The West Virginia Alternate Identification and Reporting Program

An Exploratory Analysis

West Virginia Department of EDUCATION
Office of Research
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Abstract

This study examines the results of the Alternative Identification and Reporting (AIR) program, which promoted the nonuse of disability labels for students receiving special education under the Individuals with Disabilities Education Act (i.e., students who would previously have been identified as having an emotional/behavioral disorder, specific learning disability, mild mental impairment, other health impairment, and/or orthopedic impairment), in a group of 26 elementary and middle schools in West Virginia. The AIR program was founded on the premise that the determination of a specific disability category and subsequent labeling is not necessary for providing students needed instructional and behavioral services. Instead, staff were to focus on the instructional and behavioral needs of the students. Survey and assessment data were used to examine the results of the AIR program. In response to e-mail invitations, 273 teachers, 20 principals, 12 assistant principals, and 11 psychologists completed online questionnaires. Additionally, an analysis of WESTEST/WESTEST 2 assessment data examined whether students with disabilities attending AIR schools outperform students with similar disabilities in non-AIR schools in mathematics and reading/language arts. The AIR program had four main goals. Regarding its first goal of establishing and reinforcing the commonality of instructional and behavioral needs for students, survey data indicate the AIR program made limited progress. The AIR program made some progress in its second goal of transitioning teachers, administrators, and parents towards a model of support that is based on the student's instructional and behavioral needs and not a defined area of disability. Additionally, the survey results suggest that the AIR process made progress with students in diminishing the burden that a label appears to place on them emotionally and the associated low expectations. Also addressing the third goal, analyses in this study reveal some higher, though statistically insignificant, gains in test scores for AIR students in mathematics and reading compared with students with similar disabilities in non-AIR schools. Although the AIR program did not fully achieve its first three goals, it appears it is well on its way to doing so if the findings from this study can be utilized to inform program implementation going forward. Further, it is hoped that the project has achieved its fourth goal, which is to contribute to the national dialogue associated with research related to early intervention, response to intervention, and appropriate instruction and support for students who demonstrate the need for the protections of IDEA.

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Introduction

This study examines the results of the Alternative Identification and Reporting (AIR) program, which promoted the nonuse of disability labels for students receiving special education under the Individuals with Disabilities Education Act (IDEA), in a group of elementary and middle schools in West Virginia. The impetus for the program was the body of research pointing to negative influences that labeling can have on teachers' expectations and judgment regarding students with labels. Program planners, aware of the complexities of this research, characterized it as follows:

> The research is inconclusive as to the impact on achievement of labeling a child. There are no broadly applicable data, for instance, that document academic gains of exceptional students as a result of eliminating labels nor is there empirical evidence to show that associating students with disabilities with a correctly assigned categorical label results in lessened academic achievement. There is broad concern, however, that teacher and parent and student expectations are lowered when a student carries a label and that that is intermingled with personal feelings of value and worth that affect a student's life choices. We will be exploring that in the evaluation of the project in addition to student achievement and outcomes data. (WVDE, n.d., p. 3)

A brief summary of the research literature on the effects of labeling follows, along with an overview of research on response to intervention (RTI), which provided the foundation upon which the AIR program was built. More in-depth discussion of the literature on these topics can be found in Appendix A. (See also Osterholm & Nash, 2007, for a review of the literature on the effects of labeling.)

Review of the Research Literature

Research on the effects of labeling

Early evidence (Foster & Salvia, 1977; Foster, Schmidt, and Sabatino, 1976; Gillung and Rucker, 1977), as well as at least one recent study (Bianco, 2005) showed that knowing a child's label—especially the labels of *mentally retarded*, *emotional/behavioral disability*, and *learning disability*—affected teacher perceptions and expectations for success. Other studies have found that only certain labels (i.e., *emotionally disturbed*) influenced teachers' expectations for student success, and that teachers may be more influenced by student behavior, such as a sample of student work (Levin, Arluke, & Smith, 1982), than by labels assigned to them.

Research has shown that students with disabilities experienced both felt and enacted stigma and there were many reports of being teased, ridiculed, and bullied (Jones, 1972; Higgins, Raskind, Goldberg, & Herman, 2002). There were also reports of parents of children with high-functioning autism experiencing stigma, most commonly embarrassment and avoidance by others (Gray, 2002). Yet it is unclear if it is the label that invoked the negative reactions of peers and public on students with disabilities or other factors, such as the behavior of the disabled students, themselves (Sutherland, Algozzine, Ysseldyke, & Freeman,

2001) or by their placement in resource rooms versus special classrooms (Bak, Cooper, Dobroth, & Siperstein, 1987). At least one study, however, showed that the label, itself, could affect peers' perceptions of the social acceptability of students with certain labels (Hunt, 2006).

It should be noted that in the case of dyslexia, research has shown that labels can produce a mitigating effect by providing an acceptable explanation for a student's inability to read or spell, in place of peers' and others' judgments of them as lazy or intellectually disabled (Reid, 1996; Riddick, 2000; Solvang, 2007; Taylor, Hume, & Welsh, 2010). Further, the specific label of *dyslexia* was found to be associated with higher self-esteem than the more general terms, *learning disabled* (United States) or *special education needs* (United Kingdom) (Riddick, 2000; Taylor, Hume, & Welsh, 2010). This finding did not necessarily hold for other disabilities, such as Asperger's syndrome or high-functioning autism (Gray, 2002; Huws & Jones, 2008).

Students studied by Riddick (2000) and researchers (Higgins, Raskind, Goldberg, & Herman, 2002) point out the need to address issues of school culture, especially stigma and mistreatment of students with disabilities by their nondisabled peers. Higgins and colleagues (2002) wrote

> It is the hope of the authors that administrators and teachers of 'mainstream' students will develop a proactive curriculum of tolerance and impartiality toward individuals with disabilities, and failing that, at least begin to admonish systematically their worst tormentors. (p. 16)

They recommend that activities "for educators, school counselors, and parents include establishing counseling groups focused on coming to terms with a learning disability, implementing peer support groups, developing mentoring programs and the like, as well as strengthening disability awareness curricula and transition services to include consideration of the notion of acceptance of a disability and of persons with disabilities, as well as the label process and its consequences" (Higgins, et al., 2002, p. 16).

For parents, positive effects of labeling described in the literature include helping parents by validating that there was a problem and enabling them to access services for their child; and by providing a medical explanation for a problem, which can serve as a welcome alternative to teachers and others attributing undesirable behaviors to poor parenting (Reid, 1996).

However, many of these positive functions may also result from response to intervention (RTI) approaches, which also identify educational needs and provide appropriate interventions.

Research on response to intervention (RTI)

The AIR program was implemented in RTI pilot schools, and was firmly grounded in the premises of RTI—that by intervening early, struggling students will obtain the skills they need and avoid special education placement later (Newman-Gonchar, Clarke, & Gersten, 2009). The National Center on Response to Intervention (NCRTI) describes four essential components of RTI: (a) a school-wide, multilevel instructional and behavioral system for preventing school failure; (b) screening; (c) progress monitoring; and (d)

data-based decision making for instruction, movement within the multilevel system, and disability identification, in accordance with state and federal law (NCRTI, 2010, p. 1).

