the Design Group began a process to develop *Standards*
The Process

After a review of 1) functional/life skill curricula, checklists, and guidelines in use in Delaware and elsewhere, 2) the content of alternate assessments in other states, and 3) the listing of goals for students expressed by parents, teachers and other stakeholders (Piscolish & Wojewodzky, 1998), the Design Group and Advisory Committee agreed upon five domains for the Standards for Functional Life Skills Curriculum. These were: Communication, Personal Management, Social, Career/Vocational, and Applied Academics. Each of these domains also was linked conceptually to the Academic Content Standards, (Peters, Dock, Stewart & Comfort, 1998).

Together with another group of teachers and administrator volunteers, the Design Group, the Advisory Committee, and the project staff developed a preliminary set of Standards within each domain. Subsequently, 40 teachers, related service personnel, and parents participated in a 3-day retreat to refine the draft standards and develop appropriate performance indicators. These were subsequently edited and assembled by the Design Group and the Staff and shared with the State Supervisors of Special Education and the Delaware State Board of Education.

Throughout the next eighteen months, teachers, administrators and related services personnel were provided with additional opportunities to refine the definitions of the Domains and to suggest appropriate performance indicators, (Crossen & Anderson, 1998; Crossen, Anderson, Landmesser, 1999; Peters, Crossen & Anderson, 2000).

Outcome: Delaware Standards for Functional Life Skills Curriculum

The Delaware Standards for Functional Life Skills Curriculum were adopted by the Delaware State Board of Education in July, 2000. The standards document defines the five curriculum domains that represent important life skill areas where high expectations are held for student and program performance. Given the student population for whom the standards are designed, it was considered essential that individual achievement not be assessed in isolation of the opportunities for learning and the supports provided. How this plays out in other components of the system will be discussed later.
Box 2
Standards Domains

**Communication:** The acquisition, demonstration, and use of an effective symbolic/non-symbolic referential system for various purposes, audiences, and situations.

**Personal Management:** The acquisition, demonstration, and maintenance of the ability to be mobile, attend to personal needs, manage one’s own behavior, and exercise personal choice as independently as possible.

**Social:** The acquisition and utilization of social skills and conventions in relation to other people and in a variety of situations

**Career/Vocational:** The acquisition of knowledge and skills to become a productive worker in a preferred occupation.

**Applied Academics:** The acquisition of academic skills in reading, writing, math, social studies, and science in the context of daily routines and the application of them in a variety of real life situations.

Sound Assessment Procedures

**Portfolio Assessment**

Early on, the Design Group opted for a portfolio assessment as the most flexible, dynamic and objective way to document the performance of students with moderate to severe disabilities. A portfolio assessment was seen as having the potential benefits of:

- Adapting to the wide diversity of capabilities and abilities within the eligible population across different chronological age groups,
- Providing opportunity to organize and display data of a variety of types (written materials, photographs, videos, etc.) from a variety of sources (the student, peers, teachers, and parents),
- Permitting assessment of performance across the five curriculum domains in a variety of settings,
- Permitting student and parent participation and choice in the selection of
materials for assessment,

• Permitting assessment of the accommodations and supports provided for learning,
• Permitting standardization of content and objective scoring within a system that recognizes student individuality and uniqueness,
• Creating an essential link between student performance and the attainment of high standards.

As actual work on the portfolio was begun, the original Design Group was reconstituted, with new members, as the Portfolio Design Group. This group, along with staff members of the Center for Disabilities Studies, was charged with:

• Developing orientation and training materials and procedures for teachers concerning the preparation of portfolios for assessment,
• Assessing the barriers and costs involved in the use of a portfolio assessment system,
• Establishing the standard content of portfolios,
• Defining the means for parent input into portfolio development,
• Establishing and testing a scoring system,
• Establishing the reliability and validity of the assessment system.

To accomplish these tasks the Portfolio Design Group initiated a series of feasibility, pilot and field studies to be conducted during the period between September, 1998 and September, 2000. Each of the studies was designed to build on the prior ones and increase the number of staff, parents and students involved in the process. By the completion of the full implementation field test, over 700 teachers, administrators, parents and students had an opportunity to be involved in the development of the Delaware Alternate Portfolio Assessment in one way or another.

The feasibility, pilot and field tests were designed to assess for key criteria of sound assessment procedures: feasibility, reliability, validity, and utility.

Feasibility

The criterion of feasibility involved gaining an understanding of whether teachers were willing to engage in the process of portfolio development, what training would be necessary to prepare them for portfolio development, and what costs in effort, time and other resources would be involved.

