Impact of Portfolio Assessment on Locus of Control of Students with and without Disabilities

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Abstract: The purpose of this study was to explore the effect portfolio assessment had on locus of control of students with and without disabilities, and to see specifically whether use of portfolio assessment increased internal locus of control of students with disabilities. Participants were eighth grade students chosen on the basis of classroom use and non-use of the portfolio assessment process. Both general education students (n = 70) and special education students (n = 20) were involved in the study. The Nowicki-Strickland Locus of Control Scale was used to identify participants’ locus of control. Overall, results indicated that all individuals involved in the portfolio assessment process scored more internally-oriented in terms of locus of control than those who were not involved in the portfolio assessment process.

Using alternative methods of assessment, rather than standardized testing, to show mastery or growth in a particular subject area is becoming a more common occurrence in our nation’s schools. Motivated by severe misuse of standardized testing and by frustration with tests that critics claim are not keeping pace with the changing curriculum (Quinta & McKenna, 1991), many educators are turning to alternative methods of assessment (Herman, Aschbacher, & Winters, 1992). The emphasis on standardized testing in the United States has been severely abused. Schools are being ranked and are qualifying for financial rewards based on test scores. Even values of houses are being judged by their proximity to schools with high-test scores (Keller, 2001; Shepard, 1989).

Most educators agree that assessment methods have not kept pace with the changing needs of the curriculum, but more importantly, many standardized tests are not appropriate for individual students with disabilities (Choate, Enright, Miller, Poteet, & Rakes, 1992). In addition, Abruscato (1993) stated that standardized tests are deficient in providing useful information that teachers can utilize to help them with instruction in the classroom. They further indicated that traditional assessment usually overlooks a student’s performance. Due to inadequacies embedded in traditional assessment methods, an alternative method of assessment is warranted (Tierney, 1992).

One alternative method of assessment is portfolio assessment. Educators are seeking alternative ways to provide information that documents what a student knows over a course of time, rather than just a one-shot performance. Developing portfolios to use as an alternative method to assess students is progressively being used as a viable alternative to standardized testing in schools today (Swicegood, 1994).

Portfolio Assessment

Portfolio assessment is a reliable and valid way to provide information on a student’s knowledge and understanding of subject matter content by evaluating a purposeful collection of a student’s work over a particular period of time (Ferguson, 1992; Morton, 1991; Options, Inc., 1993). The portfolio assessment process is used among educators to provide an alternative means for students to showcase their knowledge in a variety of ways. With the use of portfolio assessment methods, which incorporate various assessment formats, a more accu-
rate indication of a student’s capabilities can be obtained (Feuer & Fulton, 1992).

Using portfolios in the classroom as a different way to assess a student’s knowledge base has generally been more widely used in general education classrooms than in special education classrooms. As more and more teachers incorporate the portfolio assessment process in their daily classroom instruction, they are seeing first-hand how beneficial portfolios can be when used to strategically address the individual needs of their students, particularly when used with students in inclusive environments (Tierney, Carter, & Desai, 1991; Walther-Thomas & Brownell, 2001).

Portfolio assessment has been used to connect assessment to instruction and evaluation. This usage of portfolio assessment has become more important for individuals with disabilities since the passage of Individuals with Disabilities Education Act (IDEA) Amendments of 1997 (Public Law 107-17) which suggests that teachers conduct classroom-based assessment that connects assessment to instruction and evaluation. Portfolio assessment meets this IDEA suggestion perfectly and according to Gomez, Grau, and Block (1991), portfolios provide a host of data upon which to base instructional decisions and from which to evaluate student progress. This particular benefit is especially important when making instructional decisions as it relates to students’ IEP goals. Portfolio assessment is a valuable tool to use to link instruction and assessment directly to a student’s IEP.

**Locus of Control**

Locus of control refers to an individual’s perception of control over one’s own environment. Individuals can be considered to have either internal locus of control or external locus of control. According to Greer (1991), individuals who are internally-oriented credit life’s successes and failures to their ability and effort, while individuals who are externally-oriented credit fate and luck to their life’s successes and failures, instead of their own effort. Positive attitudes stemming from an internal locus of control can lead to mastery and competent behavior (Creek & McDonald, 1988).