As for the multitier (or multilevel) aspect of RTI, most observers describe three levels of intensity:

1. High quality core instruction that meets the needs of most students in the general education classroom
2. Evidence-based interventions of moderate intensity that address the learning or behavioral challenges of most at-risk students
3. Individualized intervention(s) of increased intensity for students who show minimal response to secondary prevention (NCRTI, 2010, p. 4)

Another way to look at RTI is as a way to coordinate and gain coherence among the general classroom, special education, and Title I services for struggling students (Newman-Gonchar, Clarke, & Gersten, 2009).

Until recently, developers and proponents of RTI have relied on studies of individual components to put together research-based approaches to intervention, but little research had been done on the RTI process itself (VanDerHeyden, Witt, & Gilbertson, 2007). However, an emerging body of research—much of which is limited in its generalizability due to methodological issues—provides some evidence of the effectiveness of the RTI approach to identification and placement of students with LDs. One meta-analysis and two research reviews provide systematic overviews of this emerging research base. Briefly, the emerging research indicates the following outcomes of RTI:

- *Reductions in percentages of students identified as LD*. Characterized as a systemic improvement by Burns, Appleton, and Stehouwer (2005) in their meta-analysis of 11 studies, they found that on average less than 2% of the student population was identified as LD among the field-based RTI models compared with estimates of the population as a whole (5.7% in 2002). Hughes and Dexter (n.d.) in their descriptive review of the literature did not indicate such a large effect, reporting that placement rates remained steady or decreased slightly.
- *Gains in student achievement*. Burns and colleagues (2005) also found strong positive effects on student achievement, with an unbiased estimate of effect of 1.54. Work by Fuchs, Fuchs, and colleagues focused on mathematics interventions has shown promise for certain interventions both in the regular classroom (Tier 1) and in supplemental instruction (Tier 2). The interventions are even more powerful when the same approach is used in both tiers for students at risk of mathematics difficulties (Fuchs, Fuchs, & Hollenbeck, 2007; and Fuchs, Fuchs, Craddock, et al., in press).

The AIR program was designed and implemented based on a commitment to combining the positive potential of the RTI approach for identifying and serving students with special learning needs, and the desire to avoid possible negative impacts of using disability labels. The program set out to study if there are any significant beneficial results accruing from removing labels—especially in an RTI setting. Additionally, program planners hoped to investigate how services for students at Tier III differ from those who have IEPs. Conse-

quently, the West Virginia Department of Education (WVDE), Office of Special Programs (OSP), in consultation with the U.S. Department of Education, Office of Special Education Programs, initiated the AIR program in 2008.

Background on the AIR program

The AIR program was founded on the premise—shared with RTI—that the determination of a specific disability category and subsequent labeling is not necessary for providing students needed instructional and behavioral services. Instead, staff were to focus on the instructional and behavioral needs of the students.

The main goals of the AIR program were to

1. Establish and reinforce the commonality of instructional and behavioral needs for students;
2. Transition teachers, administrators, and parents to a model of support that is based on students' instructional and behavioral needs and not defined areas of disability;
3. Diminish the burden that labels appear to place on students emotionally and the associated low expectations of their teachers; and
4. Contribute to the national dialogue associated with research related to early intervention, response to intervention (RTI), and appropriate instruction and support for students who demonstrate the need for the protections of IDEA (WVDE, 2010).

The program was initiated in the 2008/09 school year with 14 elementary schools (Cohort 1). A middle school and an additional 11 elementary schools were added in the 2009/10 school year (Cohort 2)—for a total of 26 schools, which were located in six counties. The program was introduced as a complementary process in schools that had already implemented RTI, a 3-tiered early detection and intervention system that identifies struggling students and assists them before they fall behind. The RTI system allows for increasing intensity of instruction to students in direct proportion to the individual needs. However, in addition to implementing the RTI process across all grade levels and all applicable content areas, AIR schools had to agree to (a) participate in the AIR program until its conclusion in 2012; (b) inform parents about the program; (c) comply with all state and federal regulations under IDEA 2004; and (d) be committed to providing appropriate instruction and services in a manner that seeks not to separate, but to include all students in its comprehensive planning and use of resources (WVDE, 2011).

In the AIR schools, students who had progressed to Tier III and who needed the additional services and protections of IDEA—particularly students who would previously have been identified as having an emotional/behavioral disorder, specific learning disability, mild mental impairment, other health impairment, and/or orthopedic impairment—were selected for the AIR process. Selection for continued services was based on criteria consistent with federal regulations, and agreed upon by an individual education program (IEP) team based solely on the demonstrated needs of the students. Services consistent with specially designed instruction as provided for in IDEA (2004) were determined by data collected during the RTI process, subsequent to it, and within a multidisciplinary evaluation. Staff in AIR schools

were allowed to continue using labels for students with autism, blindness and low vision, deaf blindness, deafness, developmental delay, hard of hearing, moderate and severe mental impairment, multiple disabilities, speech/language impairment, and traumatic brain injury, because it was thought that, for these students, an identified disability allows for easier access to community services and other unique supports.

In the early stages of the AIR program, trainings were provided to teachers and administrators in AIR schools on how to provide supportive services that target students' instructional or behavioral needs without relying upon student labeling. No documentation on the specific components of the trainings, the number of trainings, or the total hours of training provided to school personnel was available for use in this study. With the high staff turnover on the program, this lack of documentation suggests low fidelity in the implementation of the AIR program.

Goals of the Evaluation Study

This study evaluates whether the program achieved its first three goals, by analyzing survey data from 270 teachers, 31 principals, and 11 psychologists; and by comparing the 2008, 2009, and 2011 West Virginia Educational Standards Test (WESTEST) and WESTEST 2 scores of special education students in AIR schools and matched samples of special education students in non-AIR schools. In doing so, it will achieve the fourth goal of contributing to the national conversation about research related to early intervention, RTI, and appropriate instruction and support for students who demonstrate the need for the protections of IDEA. Specifically, this evaluation study aims to examine the following evaluation questions (EQs):

EQ1. What changes are associated with the AIR program in the general education classrooms? [AIR Program Goal 1]

EQ2. What changes are associated with the AIR program in the special education classrooms? [AIR Program Goal 1]

EQ3. Are there changes in school personnel's use of a model of support focused on students' instructional and behavioral needs rather than on defined areas of disability since the inception of the AIR program? [AIR Program Goal 2]

EQ4. Are there changes in affected parents' interaction with schools and relevant committees since the inception of the AIR program? [AIR Program Goal 2]

EQ5. Are there changes in students' interactions and behavior since the inception of the AIR program? [AIR Program Goal 3]

EQ6. Do students with disabilities attending AIR schools academically outperform students with similar disabilities in non-AIR schools in mathematics and reading/language arts? [AIR Program Goal 3]

Methodology

To address the evaluation questions, we collaborated with AIR program staff in the West Virginia Department of Education (WVDE) Office of Special Programs (OSP) to develop a logic model that depicted the program's theory of change based on program's goals, which guided the evaluation.

Principal, Teacher, and Psychologist Survey Development and Analysis

Based on this logic model, we developed three survey questionnaires in collaboration with AIR program staff—the Teachers Survey, Principals Survey, and Psychologists Survey—to assess fidelity of AIR program implementation, and to gauge school and district personnel perceptions of its quality (addressing EQ1–EQ5; see Appendix B, page 63).