An initial feasibility study involving a small group of teachers (Crossen & Anderson, 1998) was conducted to gain an understanding of the effort and costs of portfolio preparation. Through logs, questionnaires, interviews and small group discussions, information was gathered from
teachers concerning the effort requirements of each portfolio component and the costs they incurred. Parents provided additional information concerning their participation in portfolio development, their satisfaction with the process and the product, and their feelings about what developing a portfolio did for them and their children.

Additionally, considerable feedback was acquired on the content and style of the DAPA Teacher’s Training Manual. Importantly, the portfolios developed during the feasibility study provided additional Delaware-based sample portfolio entries for use in future training.

Pilot Study 1 involved 19 portfolio developers, 14 parents, and 14 students. This study was concerned with both the workability issues of the Feasibility Study and with the first assessment of the adequacy of the scoring system that was in the process of being developed. In terms of the workability issues, the study findings were similar to those of the prior study. The main findings of the study were:

− Portfolio development required a considerable investment of time. Approximately half of the participants also incurred additional expenses.
− Teachers encountered difficulties in several procedural and format issues and recommended changes based upon their experience.
− There was a very positive response to the Standards but an expressed desire for more performance indicators.
− Parents rated the portfolio process favorably.
  (Crossen, Anderson, & Landmesser, 1999)

The results of the two studies converged to suggest that developing and scoring portfolios was a feasible but challenging and time consuming process for teachers. The feedback provided was used to explore ways to streamline the development process and to further objectify the scoring process (See below.)

**Portfolio Scoring**

The structure of the Delaware Alternate Portfolio Assessment scoring procedures may be thought of as a pyramid (See Figure 1) (Crossen, Anderson & Landmesser, 1999). At the base are five dimensions: Activity, Independence, Supports, Settings, and Interactions used in scoring each portfolio entry in each Domain. (See Box 3 for definitions of each Dimension.) Each Dimension is assigned a score from 1 (lowest) to 4 (highest). At the next level are the five Domains. (See Box 2 for definitions.) Since each Domain is scored on the five Dimensions the potential Domain scores can range from 5 to 20. At the apex of the pyramid is the total portfolio score with potential scores ranging from 25 to 100.
The actual scoring of each Dimension and Domain is based upon the verification of evidence within the portfolio that reflects the requirements specified in the scoring rubric. See Appendix A.

**Box 3**

**Scoring Dimensions**

**Activity:** The degree to which the activities for instruction and performance are age appropriate and functional.

**Independence:** The degree to which instructional opportunities (i.e., materials and teaching strategies aimed at producing growth) are provided in the following areas: Choice-making, planning, monitoring, evaluating, and adjusting performance.

**Supports:** The degree to which accommodations and adaptations that are evidenced promote increased student participation and decreased teacher direction.

**Settings:** The degree to which multiple environments are used for generalization of the targeted functional skill.

**Interactions:** The degree to which the student has access to typical peers.
Reliability

During the scoring phases of Pilot Studies 1 and 2 a variety of scoring methods were employed. Scorers included teachers who had participated in the feasibility or pilot studies, and members of the Portfolio Design Group. Some scoring procedures used teams of two to score individual portfolio entries and compared their score to those of another team of scorers (Partner method). In other cases individuals scored entries and compared their results to other individual scorers. Scores were considered perfect matches if both pairs or individuals came up with an identical dimension score. Close agreement was deemed to have occurred if the two dimension scores differed from each other by 1 point. Table 2 indicates the Pilot Study 2 Close Agreement percentages under differing scoring conditions. For more details on preliminary study scorer training or reliability results see Crossen et al., 1999 and Peters et al., 2000.

Table 2
Pilot Study Scorer Agreement
N = Number of Entries Scored

<table>
<thead>
<tr>
<th>Method</th>
<th>% Close Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Scoring Method (N = 525)</td>
<td>88.6%</td>
</tr>
<tr>
<td>Partner Scoring Method (N = 633)</td>
<td>84.4%</td>
</tr>
<tr>
<td>Experienced with Experienced Scorer (N = 300)</td>
<td>87.2%</td>
</tr>
<tr>
<td>Novice with Novice Scorer (N = 156)</td>
<td>80.7%</td>
</tr>
<tr>
<td>Experienced with Novice (N = 88)</td>
<td>92.7%</td>
</tr>
</tbody>
</table>

Field Study Portfolio Procedures: During the Field Study academic year approximately 320 students met the eligibility guidelines for participation in the DAPA. However, since during the field study no teacher was required to submit more that 2 portfolios, a total of 128 teachers submitted a total of 197 student portfolios. Portfolios were submitted on or before May 31, 2000.