Educators need to be aware of the locus of control orientation of their students, since it can be a documentation of personality and learning differences among children and be a possible predictor of academic success. Numerous studies have been conducted focusing on the relationship between locus of control and achievement. Research indicates that individuals who are internally-oriented are more apt to strive for achievement than individuals who are externally-oriented (Clifford & Cleary, 1972; Duke & Nowicki, 1974; Messer, 1972; Rotter, 1966). Research conducted by Creek, McDonald, and Ganley (1991) indicated that when predicting performance on standardized achievement tests, internal locus of control is as accurate as IQ.

Research on locus of control and students with disabilities identify students with disabilities as, on the whole, being more externally-oriented (Dudley-Marling, Snider, & Tarver, 1982; Rogers & Saklofske, 1985). Several studies have indicated that students with learning difficulties are more apt to credit academic failures and successes to externally-oriented elements such as luck, task difficulty, and lack of ability (Aponik & Dembo, 1983; Jacobsen, Lowery, & DuCette, 1986; Rogers & Saklofske).

**Benefits of Portfolio Assessment in Relation to Locus of Control**

Benefits of using the portfolio assessment process in the classroom setting have been documented in professional literature. Key outcomes of the portfolio assessment process addressed in the literature are student self-assessment and self-reflection, which can lead to student ownership of learning. These key elements may contribute to internal locus of control.

Student self-assessment and self-reflection contributes positively to the learning process in many ways. Moya and O’Malley (1994) suggested that students’ internal locus of control may be increased by allowing students to participate in the assessment process. By being involved in the self-assessment and self-reflection process, results not only include increased self-esteem and an enhanced sense of pride but also an increased sense of ownership of the learning (Frazier & Paulson, 1992). Paulson, Paulson, and Meyer (1991) indicated
that portfolios that promote student reflection on their own work allow students to assume ownership of their portfolios. The concept of taking ownership in one’s own learning may be a key element in having a more internal locus of control. Student self-assessment and self-reflection, along with increased self-esteem, sense of pride, and sense of ownership of the learning can result in increases in student motivation.

Students setting their own goals and judging how well they have reached those goals is an important component of portfolio assessment (Rief, 1990). According to Sloan (1996), the “payoff for kids” in using portfolios happens when they reflect on their work and begin to set goals and take an active role in their own learning. When students begin to take an active role in their learning, the outcome is a high degree of student involvement (Frazier & Paulson, 1992). The portfolio assessment process promotes student self-control, confidence, and enthusiasm, which can enhance student achievement. Portfolios can be “powerful educational tools for encouraging students to take charge of their own learning” (Paulson et al., 1991, p. 61). By allowing students to take control of their own learning, an environment may be fostered that is conducive to enhancing an individual’s internal locus of control.

Although many benefits of portfolio assessment are reported in the literature, one benefit of particular interest to this study was that of increasing a student’s internal locus of control. In a research study conducted by Ezell (1995), students who were involved in the portfolio assessment process were more internally-oriented. Moya and O’Malley (1994) concur that locus of control may be enhanced by allowing students to participate in the portfolio assessment process and even report that this “active involvement in the portfolio process may encourage a student’s self-determination in learning” (p. 27). Similarly, a study conducted by Ezell, Klein, and Ezell-Powell (1999) found that the use of portfolio assessment helps foster self-determination. Moya and O’Malley further report, “metacognitive awareness of the learning process may be strengthened” (p. 27) by being involved in the assessment process. Although many descriptive and anecdotal articles have been written about portfolio assessment, there is limited empirical data. These benefits of portfolio assessment should be more thoroughly investigated through empirical research. Harris and Curran (1998) indicated that very little research on portfolio assessment has reported numerical/quantitative information and even less of this research has included children with disabilities. Therefore, the purpose of this study was to provide more empirical data on effectiveness of portfolio assessment usage. More specifically, this study explored whether the use of portfolio assessment increased students’ with and without disabilities internal locus of control.