The surveys included questions designed to form six subscales hypothesized, each associated with direct potential outcomes of the program: (a) change in school culture; (b) improved regard for special education students, staff, and services by parents and others; (c) school-wide provision of noncategorical special education services; (d) reduced burden on students arising from categorical labels; (e) improved understanding of RTI Tier III and special education services and instruction among all teachers and special education staff; and (f) improved parental understanding of children's needs, abilities, and services.

AIR program staff sent e-mails containing electronic links to online survey questionnaires to all 26 principals of AIR schools on March 20, 2011. Principals were asked to fill out the Principals Survey and to direct teachers involved in the AIR process in their schools to fill out the Teachers Survey via an electronic link to the online questionnaire. Approximately 654 general and special education teachers, curriculum specialists, remedial specialists, and speech language pathologists were eligible to be surveyed. Although principals were told to send the electronic link only to teachers involved in AIR, there was some variation in how they responded; that is, some principals complied with the instruction while others invited both teachers involved and those not involved in the program. There was variation among schools regarding participation in the Principals Survey, as well; in some schools only the principals completed it, while in others both principals and assistant principals completed it. AIR program staff also sent e-mails with an electronic link to the Psychologists Survey questionnaire to the district special education directors associated with each of the AIR schools. In turn, they sent the Psychologists Survey to psychologists involved in AIR schools in their district. There are no data available on the number of psychologists invited to participate in the survey. In response to the e-mail questionnaire invitations, 273 teachers, 20 principals, 12 assistant principals, and 11 psychologists completed questionnaires.

The questionnaires included both multiple-choice response questions and some open-ended questions. The multiple choice questions asked respondents to indicate on a 5-point Likert-type scale if they strongly agreed (1 point), agreed (2 points), disagreed (3 points), or strongly disagreed (4 points) with a list of statements, or if they considered the statement not applicable to them (5 points). For the analyses in this report, we set Not Applicable responses to zero and excluded them from the prevalence statistics reported for

each item. The prevalence statistics reflect the percentage of respondents who strongly agreed or agreed with each statement among the group of respondents who indicated—by using the other four response options—that the items applied to them.

Although questions were originally developed to form six subscales, factor analysis of the survey data yielded a single factor structure, not six as hypothesized. Consequently, using qualitative methods, we developed a different structure for our analysis based on the first three AIR program goals, which included five content areas corresponding to the evaluation questions EQ1–EQ5: (a) impact on general education (Goal 1), (b) impact on special education (Goal 1), (c) impact on school personnel (Goal 2), (d) impact on parents (Goal 2), and (e) impact on students (Goal 3). We then ran Cronbach's alpha analyses—measures of the internal consistency of the items in each content area—which proved to be quite high, indicating that within each of the five content areas the items all measured the same latent variable of interest. Lastly, 4-point scales reflecting each content area were reverse coded to prevent the mean from being counterintuitive (i.e., lower scores signifying higher levels of agreement). In the scales, *strongly disagree* was coded as 1, *disagree* as 2, *agree* as 3, and *strongly agree* as 4.

Assessment Data Analysis

We used an analysis of WESTEST/WESTEST 2 assessment data to address EQ6: *Do students with disabilities attending AIR schools outperform students with similar disabilities in non-AIR schools in mathematics and reading/language arts?* The assessment data for 2008, 2009, and 2011 were used to compute the gain scores for the AIR and non-AIR groups of students.

We created a binary indicator for whether a school participated or did not participate in AIR, and another binary indicator for whether a student was AIR eligible; that is, whether the student had one of the five exceptionality codes[1]—(a) emotionality/behavior disorder, (b) specific learning disability, (c) mild mental impairment, (d) other health impairment, and (e) orthopedic impairment—included in AIR. Non-AIR eligible students in AIR schools were removed from the data so that only AIR eligible students would be used to match the comparison group. We reasoned that including non-AIR students (those with or without exceptionalities) in our models would have obscured any effects of the removal of labels because, even in AIR schools some students still receive exceptionality labels (those with autism, blindness and low vision, deaf blindness, deafness, developmental delay, hard of hearing, moderate and severe mental impairment, multiple disabilities, speech/language impairment, and traumatic brain injury), and thus were presumably subject to the hypothesized influences that these labels bear. It is important to note that some students did not have any

[1] It should be noted that we were able to select "AIR eligible" students because primary exceptionality codes were still collected and reported at the district level for all students with IEPs even in AIR schools. This was done to remain in compliance with IDEA. However, the labels for AIR-eligible students were presumably unknown at the school level.

assessment scores[2] and the entries for a few students were duplicated in the data. In most of the duplication cases, the data in the duplicates were consistent and only one entry was kept. However, the data were not consistent for four students in Cohort 2 and these cases were deleted; three of the four cases were high school students who would not have been retained in the sample regardless because they would not have been a match for AIR students, who were elementary and middle school students. Only one of the four was AIR eligible, that is, had an exceptionality category that was included in AIR, but was not in an AIR school. It is not apparent why these students had two different scores for assessments that were conducted in the same year.

We used propensity scores to match AIR eligible students in participating schools to students that were most similar to them in non-AIR schools. The propensity score is the conditional probability of being assigned to AIR given a vector of observed covariates. In this study, the covariates were (1) gender, (2) participation in free and reduced lunch, (3) language proficiency, (4) migrant status, (5) race, (6) grade, (7) z-scores of tests in mathematics, reading/language arts, science, and social studies in the baseline year, and (8) an indicator of whether the student was AIR eligible (i.e., has one of the five AIR eligible disability codes). Thus, the propensity score was the predicted probability of being assigned to AIR, obtained from a binary logistic regression of an indicator of being in an AIR school on the listed covariates (Rosenbaum & Rubin, 1983). We used the nearest neighbor method in SPSS and specified a delta or difference of 0.001, meaning the predicted probability of a non-AIR student could only vary by 0.001 compared to that of the AIR student to whom they are matched. We ran the procedure separately for Cohort 1, which started AIR in 2008, and Cohort 2, which started in 2009.

We then matched the data obtained for the sample of AIR and matching non-AIR students in 2008 and 2009 to assessment data in 2011, which resulted in some attrition. In 2008, there were 231 AIR-eligible students in 14 participating schools, which we matched to 223 non-AIR comparison students; however, matching them with the 2011 assessment data reduced the samples to 190 and 185, respectively. In 2009, 134 AIR students were in the 12 additional AIR schools, which we matched to 128 non-AIR comparison students; matching them with the 2011 assessment data reduced the samples to 110 and 109, respectively. Thus, in Cohort 1, the data for 79 students were lost to attrition and the data for 33 students were lost to attrition in Cohort 2 because the students did not have assessment data in 2011. We conducted separate analyses for Cohort 1 and Cohort 2 because it is possible that there may be common matches for AIR students in the two cohorts, and including the record of a student twice would violate the assumption of independence between cases that is critical in subsequent tests. We used analyses of variance (ANOVAs) to test whether the gains in students' WESTEST and WESTEST 2 mathematics and reading/language arts scores between 2008 and 2009 or 2011 were significantly different between AIR and non-AIR groups of students.