Field Study Scorer Reliability Procedures: Based upon results of the two pilot studies somewhat different procedures were used to establish the reliability of portfolio scoring during the 1999-2000 Field Study. The sequence went as follows:

- Twenty-five new portfolio entries were scored by a team of experienced “master scorers” to establish a sample set of criteria scores to be used as a standard for
qualifying field study scorers.

- From the pool of all teachers who had previously prepared portfolios and/or served as scorers as part of the feasibility study or either pilot study, volunteers were recruited for scoring field study portfolios. Serving as scorer involved a major commitment of time for which the successful participants were paid. In the end 15 scorers were recruited.

- Initial training for the scorers was conducted June 7-9, 2000. At the end of this training each participant scored 5 domain entries (25 dimension scores) from the criterion sample. The requirement for qualifying was a 72% Perfect Agreement with the standard and a Close Agreement (1 point discrepancy) of 88%.

- If the participant qualified they did not need to attend further training. If they failed to qualify an additional day of training was conducted on June 13th, a part of which was devoted to discussing score discrepancies. The training was followed by a second round of scoring using 5 new domain entries. The requirements for qualifying remained the same. If criteria were not yet met a third round of training was scheduled for June 15th. Since 13 of the participants qualified on the first and the other two on the second round, the additional day of training was not needed.

- Scoring of portfolios began on June 22, 2000 and lasted 12 days. All portfolio domain entries were scored separately by two independent scorers. Table 3 provides the percentage of Perfect Agreement between independent scorers based upon the scoring of 829 domain entries from the full 197 portfolios.

- Where discrepancies existed between the ratings of the two scorers, at the end of the sessions they met to discuss and, if possible, to resolve the discrepancies. If they could not resolve the discrepancy, a third independent scorer scored the entry and broke the tie. If there still remained a discrepancy, the entry was discussed until a resolution occurred. That is, 100% agreement was forced for the final scores that were returned to parents, teachers and schools.

**Table 3**

Field Study Perfect Agreement Percentages*

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>% Agreement</th>
<th>DIMENSION</th>
<th>% Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>72.9</td>
<td>Activity</td>
<td>92.0</td>
</tr>
<tr>
<td>Social</td>
<td>73.9</td>
<td>Independence</td>
<td>58.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Choice)</td>
<td></td>
</tr>
<tr>
<td>Personal Management</td>
<td>69.8</td>
<td>Supports</td>
<td>61.8</td>
</tr>
<tr>
<td>Career/Vocational</td>
<td>72.0</td>
<td>Settings</td>
<td>77.6</td>
</tr>
<tr>
<td>Applied Academics</td>
<td>74.8</td>
<td>Interactions</td>
<td>74.8</td>
</tr>
</tbody>
</table>

*These data provided additional indicators of scoring definitions that might require revision.

Analysis of the percentage of perfect agreements across the twelve days of scoring yielded
an average daily perfect agreement of 72.2% with no significant differences across days. The daily percentages for days on which at least 15 portfolio entries were independently scored ranged from 65.6% (Day 11) to 78.4% (Day 9). Day 1 and Day 12 of scoring produced essentially identical percentages of perfect agreement: 73.6% and 73.1% respectively. That is, scorers became neither better nor worse over the scoring period. Additionally, since portfolio entries were scored by different pairs of scorers, it was possible to determine the percentage of agreement for different scorer pair-ups. Again, where at least 15 entries scored by both were available, percentage of initial Perfect Agreement ranged from 66.7% to 82.3%.

While the Perfect Agreement and Near Agreement scoring percentages reported in Tables 2 and 3 are very respectable for a complex scoring system such as this, all scores reported out from the Field Study had 100% agreement after discussion between two independent scorers. That is, in terms of sound assessment procedures, the DAPA scoring system was reliable.

**Validity**

The concept of validity, in its simplest form asks whether a measure or assessment tool measures what it is intended to measure or assess. More precisely, one does not validate a measure, one validates an interpretation of data arising from a specified procedure. (Carmines & Zeller, 1979.) Thus, one validates not the measuring instrument itself but the measuring instrument in relation to the purposes for which it is used. The purposes of the DAPA are two-fold. First, it provides a record for capturing student performance within the five curriculum domains. The portfolio provides the means for documenting multiple data points that can be used by an IEP team to plan appropriate instruction. Second, the DAPA was designed to be used as part of an overall, uniform accountability system focused on program, rather than student, accountability. It is these two purposes against which validity should be assessed.

To document validity, measurement developers usually attempt to establish one or more of the following types of measurement validity: Content Validity, Face Validity, Criterion Validity and Construct Validity. (Neuman, 2000)

**Content Validity.** Content validity addresses the issue as to whether a particular measure or assessment procedure: a) includes all the relevant content the measure is supposed to represent, and b) does not include irrelevant or contradictory content. The dual purposes of the DAPA are expressed in the content of the portfolio and its scoring system. These, in turn, derive from two sources.