Method

Subjects

The study was conducted in two public middle schools. This study consisted of four classrooms of eighth grade students, two classes of which were involved in the portfolio assessment process as determined by the Portfolio Assessment Criteria Checklist (Ezell, 1995), and two classrooms of which were involved in traditional assessment (non-portfolio assessment). To maintain homogeneity, both school sites were chosen from the same school district and had similar characteristics: number of total students, percentage of students with and without disabilities, grade level, resource time of special education students, and ethnicity. Both general education students (n = 70) and students with mild disabilities (learning disabilities and educable mentally retarded; n = 20) were included. Students who were identified with mild disabilities were all taught in an inclusive setting, with the exception of a range of 30 to 90 minutes daily in which they were provided academic tutorial assistance in a resource-type classroom. Overall, subjects consisted of 90 students of which 22% were students with disabilities (SLD = 12%, EMR = 10%).

Instrument

To determine students’ locus of control, the Nowicki-Strickland Locus of Control Scale (NSLCS) was administered (Nowicki & Strickland, 1973). The NSLCS is a 40-item test that requires a
“yes” or “no” response. Score on the NSLCS indicates the number of test items marked in an external direction. The higher the individual’s score, the more external is his/her locus of control orientation.

Procedure

Letters were sent by the authors to announce the research project to various colleagues who taught university graduate education courses. The letter denoted the search for teachers who taught general and special education students within the same classroom and who also used portfolio assessment. Interested teachers were asked to complete a one-page initial survey to obtain general information about portfolio usage in their classroom. Sixty-nine teachers responded to the initial survey and submitted it via their university instructor.

Of 69 original respondents, 48 were eligible to receive a second survey that was six pages in length and asked for more in-depth details of portfolio usage in their classroom. This survey was based on the Portfolio Assessment Criteria Checklist (Ezell, 1995). In Ezell et al. (1999), the Portfolio Assessment Criteria Checklist was summarized as follows:

- Shows evidence of specific purpose for portfolio
- Involves student in the selection of best pieces (Gearhart, Herman, Baker, & Whittaker, 1992; Hebert, 1992; Paulson et al., 1991; Valencia, 1990)
- Contains raw data and summarizing data (Valencia)
- Shows no conflict in purposes of the portfolio (Paulson et al.)
- Involves collection of student samples over time (Paulson et al.)
- Involves student in the self-reflection process (Paulson et al.)
- Includes contents different from a cumulative folder (Paulson et al.)
- Includes contents generated from multiple procedures (Lipson & Wixson, 1991)
- Contains teacher’s own instruction reflections (Nolet, 1992)
- Shows evidence of teacher and student collaboratively setting goals (Rief, 1990)
- Involves students in the self-assessment process (Rief)
- Incorporates tasks that are performed in authentic contexts (Lamme & Hysmith, 1991)
- Includes a mutually agreed upon criteria for evaluation (Tierney et al., 1991)

Of 48 respondents on the second survey, 26 returned the survey completed. Each of 26 teachers was interviewed by phone to discuss portfolio assessment criteria and to validate their survey information. All components of the checklist had to be present in order for teachers to be eligible for the research study. After phone interviews, four teachers were determined eligible for the study. Of the four teachers, the authors randomly selected one site. All demographics of the experimental group were documented including: grade level, number of students in the classroom (with and without disabilities), teacher certification, years of teaching experience, student demographics, and location.

The authors used public school demographics from the same school district to start the selection process for the control group. After several schools were targeted, the authors interviewed teachers by phone to discuss assessment techniques, grade level, class size and composition, and teacher credentials. The control group was chosen based on its match with the above characteristics.

The Nowicki-Strickland Locus of Control Scale was then administered to the subjects in the four classroom settings of eighth graders, two classrooms of which were involved in the portfolio assessment process and two classrooms involved in traditional assessment (non-portfolio assessment). This study was conducted at the end of the school year therefore students were, or were not, involved in the portfolio assessment process for an entire school year.

After the statistical analysis was conducted and interpreted, the authors shared results with the teacher who taught the experimental group. The authors’ intent was to gain an insight on her perception of and possible conclusion on the results. Various questions were asked addressing specific topics and issues in regard to implementation of the portfolio assessment process. Many questions focused on her experience with implementing the portfo-
lio assessment process with her students who had disabilities.