[2] West Virginia tests students in Grades 3 – 11 in the areas of reading/language arts and mathematics. However, many AIR schools are elementary schools and thus contain multiple grade levels that are not assessed.

Participant Characteristics

Table 1 shows the characteristics of students served in AIR schools, compared to students in non-AIR schools in 2008. Non-AIR schools tend to be slightly more racially diverse than AIR schools. However, the socioeconomic characteristics of the students appear to be similar in AIR and non-AIR schools, as nearly the same percentage was receiving free and reduced-price lunch in both groups of schools. Even more relevant, the percentage of students receiving special education is 14.1% in both groups. Students in AIR slightly outperform those in non-AIR schools, as higher percentages are proficient in math and reading/language arts, but not in science or social studies.

Table 1. Student Characteristics in AIR Schools Versus Non-AIR Schools

Characteristic	AIR school %	Non-AIR school %
Race:		
Caucasian/White	96.1	92.7
African American/Black	2.7	5.6
Hispanic	0.4	1.0
American Indian or Alaskan Native	0.1	0.1
Free and reduced-price lunch	53.3	50.4
Language proficiency	0.5	0.5
Special education	14.1	14.1
Gender	50.0	51.2
% Proficient in math	63.7	59.1
% Proficient in reading/language arts	62.9	58.2
% Proficient in science	53.4	54.4
% Proficient in social studies	55.0	56.0

Source: 2008 WVEIS

Table 2 and Table 3 present the characteristics of personnel in AIR schools who responded to the surveys. More teachers, principals, and psychologists who responded were employed in schools located in Kanawha County than in the other districts (Table 2); this is not surprising since 12 of the 26 schools were in Kanawha County. However, all but one of the Kanawha County AIR schools joined the program in the 2nd year of implementing AIR.

Table 3 reveals that a higher proportion of respondents have been in their current position for between 1 and 5 years than for other years-of-experience categories; this is important because respondents were asked to comment on a process that was initiated in the

past 3 years. Respondents who have been at their position for less than 3 years in Cohort 1 schools and less than 2 years in Cohort 2 schools would not have experienced the AIR process since its inception—which means they would not have had a full view of before-and-after-AIR conditions and may not have received a full dose of the intervention. This is particularly the case for principals, close to a quarter of whom have been in their positions for less than a year; only slightly more than half of principals have been in their positions for more than 5 years.

Table 2. County in Which Respondents' Schools Are Located

	Teachers		Principals		Psychologists	
County	n	%	n	%	n	%
Total	269	100.0	32	100.0	11	100.0
Kanawha	78	29.0	16	50.0	5	45.5
Wood	63	23.4	10	31.3	1	9.1
Tyler	60	22.3	2	6.3	2	18.2
Putnam	32	11.9	2	6.3	2	18.2
Harrison	27	10.0	1	3.1	1	9.1
Hampshire	9	3.3	1	3.1	0	0.0

The AIR process was implemented mainly in elementary schools; only one middle school was included in the implementation. As such it is important to examine the grade levels that the respondents work within. Over half (51.2%) of the teachers taught kindergarten to second grade; most (95.3%) taught in elementary school. Only 4.7% taught seventh and eighth grades.

Table 3. Number of Years of Experience in Current Position

	Teachers		Principals		Psychologists	
Provider	n	%	n	%	n	%
Total	271	100.0	32	100.0	11	100.0
Less than 1	26	9.6	7	21.9	0	0.0
1 to 5	87	32.1	8	25.0	4	36.4
6 to 10	55	20.3	11	34.4	2	9.1
11 to 15	28	10.3	2	6.3	2	27.3
More than 16	75	27.7	4	12.5	3	27.3

Results

This section presents the results of the survey questionnaires completed by teachers, principals, and psychologists, and the analysis of WESTEST/WESTEST 2 data comparisons. The results are presented by the first three goals of the program although, given how interrelated the goals are, it is unavoidable that there will be some overlap and that some items, though placed in the most relevant section, apply to more than one goal.

SPSS 18 was used to obtain descriptive statistics of the survey findings about the AIR process. The count and percentage frequencies of the responses are presented. For the attitudinal or evaluative items, the tables present the count and percentage that strongly agree or agree, labeled as *agreeable*, excluding from the analysis those who chose *Not Applicable*.

The methods used for analyzing WESTEST/WESTEST 2 data are described in the Goal 3 results section (p. 30).

Goal 1: Establish and reinforce the commonality of instructional and behavioral needs for students.

One of the main goals of the AIR process was to establish and reinforce the commonality of instruction and behavioral needs for all students, including students in both general and special education. Consequently, teachers, principals, and psychologists were surveyed about the impact of AIR in both general and special education. Their responses were used to respond to EQ1 and EQ2 in the following two sections.

Impact on general education

To respond to EQ1—*What changes are associated with the AIR program in the general education classrooms?*—the survey assessed the impact of the AIR process on general education from teachers, principals, and psychologists. A Cronbach's alpha of 0.71 to 0.90 was obtained for a scale including the items in Table 4 for the three groups of respondents, indicating that these items likely contribute to a common factor or domain.[3] Teachers were most likely to agree that the AIR process has had a positive impact on general education (Figure 1). The principals' mean level of agreement fell close to teachers'. The psychologists' mean fell lower, but still indicates weak agreement that the AIR process has had a positive impact on general education.

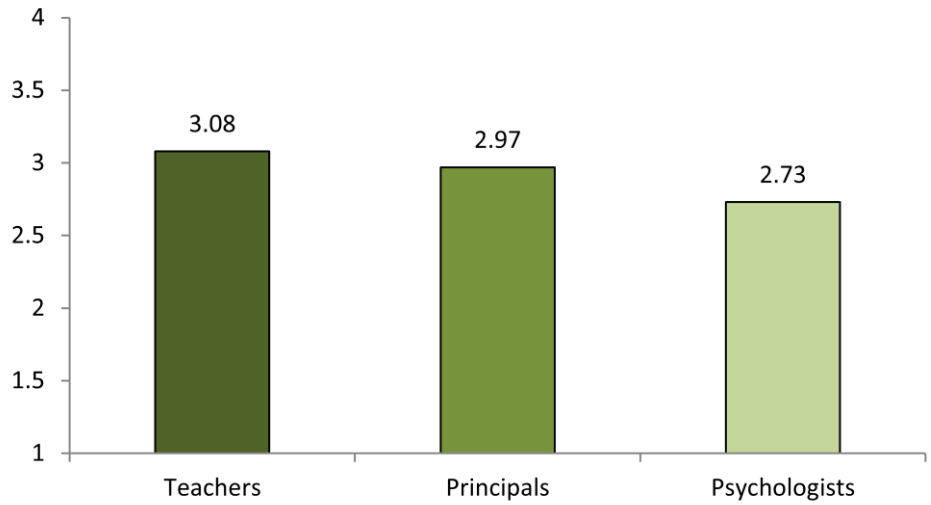
As seen in Table 4, a majority of respondents noted that the AIR program has resulted in more time spent in general education classrooms for students with IEPs. About 80%, 55%, and 63% of teachers, principals, and psychologists, respectively, agreed with this statement. Further, slightly more than half of the respondents reported that special education teachers in the schools where they work provide more support to all general education students now with the AIR program than they did previously. About the same proportion also reported that special educators provide more services to students without IEPs than

[3] A value of .70 for Cronbach's alpha (a measure of internal consistency) is typically considered sufficient reliability in the social sciences (Nunnally, 1978).

they did before implementation of the AIR program. However, only half of respondents in the three groups thought special education teachers' contributions to general education instruction and decision making are more valued now with the AIR program than they were before. Approximately 68%, 75%, and 90% of teachers, principals, and psychologists, respectively, also reported that they agree that general education teachers and interventionists work more collaboratively since AIR's inception than they did before. The quote below illustrates respondents' feelings regarding the improved collaboration between special and general education teachers.