First, the content derives directly from *The Standards for Functional Life Skill Curriculum*. The portfolio and its evidentiary materials are organized around the five Domains of Communication, Personal Management, Social, Career/Vocational, and Applied Academics. These are the curriculum areas that were defined by the literature, by parents, and by teachers as being the important content for students who meet the eligibility requirements for the DAPA.
Second, the scoring system dimensions derive from the special education literature and from 25 years of experience with the IDEA and its predecessor legislation (IDEA, 1997, Sec. 601; Findings). These sources have provided guidance and support for “best practice” in special education.

Thus, the scoring rubric includes both the curriculum domains and the educational opportunities derived from the best practice literature and can be construed as having content validity.

**Face Validity.** Face Validity addresses the question, “On the face of it, do people believe that the thing to be measured and the method of measurement fit?” The process by which the DAPA and its scoring system were developed basically ensures face validity. Clearly, the Design Committee, the DAPA Advisory Committee, and the University faculty and staff believe that what is to be measured and the measurement method “fit.” Although direct validity questions were not asked of participating teachers, students or parents, several indicators suggest that various participants in the Field Study tend to agree as well, though the data are sometimes contradictory.

For example, in a written survey of teachers who participated in the Field Study (Manning, Crossen & Anderson, 2000) the teachers were asked to respond to statements such as: “Portfolios are a useful tool to document student progress.” and “Portfolios are a useful tool to evidence instructional opportunities.” While 53% of the 81 responding teachers who expressed an opinion agreed with the latter statement, only 33.7% of the 84 responding teachers agreed or strongly agreed with the former. It seems that teachers do not see a one-time portfolio as measuring “student progress.”

In contrast a stratified random sample of parents of participating students were surveyed via telephone shortly after the portfolios were submitted. (See Manning et al., 2000) Some of the questions asked of parents were identical to those asked of participating teachers. For example, parents were asked to respond to the statement, “Portfolios are a useful tool to document student progress.” Of the 50 parental respondents who expressed an opinion, 84% agreed or strongly agreed with the statement. Parents also were asked whether they thought that the content of the portfolio was “representative of your child’s IEP.” Thirty–seven of the 42 (88%) parents who had reviewed their child’s portfolio felt that it was representative. Only three thought it was not representative.

Some of the discrepancies between teachers and parents are probably best explained by their use of differing definitions and understandings about what it means to measure student “progress” in students with moderate to severe disabilities. It also may have to do with the time frame of parents who see the portfolio as an on-going accumulation of student performance which remains and grows with the student year to year. This may compare to the time-frame of teacher participants who may see it as a one time event.
In any case these data show some support for the kind of consensus agreement required to establish face validity.

**Criterion and Construct Validity.** Basically, both Criterion Validity and Construct Validity ask the question, “Does the measure behave in ways that are consistent with expectations, underlying theory, and other indicators of the same constructs?” The answers to such questions require an understanding of and hypotheses about how the scores should behave.

For example, given that the number of portfolios scored during the Field Study is reasonably large, and given that the potential total portfolio scores can range from 25 to 100, statistically it is reasonable to hypothesize that the distribution of scores will approximate the “Normal” distribution with approximately half the scores falling above the mean and half below the mean. In a normal distribution one would also expect the mean, median and mode to be approximately the same. Figure 2 indicates the distribution of scores actually obtained.

![Figure 2](image)

As may be seen in Figure 2 the obtained scores ranged from 38 to 98 in a unimodal distribution with a Mean of 68, a Median of 66. It should be noted that the distribution accounts only for portfolios where all five entries could be scored. Of the 197 portfolios submitted, 23 had
one or more entries that were incomplete or could not be scored for other reasons.

It was also hypothesized that the scoring procedures should be domain, gender, age and locale (County) neutral. That is, there should be no significant differences in the scores achieved across domains, gender of student, age of student or locale of the school. Table 4 shows the percent of entries receiving dimension scores of 1, 2, 3 or 4 by Domain.

Table 4
Percent of Entries Receiving Dimension Scores of 1, 2, 3, or 4 by Domain
N= 870 per Domain

<table>
<thead>
<tr>
<th>Domains/Dimension Scores</th>
<th>Comm</th>
<th>Social</th>
<th>Pers Mgmt</th>
<th>C/Voc</th>
<th>App Acad</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24.5</td>
<td>19.2</td>
<td>25.2</td>
<td>25.6</td>
<td>25.1</td>
</tr>
<tr>
<td>2</td>
<td>18.5</td>
<td>20.0</td>
<td>20.8</td>
<td>20.1</td>
<td>23.4</td>
</tr>
<tr>
<td>3</td>
<td>15.4</td>
<td>14.8</td>
<td>14.5</td>
<td>15.9</td>
<td>13.3</td>
</tr>
<tr>
<td>4</td>
<td>41.6</td>
<td>46.0</td>
<td>39.5</td>
<td>38.4</td>
<td>38.2</td>
</tr>
</tbody>
</table>

These results may be seen graphically in Figure 3. Figure 4 portrays similar information using Total Domain Scores.