Research Design

Since students and class settings were both pre-existing conditions, this study used the ex post facto research design to investigate whether a general or special education students’ use of the portfolio assessment process makes a difference in locus of control orientation. According to McMillan and Schumacher (1989), there are two common characteristics of ex post facto research design. One characteristic is the inability to randomly assign groups, which for this research study, students involved were already members of participating classroom settings. Another common characteristic is inability to manipulate independent variables, which for this research study were the treatment (usage or non-usage of the portfolio assessment process) and student classification (special education or general education). The dependent variable was students’ locus of control. Overall, the research study explored whether differences between the independent variables, portfolio assessment process and student classification, resulted in a difference on the dependent variable of locus of control.

Results

Descriptive Statistical Data

Table 1 presents descriptive data for eighth grade special education and general education students in the assessment type groups (portfolio assessment/non-portfolio assessment) on the Nowicki-Strickland Locus of Control Scale. Overall, according to group means in Table 1, students involved in the portfolio assessment process were more internally-oriented than students not involved in the portfolio assessment process. If students were being assessed using portfolios, their scores indicated they were more internally-located.

A two-way analysis of variance (ANOVA) was performed to determine whether there were differences in locus of control in relation to assessment group (portfolio/non-portfolio) and student classification (general education/special education). The .05 significance level was used.

The ANOVA (see Table 2) indicated a main effect for Assessment Type, $F(1,86) = 10.294, p = .01$, indicating that the portfolio assessment group was significantly different than the non-portfolio assessment group. The non-portfolio group ($M = 18.34$) had significantly higher locus of control scores (i.e., more externally-oriented) than the portfolio group ($M = 13.35$). Thus, subjects in the portfolio assessment group were more internally-oriented in respect to locus of control than the non-portfolio group.

There was also a main effect for Student Classification (general education and special education), $F(1,86) = 4.327, p < .05$, indicating that there was a significant difference in student classification groups, general education and special education, in regard to locus of control. The special education group ($M = 18.50$) had significantly higher locus of control scores than the general education group ($M = 15.01$). Thus, the special education students were more externally-oriented in re-

<table>
<thead>
<tr>
<th>TABLE 1</th>
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<td><strong>Descriptive Data for Locus of Control for Assessment Type and Student Classifications</strong></td>
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</table>

<table>
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<tr>
<th>ASSESSMENT TYPE</th>
<th>Non-Portfolio</th>
<th>Portfolio</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>General Ed.</td>
<td>33</td>
<td>17.58</td>
<td>6.82</td>
</tr>
<tr>
<td>Special Ed.</td>
<td>11</td>
<td>20.64</td>
<td>7.03</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>18.34</td>
<td>6.92</td>
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spect to locus of control than the general education group.

The interaction between the assessment groups (portfolio assessment/non-portfolio assessment) and student classification groups (general education and special education) on locus of control was not significant.

To examine mean differences within the special education classification groups (non-portfolio, portfolio), an independent sample t-test was performed ($t(18) = 1.836, p < .05$), revealing a significantly higher score (i.e., more externally-oriented) for the special education students who did not use portfolios ($M = 20.64$), versus the special education students who did use portfolios ($M = 15.89$). Thus, in respect to locus of control, special education students in the portfolio assessment group were more internally-oriented than the special education students in the non-portfolio group.

### Discussion

The main purpose of this study was to investigate whether use of portfolio assessment increased locus of control of students with and without disabilities. Findings of this study clearly support use of portfolio assessment for all students as a means to increase their internal locus of control. While it is good news that all students who were involved in the portfolio assessment process perceived themselves as being more internally-oriented, the special education group was of particular interest to the authors, particularly those students with mental retardation. Findings of this research study indicate that portfolio use with students who have disabilities can positively impact their internal locus of control.

Previous research studies comparing locus of control among children with and without disabilities indicated that students with disabilities are more externally-oriented than their non-disabled peers (Dudley-Marling et al., 1982; Rogers & Saklofske, 1985). This study validates those previous studies in that students who were labeled as having disabilities scored more externally-oriented than their non-disabled peers. Students with disabilities, particularly those students who have mental retardation, experience learned helplessness. This learned helplessness negatively impacts their locus of control (Deshler, Ellis, & Lenz, 1996). Having knowledge of this discrepancy between students with and without disabilities should elevate the goal of orchestrating an environment conducive to increasing students with disabilities’ internal locus of control. In this study, portfolio assessment proves to be an influential factor in developing such an environment.