> Collaboration between the special education teacher and the classroom teachers has been productive and positive. (A principal)

Figure 1. General Education Impact Scale, Perceptions by Role Group



The AIR program also seems to have had a positive impact on the RTI process as approximately 90% of all groups of respondents reported that they have increased efforts to implement the 3-tier instructional model before requesting a multidisciplinary evaluation for special education in the schools where they work. Although 73%, 64%, and 56% of teachers, principals, and psychologists reported that all teachers seem to have a greater understanding of Tier III because of the AIR process, much lower percentages--57.1%, 56.5%, and 44.4% of teachers, principals, and psychologists, respectively—indicated that the AIR process has had any impact on teachers' understanding of special education.

In conclusion, the results suggest that the AIR process has resulted in special education teachers being more involved in general education and in there being more collaboration between general and special education teachers. However, the process is not perceived as having significantly influenced general education teachers' understanding of special education.

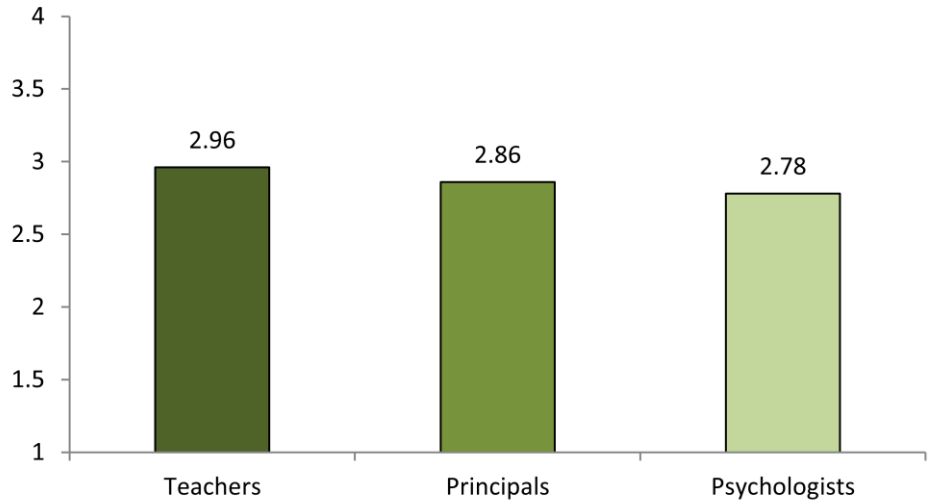
Table 4. AIR's Perceived Impact on General Education, by Role Group

	Teachers		Principals		Psychologists	
Item	n	%	n	%	n	%
In the AIR schools I serve, students with IEPs spend more time in the general education classrooms than they did before.	151	80.3	12	54.5	5	62.5
In the AIR schools I serve, special education teachers provide more support to all students within the general education classrooms than they did before.	119	61.0	12	52.2	5	55.6
In the AIR schools I serve, special educators provide more services to students without IEPs than they did before.	105	57.7	14	66.7	5	55.6
In the AIR schools I serve, I have noticed that special education teachers' contributions to general education instruction and decision-making seem to be more valued than they were before.	93	50.5	11	50.0	4	50.0
In the AIR schools I serve, general education teachers and interventionists work more collaboratively than they did before.	138	68.0	18	75.0	9	90.0
In the AIR schools I serve, we have increased our efforts to implement the 3-tier instructional model before requesting a multidisciplinary evaluation for special education.	189	92.6	21	91.3	8	88.9
Because of the AIR process, all teachers seem to have a greater understanding of Tier III.	151	72.9	14	63.6	5	55.6
Because of the AIR process, all teachers seem to have a greater understanding of special education services.	113	57.1	13	56.5	4	44.4

Impact on special education

School personnel's survey responses were also used to address EQ2: *What changes are associated with the AIR program in the special education classrooms?* The AIR process is perceived by most respondents as having had both positive and negative effects on special education, with some respondents indicating that it has had no effect in their schools. A subscale including the items analyzed in this section and presented in Table 5 had Cronbach's alphas ranging from 0.71 to 0.84 for the three groups of respondents. To obtain this scale, the second, third, and fourth items in Table 5 were reversed to indicate the expected impact of the AIR process on special education. Teachers were most likely to agree that the AIR process has had a positive impact on special education (Figure 2), while the means for principals and psychologists indicated slightly lower levels of agreement.

Figure 2. Special Education Impact Scale, Perceptions by Role Group



In support of the results from previous research suggesting that when labels are removed teachers and school personnel are less likely to think some students need special education services, approximately 69% and 87% of teachers and principals reported a decrease in the percentage of students identified for special education services because of AIR; this belief is illustrated in the quote below. By contrast, only 37.5% of psychologists reported the same.

> I think that ultimately that the AIR process or more as a result of Tiered Intervention, fewer children will be referred for Special Education services and I feel that this is GREAT!!! (A principal)

However, as many as 70% of teachers, 88% of principals, and all psychologists thought students selected through the AIR process would most likely be in the same instructional placement if labels were still being used, as illustrated by the quotes below.

> In general, the students we identify through the AIR process are the same students we would have identified much sooner through teacher/administrator experience… (A teacher)

> We have an environment where student labels do not matter. This was even before AIR. We also have had regular education students served with special education students before AIR. The only change that AIR seems to have brought about is that our eligibility meetings are very long and tedious. (A principal)

A significant proportion of respondents also reported that applying RTI processes in general has resulted in delays in providing IEP services to some students. This is also illustrated in the quote above provided by a principal indicating that eligibility meetings are now long and tedious in his/her school. Two of the 17 principals who provided additional (open-ended) comments mentioned this issue. Nine of the 83 open-ended additional comments provided by teachers also were related to the issue of delay in services. Unfortunately, respondents often conflate RTI and AIR in their evaluation so it is difficult to ascertain whether their comments are really related to both or, in some cases, to one of the two.

> Children do seem to need extensive services at times, but the process seems cumbersome for some students who we know really do need additional services earlier. (A principal)

> It's unfortunate that we spend so much time and money in a desperate attempt to implement yet another intervention for students when what AIR and RTI have done is make it harder for students to be identified for special services and delay the intervention so desperately needed. We need to be speeding the process up, facilitating the process, and intervening much, much sooner. Children's learning is at stake. (A teacher)

However, in support of AIR, Table 5 shows that less than half believe that the previous system of using students' disability labels did a better job than the AIR model of directing students to services they need. Consequently, it is not surprising that a significant proportion of respondents agreed with the last four items that indicate potential positive effects of the AIR process. Approximately 80% in each respondent group reported that the AIR process has resulted in selection committee discussions that focus on learning and behavioral needs rather than disability labels. Similarly, about 80% of teachers and principals, and 67% of psychologists reported that students with IEPs were increasingly grouped by learning needs instead of by disability categories. Over 90% of teachers and principals, and all the psychologists that responded agreed that it makes more sense for instructional purposes to discuss learning and behavioral needs instead of disability labels; one good reason for this belief is illustrated in the quote below. Additionally, 74.1%, 82.1%, and 88.9% of teachers, principals, and psychologists, respectively, agree that the AIR process has demonstrated that many students with disabilities do not need to be labeled to be served.