Figure 3
Data analyses indicated that no significant differences (p<.001) were found across domains. Further, no statistically significant differences were found across domain scores by age.
group, disability category, or gender group. No statistically significant differences between counties were found. In all cases the null hypothesis was supported. As Table 4 and Figure 3 make clear, the most common dimension score received across all domains was a 4.

The lack of differences in scores across domains is also reflected in participating teachers’ responses to our survey. Table 5 indicates teachers’ responses as to the difficulty in evidencing each domain and the barriers that existed to achieving a high score in each domain. As may be seen in the table there is no clear pattern of teacher responses as to which is the hardest or easiest domain. This is in contrast to the teacher survey results as to which dimension was hardest or easiest to evidence.

Table 6 indicates teachers believe that the Activity Dimension the easiest and the Interaction Dimension the hardest to evidence. In addition the Interaction Dimension was seen as presenting the most barriers to a high score. This is consistent with predictions based upon the nature of Delaware special education.

<table>
<thead>
<tr>
<th>Which Domain?</th>
<th>Comm</th>
<th>Social</th>
<th>Pers Mgmt</th>
<th>C/Voc</th>
<th>App Acad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Hardest to evidence</td>
<td>17</td>
<td>19.5</td>
<td>20</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>Easiest to Evidence</td>
<td>18</td>
<td>20.7</td>
<td>10</td>
<td>11.5</td>
<td>11</td>
</tr>
<tr>
<td>Presented most barriers to achieving a high score</td>
<td>9</td>
<td>10.3</td>
<td>21</td>
<td>24.1</td>
<td>14</td>
</tr>
<tr>
<td>Presented the fewest Barriers to achieving a high score</td>
<td>11</td>
<td>12.6</td>
<td>16</td>
<td>18.5</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 6
Teacher Survey Results
The percentages of 1, 2, 3 and 4 dimension scores across all entries are presented in Table 7 and Figure 5. Figure 6 shows the average dimension scores within domains.

Table 7
Percent of Scores of 1, 2, 3, or 4 by Dimension Across All Domains

<table>
<thead>
<tr>
<th>Dimension/ Dimension Score</th>
<th>Activity</th>
<th>Choice</th>
<th>Support</th>
<th>Setting</th>
<th>Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.2</td>
<td>24.7</td>
<td>4.4</td>
<td>35.6</td>
<td>54.6</td>
</tr>
<tr>
<td>2</td>
<td>4.7</td>
<td>18.6</td>
<td>43.0</td>
<td>22.2</td>
<td>14.4</td>
</tr>
<tr>
<td>3</td>
<td>5.1</td>
<td>21.4</td>
<td>26.6</td>
<td>13.6</td>
<td>7.4</td>
</tr>
<tr>
<td>4</td>
<td>90.0</td>
<td>35.3</td>
<td>26.1</td>
<td>28.6</td>
<td>23.7</td>
</tr>
</tbody>
</table>

$X^2 = 1933.9, df = 12, P < .001.$

The data in Table 7 indicates there is a statistically significant difference across dimensions in the percentage of scores 1, 2, 3, or 4. The Activity Dimension is much more likely to receive a score of 4 and the Interactions Dimension is more likely to receive a score of 1. These differences may be due, fully or in part, to a) real differences in practice, b) differences or difficulties in evidencing as suggested by the teachers survey (See Table 6), or c) difficulties in scoring, as expressed by the scorers during debriefing sessions. All three possibilities were considered as the Portfolio Design Group and the CDS Staff made scoring and training revisions.

Further analyses indicated that there were no statistically significant differences across
gender, or county. There were no significant interactions of dimension and age within the Communication, Personal Management, Career/Vocational and Applied Academics domains. There was a significant interaction with age and the supports dimension within the Social domain. Both older (17+) and younger (5yrs) students received less direct teacher supports. (See Figure 7)

Data analyses from the Field Study Portfolio Scoring, from the focus groups held for parents and teachers following the submission of the portfolios (Porter, 2000), from the teacher and parent surveys (Manning et al., 2000), and from the debriefing meetings held with the scorers all have provided rich feedback on the DAPA process. Revisions to the process resulting from these experiences are found in Appendix A.