Two components of the portfolio assessment process that may have contributed to the findings of this research project (i.e., increasing internal locus of control) are the key elements, self-assessment and self-reflection, which can lead to student ownership of learning. When talking with the teacher in this study who had implemented portfolio assessment, she expressed that portfolio assessment allowed her students to actively evaluate their achievement, and provided them with a wonderful opportunity to reflect on their own personal growth and accomplishments. The teacher further indicated that above everything else she was most proud to share the fact

### Table 2

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>$df$</th>
<th>MS</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
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<td><strong>Assessment Types</strong></td>
<td>354.869</td>
<td>1</td>
<td>354.869</td>
<td>10.294</td>
<td>.002</td>
</tr>
<tr>
<td>(Portfolio/Non-Portfolio)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Student Classifications</strong></td>
<td>149.163</td>
<td>1</td>
<td>149.163</td>
<td>4.327</td>
<td>.040</td>
</tr>
<tr>
<td>(General/Special Ed.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interaction</strong></td>
<td>3.745</td>
<td>1</td>
<td>3.745</td>
<td>.001</td>
<td>.974</td>
</tr>
<tr>
<td><strong>Error</strong></td>
<td>2964.792</td>
<td>86</td>
<td>34.474</td>
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that, in her opinion, her students with mental retardation had each developed a sense of control over his/her learning. She further stated that all of her students benefited, but it was her lower-functioning students, particularly those with mental retardation, who appeared to improve the most with regard to ownership of learning. She also indicated that it was very difficult at the beginning of the portfolio assessment process and that she often struggled to find appropriate ways to involve her students with mental retardation in the self-assessment and self-reflection process. Although it was difficult at first, she indicated the benefits made it worthwhile. The teacher contributed the students’ involvement in self-assessment and self-reflection to their sense of control over the learning. Zimmerman (1989) suggested that a sense of control develops when students share responsibility in the assessment process. Sense of control over learning may lead to desirable internal locus of control orientation.

Since the portfolio assessment group had desirable internal locus of control scores, it is reasonable to assume that components of the portfolio assessment process impacted students’ perceived control over their learning environment. In the academic setting, students who are more internally-located, attribute their learning successes and failures to their ability. In essence, they feel they are in charge of their learning. Students who are more internally-oriented have a sense of control in their life. Costa (1991) reported the achievement of academic goals is directly dependent on the student’s self-control. This sense of control may lead to an individual developing ownership of his/her life and becoming a life-long learner. It is important for everyone to become life-long learners, but it is of critical importance for individuals with mental retardation. Individuals with mental retardation must be given opportunities to practice taking ownership in their school years if we expect them to exhibit these skills once they become adults. Portfolio assessment appears to be ideally suited to provide opportunities for students with mental retardation to practice taking ownership of their own learning.

Fostering an environment that will enhance probability of increasing a student’s learning and achievement is the ultimate educational goal of classroom teachers. The teacher involved in the portfolio assessment process in this study stressed she could not indicate achievement increased directly because of portfolio assessment usage, however, she did indicate that student motivation was an important factor in her rationale for continuing to use portfolios in the future. Even though the teacher could not conclusively contribute higher achievement to portfolio usage, for years it has been established, dating as far back as Rotter (1966), that students who are more internally-oriented have higher achievement. Hence, in this study we can infer that higher achievement was a greater possibility for those who were involved in the portfolio assessment process because their scores were more internally-oriented. The teacher further stated, “The students could have attained similar academic goals using traditional methods, but I do not believe they would have been as motivated to learn.” She expressed, “Having fun while learning is important to me.” Motivation is a key element in enhancing life-long learning and in enhancing higher achievement.