> I like the AIR process in that it gives us more flexibility and more services for the students who truly need it and for those who would not qualify for a label but needs extra help. (A principal)

Table 5. AIR's Perceived Impact on Special Education, by Role Group

	Teachers		Principals		Psychologists	
Item	n	%	n	%	n	%
In the AIR schools I serve, there has been a decrease in the percentage of students identified for special education services.	127	69.4	20	87.0	3	37.5
At the end of this year, students selected through the AIR process will most likely be in the same instructional placement that they would have been if we were still using labels.	139	70.2	22	88.0	10	100.0
In the AIR schools I serve, applying RTI processes has resulted in delays in providing IEP services to some students.	139	76.4	21	95.5	6	66.7
The system of disability labels did a better job than the AIR model of directing students to services they needed.	88	49.7	7	29.2	3	37.5
In the AIR schools I serve, the AIR process has resulted in selection committee discussions that focus on learning and behavioral needs rather than disability labels.	148	80.4	17	81.0	7	77.8
In the AIR schools I serve, we have increasingly grouped students with IEPs by learning needs instead of by disability categories.	152	79.6	17	81.0	6	66.7
It makes more sense for instructional purposes to discuss learning and behavioral needs instead of disability labels.	217	91.9	26	92.9	9	100.0
The AIR process has demonstrated that many students with disabilities do not need to be labeled to be served.	143	74.1	19	82.6	8	88.9

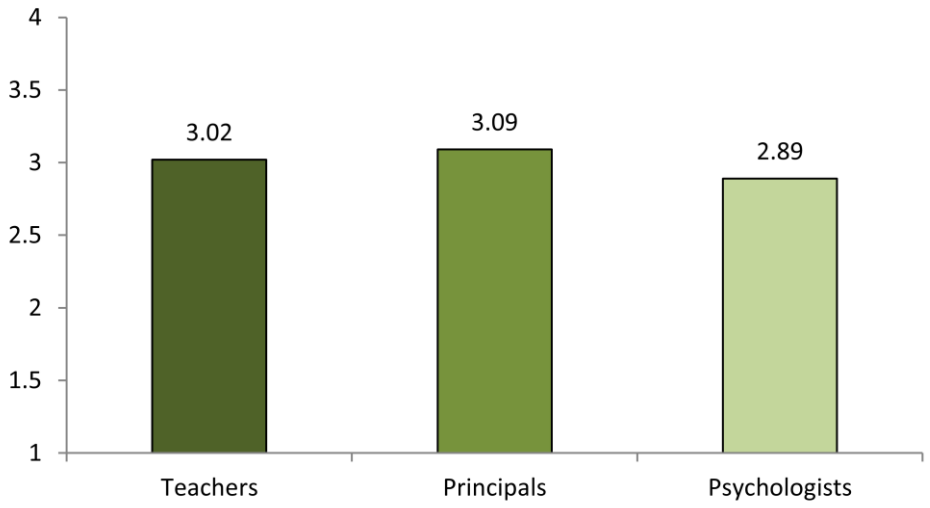
Goal 2: Transition teachers, administrators, and parents to a model of support that is based on students' instructional and behavioral needs and not on defined areas of disability

Impact on school personnel

Item responses

As indicated earlier, one of the main goals of the AIR program is to transition teachers, administrators, and parents to a model of support that is based on students' instructional and behavioral needs and not defined areas of disability. The items shown in Table 6 were used to assess how successful the AIR program has been in achieving this goal and to address EQ3: *Are there changes in school personnel's use of a model of support focused on students' instructional and behavioral needs rather than on defined areas of disability, since the inception of the AIR program?* Subscales composed of these items have Cronbach's alphas of slightly more than 0.80 for the three groups. Both teachers and principals solidly agree that the AIR process has had a positive impact on school personnel in terms of their nonuse of disability labels (Figure 3). Psychologists also agreed but less strongly.

Figure 3. School Personnel Impact Scale, Perceptions by Role Group



Responses by teachers, principals, and psychologists to the five items included in the scale indicate school personnel's acceptance for a model of support that is based on the student's instructional and behavioral needs and not a defined area of disability. At least 60% of teachers, principals, and psychologists reported less use of students' disability labels by teachers. Additionally, over 70% of teachers and principals reported less use of students' disability labels by specialists. However, only half of the group of specialists interviewed—psychologists—reported less use of students' disability labels by specialists. Over 70% of psychologists and principals, however, said disability labels have become less important to them

since the inception of the AIR program; by contrast, only 56.9% of teachers reported the same.

In addition, over 60% of all the professionals surveyed agree that they can teach or provide appropriate services to students without knowing their disability label; this view was endorsed most strongly by psychologists with 77% of them agreeing to this view. Close to 80% of the three groups also reported being able to refrain from using students' disability labels when talking with parents; instead, they reported being more likely to describe students' abilities and needs. Some open-ended responses to the question asking for additional comments illustrate the move away from the use of disability labels as illustrated next.

> The biggest advantage is in discussion with parents - what a relief to not have to tell them that we think their child is mentally impaired! (A teacher)

Although less related to this content area, it is important to point out that only about half of teachers (55%) and principals (56%) reported having received sufficient training to guide the AIR process or to differentiate, adapt, and modify classroom instruction for students with IEPs. In contrast, 80% of psychologists reported having received sufficient training to guide the AIR process. As illustrated in the quotes below there is a need for more training not only to make professionals more competent in, and enthusiastic about, implementing the AIR process but also to train school personnel on how to differentiate classroom instruction and management tools for students.

> Please know that I am not trying to sound negative with my responses. I like what the AIR program is about and believe in its purpose. I think that more training is needed from someone other than the person who completes the form to help educate people about the process and its fundamental purpose. (A psychologist)

> Training needs to be administered and teachers need to be given time to adequately use the information to better help students. (A teacher)

Table 6. AIR's Perceived Impact on School Personnel, by Role Group

	Teachers		Principals		Psychologists		Total
Item	n	%	n	%	n	%	respondents
Since beginning AIR, I have noticed fewer references to student disability labels by teachers than there were before.	153	69.5	17	65.4	6	60.0	176
Since beginning AIR, I have noticed fewer references to student disability labels by specialists (i.e., diagnostician, psychologist, etc...).	167	77.7	18	72.0	5	50.0	190
Since beginning AIR, student disability labels have become less important to me.	123	56.9	19	73.1	7	77.8	149
Since beginning AIR, I realize I can provide appropriate services or instruction to students without knowing their disability label.	138	62.7	17	65.4	7	77.8	162
When talking with parents, the AIR process has helped me move away from using disability labels and toward describing students' abilities and needs.	166	79.4	21	77.8	8	80.0	195

Further, although 78%, 87%, and 89% of teachers, principals, and psychologists, respectively, reported that they believe in the value and principles of the AIR process, only 65%, 64%, and 78%, respectively, reported that they are enthusiastic about the AIR process. The following quote is illustrative of respondents' high level of belief in the value and principles of the AIR process:

> I am a firm believer in AIR and am pleased with its effects on the teachers and the students. (A principal)

Overall, analyses of the survey responses suggest that there has been some success in transitioning school personnel towards a model of support that is based on students' instructional and behavioral needs; however, more support is needed for school personnel to confidently and enthusiastically implement the process.