Data analysis is continuing. As indicated earlier, establishing the validity of the use of a measure is a continuing process. The various data sets are being combined and analyzed in greater detail to provide further information for fine tuning the system. Additional studies are also planned to gain additional feedback on specific aspects of the system. However, the Field Study data analyzed to date have provided some confidence in the reliability and validity of the system.

![Figure 5](image1)

**Figure 5**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Choice</th>
<th>Support</th>
<th>Setting</th>
<th>Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

![Figure 6](image2)

**Figure 6**
**Figure 7**

**Social Domain: Supports by Age**

```
<table>
<thead>
<tr>
<th>Age</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 yrs</td>
<td></td>
</tr>
<tr>
<td>8 yrs</td>
<td></td>
</tr>
<tr>
<td>11 yrs</td>
<td></td>
</tr>
<tr>
<td>14 yrs</td>
<td></td>
</tr>
<tr>
<td>17 yrs</td>
<td></td>
</tr>
<tr>
<td>20 yrs</td>
<td></td>
</tr>
</tbody>
</table>
```
Ultimately the expense in time and money of any assessment system has to be justified by its utility. That is, does the system provide useful information for planning and decision-making? It is too soon to establish the utility of the DAPA in any real sense. The first year of implementation has just begun. The scores will not be benchmarked fully for a few more years. And the field study scores are being neither aggregated with the DSTP scores nor used for accountability purposes.

In the teacher and parent surveys, some opinions were expressed which suggest that the DAPA process may have positive systems change effects. For example, within the respondents to the teacher’s survey results, fifty-five percent (55%) of teachers responding to the survey felt that the Standards were a “useful tool in planning student’s instructional programs.” Forty-nine percent (49%) of teachers who expressed an opinion felt that the five portfolio domains “provide a comprehensive framework for designing student’s instructional programs.” And, of the 75 teachers who expressed an opinion, 59% felt that developing a portfolio did not have “a negative impact on the target student’s instructional program.” These were essentially positive findings among some negative feelings expressed by teachers about the DAPA process in particular and accountability in general.

The vast majority of parents surveyed on the other hand agreed that, “portfolios were useful tools to document student progress, (84%)” and “increased parent’s involvement in their child’s education (86%).” Parents also agreed that the portfolio process was beneficial to their child’s “present learning and education (82%)” and their child’s “future learning and education (86%).”

It appears that most parents and some teachers believe the DAPA process has utility in planning for and conducting programs that enhance student learning.

**Personnel Development**

Implementing a major change in the educational system requires a major commitment to the professional development of the personnel involved. The Delaware Department of Education has implemented a number of initiatives in special education over the past few years of which Alternate Assessment is just one. However, during 1999-2000 in conjunction with the Field Study, a major investment in time and money was made to acquaint school personnel throughout the state with the DAPA requirements and process.

An extensive “Teacher Training Manual” was developed which provided: background information, guidelines and examples for portfolio development, a description of the scoring process, and a variety of hints and suggestions for documenting portfolio entries. Every person who was to prepare a portfolio was provided with a copy of the training manual. Additionally, during the summer and fall of 1999 full-day Portfolio Development Training sessions were offered in each of the state’s three counties. Attendance was high with the New Castle sessions attended
by 251 persons, the Kent County session attended by 122 people, and the Sussex County session by 122. Participants included teachers, administrators and related services personnel. For portfolio developers who could not attend these sessions, videotapes of the training were made available on request. A total of 36 persons availed themselves of this option.

Throughout the fall of 1999, Update Training Sessions were offered as a follow-up for those who had completed the initial Portfolio Development Training or who had participated in one of the pilot studies. These sessions were used to clarify requirements, answer questions, and provide an update for any changes that had occurred in the process. Attendance at these sessions included 14 persons for New Castle County, 6 for Kent County and 20 for Sussex County. Additionally, county workshops were offered on a monthly basis from October through April. Total attendance for these was 73 in New Castle, 43 in Kent, and 19 in Sussex County.

During the period from July, 1999 through April, 2000, DDOE and CDS staff trained at total of 531 teachers, administrators and related services personnel. Parent information nights were also held in all three counties to inform parents and guardians about the involvement of their children and themselves in the portfolio process.