Having internal locus of control is a desirable goal for all students, particularly for low-functioning students who have a history of learned helplessness. Internal locus of control leads to individuals taking ownership of their life, which could ultimately lead to becoming self-determined. Creek and McDonald (1988) indicated that positive attitudes, as a result of being internally-oriented, lead to mastery and competent behavior. In addition, Creek et al. (1991) suggested that having an internal locus of control directly impacts higher achievement. Overall, portfolio assessment may foster a student’s self-determination (Ezell et al., 1999; Moya & O’Malley, 1994), enhance a student’s internal locus of control (Ezell, 1995; Moya & O’Malley), and promote a student’s ownership in learning (Frazier & Paulson, 1992; Paulson et al., 1991). In this study, findings clearly support portfolio assessment as a powerful tool that can be used to increase students’ internal locus of control. Portfolio assessment should be considered a viable option to standardized testing for all students, particularly students with disabilities.
References

Abruscato, J. (1993). Early results and tentative im-
plemements from the Vermont Portfolio Project. Phi Delta Kappan, 74, 474–478.
normal adolescents’ causal attributions of success
and failure at different levels of task difficulty.
References
normal adolescents’ causal attributions of success
and failure at different levels of task difficulty.
and programming (2nd ed.). Boston: Allyn and
Bacon.
Clifford, M. M., & Cleary, T. A. (1972). The rela-
tionships between children’s academic perform-
ances and achievement accountability. Child De-
velopment, 43, 647–655.
Association for Supervision, Curriculum and De-
velopment.
Creek, R. J., & McDonald, W. C. (1988). Internality:
A predictor of academic success. National Associa-
tion of Laboratory Schools, Vol. 13.
Creek, R. J., McDonald, W. C., & Ganley, M. A. (1991). Internality and achievement in the intermedi-
ate grades. Research/Technical (143). (ERIC Doc-
ument Reproduction Service No. ED 390 656)
Teaching adolescents with learning disabilities (2nd ed.). Denver: Love.
Dudley-Marling, C. C., Snider, V., & Tarver, S. G. (1982). Locus of control and learning disabilities:
A review of discussion. Perceptual and Motor Skills,
54, 503–514.
Duke, M., & Nowicki, S. (1974). Locus of control and achievement: The confirmation of a theore-
Empowering students with mental retardation
through portfolio assessment: A tool for fostering self-determination skills. Education and Training in
Mental Retardation and Developmental Disabilities,
34, 453–463.
grade students’ locus of control and their involve-
ment in the portfolio assessment process (Doctor-
Learning, 21(3), 38–41.
478.
folios motivate reluctant writers. Educational Leader-
ship, 49(8), 62–65.
Gearhart, M., Herman, J. L., Baker, E. L., & Whit-
taker, A. K. (1992). Writing portfolios at the elemen-
tary level: A study of methods for writing assessments
(CSE Technical Report 337). Los Angeles: Na-
tional Center for Research on Evaluation, Stan-
dards, and Testing.
ality. Language Arts, 68, 620–628.
Greer, J. V. (1991). At-risk students in the fast lanes:
Let them through. Exceptional Children, 57, 390–
391.
Harris, M. B., & Curran, C. M. (1998). Knowledge,
attitudes, and concerns about Portfolio assess-
ment: An exploratory study. Teacher Education and
Special Education, 21, 83–94.
from students and staff. Educational Leadership, 49,
58–61.
Alexandria, VA: Association for Supervision and Curriculum Development. (ERIC Document Re-
production Service No. ED 352 389)
Jacobsen, G., Lowery, B., & DuCette, J. (1986). At-
tributions of learning disabled children. Journal of
Educational Psychology, 78, 59–64.
language classroom. Journal of Special Education,
26(1), 53–58.
Keller, B. (2001). Incentives for test-takers run the
gamut. Educational Projects in Education, 9(34), 1, 28–
29.
adventure into portfolio assessment. Language
Arts, 68, 629–641.
Lipson, M., & Wixon, K. (1991). Assessment and in-
struction of reading disability: An interactive approach.
e in education: A conceptual introduction. New York:
Harper Collins.
Messer, S. B. (1972). The relationship of internal-
external control to academic performance. Child
Development, 43, 1456–1462.
portfolio assessment. Tahlequah, OK: Northeastern
State University. (ERIC Document Reproduction
Service No. ED 336 728)
assessment model for ESL. The Journal of Educa-
tional Issues of Language Minority Students, 13, 13–
36.
Nolet, V. (1992). Classroom-based measurement and
control scale for children. Journal of Consulting
and Clinical Psychology, 40, 148–155.

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