Qualitative responses

School personnel's general view of the AIR process will also impact their ability to transition towards a model of support that is based on student's instructional and behavioral needs. The open-ended questions included in the survey provided data that helps in addressing EQ3, that is, whether *the AIR process has successfully transitioned school personnel to a model of support that is based on students' needs and not disabilities*. Teachers, principals, and psychologists were asked three open-ended questions. First, they were asked "Based on your experience what is the best part about the AIR process?" The themes arising from their responses to this question are presented in a color-coded scheme (Table 7, page 20) and described in the following section. In the subsequent section, the themes identified from their response to the second open-ended question "Based on your experience, what is the most serious drawback to the AIR process?" are presented (Table 8, page 24). Quotes from responses to the third question asking, "Please provide us with any additional comments you may have," are used to illustrate different issues throughout the report. It is important to mention that some respondents touched on more than one theme when responding to the questions.

Best things about the AIR process. Several themes emerged in response to what respondents thought was best about the AIR process. Two themes were common to all three groups and five themes were common to only two groups of respondents (Table 7). Five themes were only mentioned by one group.

The most commonly endorsed theme by members of the three groups was the focus on students' needs rather than labels. Twenty-one of the 129 teachers, 7 of 20 principals, and 6 of the 9 psychologists said what they like best about AIR is its focus on students' instructional and behavioral needs rather than on labels.

> Taking away labels helps return the focus to the child as an individual instead of a disability. Needs are actually being met. (A teacher)

> I can concentrate on the individual needs of students without the worry of a label. (A principal)

> There is a greater focus on the academic/behavioral needs of the student and less focus on whether the student fits a special ed label. (A psychologist)

The next most commonly endorsed and related theme by the three groups was the nonuse of labels. Twenty of the 129 teachers, 3 of the 20 principals, and 2 of the 9 psychologists who responded to this question indicated this theme. As illustrated below, however, this theme could have both a positive and a negative connotation.

> No labels- increases expectations. The teachers have no idea what label the child met criteria on. (A psychologist)
>
> I like the idea of doing away with labels. (A principal)
>
> I believe that identifying student needs, regardless of diagnosis or labels, is a benefit of the AIR process. (A teacher)

Table 7. Perceived Best Things about the AIR Process, by Role Group

Themes	Teachers	Principals	Psychologists
Focus on students' needs	Focus on needs rather than labels (21)	Focus on needs rather than labels (student centered conversations) (7)	Service based on need (strengths and weaknesses) (6)
Nonuse of labels	No labels (20)	No labels (3)	No labels (2)
Collaboration	More collaboration among staff (14)		Collaboration among parties involved (1)
	Student assistance team (SAT) meetings (2)	Going through the process before referral (1)	
	Collaboration among staff, parents and students (1)	Parents are more comfortable/receptive (2)	Parents are more receptive (1)
Objectivity	Informs/guides decisions; less subjective identification process (5)	More data driven (3)	
	Increased capacity to identify needs and provide services (1)		
Helpful to student	It is good to ALL students/provision of services to ALL students (9)	Helping all students (3)	
	Students are identified earlier (2)		
No change or likes nothing	Nothing (5)	Nothing (1)	
	Not enough experience, unsure, or "I don't know" (14)		
	No difference between AIR and what we had before (2)		
Increased expectation	Higher expectation for students (2)		Increasing expectations (1)

Table 7 continued next page

Table 7. Perceived Best Things about the AIR Process, by Role Group

Themes	Teachers	Principals	Psychologists
More involvement in general education	More time in general education translating into more opportunity to succeed (9)		
Individualized or small group instruction	Tiered, individual and small group instruction (14)		
Theoretical model	The idea behind AIR/theoretically (14)		
Everything about AIR	All of it (1)		
The form			The form (1)
Lack of understanding			Lack of understanding (1)

Note: Number of respondents mentioning each theme in parenthesis.

Members of the three groups also mentioned that one of the things they liked best about the AIR process is collaboration—between school staff, parents, and students, the collaboration at the Student Team—and the resulting receptiveness of parents. Seventeen of the 129 teachers, 3 of 20 principals, and 2 of the 9 psychologists mentioned this theme which is illustrated in the quotes below.

> Teamwork among educational staff, parents, and students has increased... (A teacher)

> During the referral process, parents are much more comfortable giving permission for testing when they find out that if selected, their child will not have a "label." (A principal)

Three themes were mentioned by only teachers and principals. Six teachers and three principals like the AIR process best because it is more data driven, results in more objective identification of students needing support, and therefore increases their capacity to identify students' needs and provide needed services.

> Amount of detailed information to be considered at Eligibility meetings gives a better picture of the child's abilities. (A teacher)

> In theory—the selection of needed services. Sometimes I am able to say that a child needs to be selected for more services based on the data/observations/classroom performance demonstrates the student needs support to be successful. (A principal)

Additionally, seven teachers and one principal reported that they saw no difference between AIR and the previous system they had or that they like nothing about the AIR process.

One theme, illustrated in the quotes below, was shared by only two teachers and a psychologist. They reported that what they liked best about the AIR process is that it results in higher expectation for students.

> Having high expectations for all students! (A teacher)
>
> No labels—increases expectations. The teachers have no idea what label the child met criteria on. (A psychologist)

Four themes—more time in general education will result in success for students with needs; having tiered, individual, and small group instruction; the idea or theory behind AIR; and everything about AIR—were mentioned by teachers only. Nine, 14, 5, and 1 teachers, respectively, mentioned the themes.

> Students are given more of a chance to make improvements and succeed in the general education environment. (A teacher)
>
> It allows the interventionists to apply the three tiered model to students before being recommended for testing. (A teacher)
>
> Students don't have to "be identified" to receive the help they need (theoretically). (A teacher)
>
> All of it.... (A teacher)

Finally, two themes—*the form* and *lack of understanding*—were mentioned by psychologists only. The following quote illustrates this theme.

> Personally, I believe in the AIR principals and I like how the form has evolved into its current form; however, the process is still seen as a means to place the student in special education. I continue to have a hard time with staff believing the AIR process means that you can place a student in special education without having to meet the WV Department of Education criteria. Just last week someone who has been through the process with me for three years made the comment that the committee can just place them in services no matter what the data conveys. (A psychologist)

It is important to mention that 14 teachers reported that they do not have any experience of the AIR process and thus, did not provide any comments.