As indicated previously 23 of the 197 portfolios turned in had incomplete entries or other problems that did not permit them to be scored. An analysis was done to determine comparing attendance at the various Portfolio Development Training Sessions with incomplete entries. The analysis indicated that 71.6 % of the “problem entries” were in portfolios turned in by developers who had not attended any of the training sessions (p <.001)

As a result of the Field Study experience, the training materials have undergone significant change. A new Delaware Alternate Portfolio Assessment User’s Guide, has replaced the former Teacher’s Training Manual. Every portfolio developer has been provided with a copy of the guide. Additional copies may be down loaded from the DAPA web site (WWW.dapaonline.org). An extensive training sequence has been planned and is being implemented. This includes four, full-day Portfolio Development Training Sessions, six 2 ½ hour Update Training Sessions, six, 2 ½ hour Scoring Training sessions, 15 County Workshops, and six Parent Information Nights. Finally, in a continuation of a process initiated during the Field Study, each School District has been assigned a District Consultant to provide training, one-to-one consultation and answer questions.

Accountability

While the State of Delaware has passed educational accountability legislation that has consequences for students, teachers and programs, the implementation is just beginning to take place. Full implementation currently is scheduled for 2002. At that time, student scores on the DSTP may be factored into teacher pay and program funding. How this will affect the DAPA is not known at this time.
During the same time-frame it will be necessary to “benchmark” the DAPA scoring system against the Standards criteria of: Distinguished, Exceeds Standards, Meets Standards, Below The Standard or Well Below the Standard.

To maximize the consistency between the DSTP reporting and the DAPA reporting, the staff of the CDS met with the DDOE staff responsible for the Delaware Student Testing Program. As a result a format for reporting DAPA scores has been devised and was utilized for reporting the results of the Field Study to parents, teachers, school principals and district offices. An example of the Report Format and the directions that go with it are found in Appendix B.

A Final Word

This Technical Report summarizes progress to date in the development of the Delaware Alternate Portfolio Assessment. The DAPA is still very much a work in progress. It has begun on a strong footing. The development process has provided a very wide range of opportunities for input and participation of all stakeholders. The development process has been systematic, starting with open-ended parent and teacher input and working through the adoption of a common philosophy and set of assumptions to the establishment of standards. It has subjected the scoring procedures to a series of more and more stringent, empirically-based tests of the quality of the measurement process. It has been paralleled by a major personnel development effort. And, it has been designed to integrate with the accountability system of the State. The outcomes to date bode well for the future.

References


Appendix A

2000-2001 DAPA Changes
Appendix B

Score Reports
GUIDE TO UNDERSTANDING
DAPA FIELD STUDY SCORES

Purpose of the DAPA
The purpose of the DAPA is two-fold. First, it provides a record for monitoring student progress and performance within five curriculum domains: Communication, Personal Management, Social, Career/Vocational, and Applied Academics. The second purpose is to provide a measure of program accountability so that programs are measured consistently across the state against standards developed by Delaware’s stakeholders, including parents, teachers, and administrators.

Field Study Overview
During the 1999-2000 school year, students who met the eligibility criteria and assessment ages of the DAPA participated in a Field Study. On May 31, 2000, 128 teachers submitted a total of 197 student portfolios to the Delaware Department of Education. The number of student portfolios is greater than the number of participating teachers because some teachers submitted more than one portfolio.

Scoring Process
Portfolios were scored during the summer of 2000 by a group of trained Delaware teachers. The job of portfolio scorers was to examine each domain entry for evidence of learning opportunities that were presented in the five dimensions of the scoring rubric: Activity, Choice, Supports, Settings, and Interactions. A scoring rubric represents a rating system that specifies the criteria used by scorers when judging portfolios. Two trained teachers independently scored each portfolio domain based upon the scoring rubric. Then, the two scores were compared. If the two scorers disagreed, the domain entry was discussed. If necessary, a third scorer reviewed the entry before the final score was decided. Therefore, each dimension score within each domain was agreed upon by at least two trained scorers.

Meaning of the Scores
While the portfolio entry reflects student performance in each domain, the scoring rubric is designed to reflect the learning opportunities that have been presented to the student. In order to ensure that the scoring process is objective and consistent, there are a strict set of scoring rules and definitions. According to these scoring rules, some whole portfolios were scored as incomplete because they were missing a required component. Additionally, some individual portfolio entries were scored as incomplete because at least one of the scoring rules was not satisfied. Incomplete portfolios and entries received scores of zero. In both cases, the score report provides specific reasons for the zero score.

Low portfolio scores do not indicate that the student was not in a good program or that he/she did not have a good teacher. The Field Study year was specifically designed to provide teachers with an opportunity to practice putting together DAPA portfolios. As with any new process, it takes time to learn how to do it well. In addition, because the scoring rubric is designed such that high scores reflect quality learning opportunities, we anticipated that some portfolios would score at lower levels during the first few years. With the effects of educational reform, we expect that portfolio scores will increase in the upcoming years. The State of Delaware and Delaware’s teachers are committed to improvement. Our goal is not to measure the shortcomings of our programs, but rather to identify areas where improvements can be made.
YOUR CHILD'S REPORTS

Your child receives a score report for each curriculum domain. The domains are called: Communication, Social, Personal Management, Career/Vocational, and Applied Academics. For each domain, the reports are identical in format and present the same kinds of information about the score your child received on his/her portfolio.

Identification information appears at the top of the page. The age information refers to your child’s age as of August 31, 1999. The assessment date is May 31, 2000 because that marks the day portfolios were submitted to the Delaware Department of Education. The assessment form is labeled "Alt” which refers to the Delaware Alternate Portfolio Assessment.

Your child’s portfolio domain score is reported as a raw score. This is the actual score your child’s portfolio received in that particular domain. Possible domain scores range from a low of 5 to a high of 20. Domain scores are derived by adding the five dimension scores found in the scoring rubric (see enclosed). If your child received a 1 in each dimension of the scoring rubric, the domain score would be a 5. In comparison, if your child received a 4 in each dimension of the scoring rubric, the domain score would be a 20. Each dimension is scored separately.

As a comparison, the scores of students in your child’s age group are also presented. The bar graph shows how your child’s portfolio score compared to the portfolio scores received by other students in the same age group. On the bar graph, your child’s score is illustrated with an “^”. It is important to note entries receiving scores of zero are not included in the bar graph.

Your child’s portfolio entry was developed based on a Standard that is included in the Standards for Functional Life Skills Curriculum or the Academic Content Standards. The letter and number represent the standard that is being evidenced in the portfolio entry. Functional standards are represented by the letter “F” and Academic Content Standards are represented by the following:

ELA = English/Language Arts  SS = Social Studies
M = Math  S = Science

The complete standard is stated following the identification number.

Performance Levels are not yet available because the Field Study scores serve as baseline data. Performance levels will be assigned in future assessment years.
### Performance Levels

This assessment is based upon the *Standards for Functional Life Skills Curriculum* and is designed to assess the learning opportunities provided for your student.

<table>
<thead>
<tr>
<th>Applied Academic Level</th>
<th>Distinguished</th>
<th>Exceeds the standard</th>
<th>Meets the standard</th>
<th>Below the standard</th>
<th>Well Below the standard</th>
</tr>
</thead>
</table>

### Score Comparisons

<table>
<thead>
<tr>
<th>Domain Score: 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Domain Score Range: 5–20</td>
</tr>
<tr>
<td>Number of Student Scores in Comparison Groups Assessed This School Year</td>
</tr>
</tbody>
</table>

### Standard this entry was based on: F 16

The student will interpret and use printed symbols that are encountered in everyday life situations and will demonstrate comprehension of their meaning.

### Entry Scores:

<table>
<thead>
<tr>
<th>Activity:</th>
<th>4 - The student is shown participating in an activity in which the activity and materials are age-appropriate AND target multiple functional skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice:</td>
<td>3 – The student is shown to have the opportunity for: selecting, planning and monitoring</td>
</tr>
<tr>
<td>Supports:</td>
<td>2 – The student is shown participating in an activity: that is directed by the teacher with evidence of supports</td>
</tr>
<tr>
<td>Settings:</td>
<td>3 – The student is shown having the opportunity to perform the targeted functional skill in two environments within the School, Community, or Home settings</td>
</tr>
<tr>
<td>Interactions:</td>
<td>1 – The student is not shown having the opportunity for social interactions with typical peers while working on the targeted functional skill.</td>
</tr>
</tbody>
</table>
YOUR STUDENT’S REPORTS

Your student receives a score report for each curriculum domain. The domains are called: Communication, Social, Personal Management, Career/Vocational, and Applied Academics. For each domain, the reports are identical in format and present the same kinds of information about the score your student received on his/her portfolio.

Identification information appears at the top of the page. The age information refers to your student’s age as of August 31, 1999. The assessment date is May 31, 2000 because that marks the day portfolios were submitted to the Delaware Department of Education. The assessment form is labeled "Alt" which refers to the Delaware Alternate Portfolio Assessment.

Your student’s portfolio domain score is reported as a raw score. This is the actual score your student’s portfolio received in that particular domain. Possible domain scores range from a low of 5 to a high of 20. Domain scores are derived by adding the five dimension scores found in the scoring rubric (see enclosed). If your student received a 1 in each dimension of the scoring rubric, the domain score would be a 5. In comparison, if your student received a 4 in each dimension of the scoring rubric, the domain score would be a 20. Each dimension is scored separately.

As a comparison, the scores of students in your student’s age group are also presented. The bar graph shows how your student’s portfolio score compared to the portfolio scores received by other students in the same age group. On the bar graph, your student’s score is illustrated with an “^”. It is important to note entries receiving scores of zero are not included in the bar graph.

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