Drawbacks to the AIR process. Respondents were also asked "Based on your experience, what is the most serious drawback to the AIR process?" Table 8 (page 24) presents the identified themes from the responses. Four themes were common to the responses of the three groups of respondents. Eight teachers, three principals, and one psychologist saw no difference between AIR and the process they used before or saw no drawback in the AIR process. Additionally, members of all three groups mentioned the amount of paperwork required for the AIR process. Psychologists noted that the amount of paperwork has increased with the inception of the AIR process. Three teachers, three principals, and one psychologist mentioned this theme.

> More paperwork. (A teacher)
>
> The complication of documentation/paperwork. (A principal)

> I haven't seen that the AIR process has been of great benefit, due to our existing process working so well in a collaborative manner and serving children based on their individual needs. This process has seemed to prolong meetings, increase paperwork and I have found that the majority of parents still want to know the specific "labeled" deficit area in which requires this specially designed instruction. (A psychologist)

Along the same line, respondents complained that the AIR process has resulted in the student assistance team (SAT) meetings taking too long, and otherwise negatively affecting SAT meetings. Principals also noted that the AIR process has resulted in additional work for teachers. One teacher, three principals, and two psychologists mentioned this theme. However, when some of the quotes are examined it is apparent that the respondents' comments were about the RTI process rather than the AIR process.

> What it has done to the SAT Process. I don't like what AIR has done to the SAT Process. Not every problem that is referred to the SAT Process falls into a reading or math problem and this is all that is addressed on the forms. The different forms are redundant and not "user friendly." (A teacher)

> The selection committee meetings are very lengthy. It's difficult, as an administrator, to find coverage for teachers to attend these meetings. The RTI Math component of AIR is a problem due to time constraints during the instructional day and lack of staff to carry-out the process effectively. (A principal)

> Form is repetitive and meetings take much much longer to complete for the same outcome. (A psychologist)

Lack of resources—training, time, personnel, etc.—is also another common theme identified as the most serious drawback of the AIR process by members of the three groups. The resulting lack of understanding was also mentioned by teachers and psychologists. The lack of understanding was at both the personnel and parent level. This theme was identified by 10 teachers, five principals, and five psychologists. An additional seven teachers mentioned lack of resources or help needed to provide one-on-one help to the students in their classroom and one teacher specifically mentioned that there was not enough time for collaboration.

> NO training, no knowledge of the process. (A teacher)

> Teachers and parents do not seem to understand what it is. Eligibility meetings take way too long - 3 hours. It is very difficult to have teachers out of classrooms for that long without subs provided. Our team members seem confused about the form. Team members argue about the form. Parents seem confused at meetings. (A principal)

> Lack of communication and specifically defined training from the top down; communication between developers of AIR, administration, and school personnel. Lack of all parties being on the same page and understanding that page exactly the same! (A psychologist)

Teachers and principals, but not psychologists, were concerned that too many sessions were required to qualify for services and, as a result, they felt that students were not getting or qualifying for the services they need. In some cases when students qualify, teachers and principals feel that the services are delayed. Fifty-one teachers and two principals

reported that too many sessions were required to qualify for services and as a result students' services were delayed. Similarly, 14 teachers and two principals reported that students were not getting or qualifying for the assistance they need.

> Students with specific obvious learning deficits cannot be serviced in a timely manner. Many students fall too far behind before their needs can be met, resulting in self-confidence issues and further academic delays. (A teacher)

> We are not providing services to many students who need them. Many students are not receiving the assistance they need. Many parents are unhappy that their children are not able to receive services. (A principal)

Another theme that was mentioned by both teachers and principals was that educators need to know their students' disability labels because they believe that would help them know how best to assist the students. This view was not commonly endorsed, though; only two teachers and one principal mentioned this theme.

Table 8. Perceived Drawbacks to the AIR Process, by Role Group

Themes	Teachers	Principals	Psychologists
No change or nothing	No drawbacks (6)	No drawbacks (3)	
	I don't see any difference (2)		No change (because it was not an issue before) (1)
Burden of paperwork	Amount of paperwork (2)	Amount of paperwork (3)	Amount of paperwork (1)
Burden on teachers, student assistance taskforce, and selection meetings	Negative impact on the SAT process (1)	Selection Committee meetings are too long (3)	Prolonged meetings (2)
		Additional work on all teachers (1)	
Lack of resources	Not enough/lack of training, and lack of understanding of the process (5)		Lack of training and/or understanding (3)
		Lack of resources (1)	Lack of resources (i.e., time, personnel, etc…) (2)
	Confusing to parents/educating parents (5)	Parents don't understand the process (4)	
	Teacher-student ratio/teachers don't have enough help to provide 1-on-1 help to every child in their classrooms (7)		
	Not enough time for collaboration (1)		

Table 8 continued on next page

Table 8. Perceived Drawbacks to the AIR Process, by Role Group

Themes	Teachers	Principals	Psychologists
Delayed or no services	Too many sessions; delayed services (51)		
	Students not getting the assistance they need or not qualifying (14)	Students aren't receiving services (2)	
		Delayed services (2)	
Educators need to know students' disabilities	It would be better to know students' disabilities so that we know how best to help them (2)	Educators need to know the disabilities of their students (1)	
Teachers' input not valued	Teachers' input has little value/discouraged from making referrals (5)		
	DIBELS has too much value which hinders provision of additional help (2)		
Negative general education environment	General education environment too frustrating for students with difficulties (5)		
	Negative impact on general education classroom/everyone (4)		
Disconnection with theory	Disconnect between theory and practice (3)		
Nothing good	Nothing good about it (1)		
No experience	Not sure/no experience (11)		
Change in language			Changing language (1)

Six additional themes were mentioned by teachers only. Seven teachers mentioned that teachers' inputs are not valued in the AIR process or that the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are given too much value, which hinders provision of additional help. Another nine teachers felt the AIR process forces students with difficulties to stay longer in the general education environment and that this is too frustrating for the students. Some of the nine also felt, by retaining students with needs in the general education environment for longer, the AIR process negatively impacts the general education classroom and students. In addition, three teachers felt there is a disconnect between the theory and practice of AIR. One teacher reported that there is nothing good about AIR. Most of the-

se comments provided on these six themes indicate a weak understanding of the differences between RTI and AIR among the respondents. The following quotes illustrate the themes.

> When it comes to placement teachers input has very little value in the decision. The fact that the data points have to be completely level and show no growth, even if the child is working below grade level. Tier 2 & Tier 3 needs to be more flexible according to student needs. The student may need Tier 3 right away. Our county is requiring 100 sessions before they can go to Tier 3. The needs of the child are not considered. Also, sometimes this process is taking up to 2 years. The AIR process hinders us from talking with parents and with placements. (A teacher)

> I feel that some students are not getting the services they need and are being pushed into the general education class more than they should be, to the point that it is uncomfortable for the special education student and a disruption to the general education class. (A teacher)

> Theory doesn't always translate into practice. (A teacher)

It is surprising that 11 teachers reported they have no experience of AIR. Some mentioned that their school was not participating in AIR whereas others mentioned that they are new to the school. This issue seemed to occur only with teachers, suggesting that some principals may have invited teachers who were not involved or aware of the process to partake in the survey.

Apart from teachers, psychologists were the only ones that mentioned a theme that was not shared by the other two groups. Only one psychologist reported that the most serious drawback to the AIR process was getting school staff to change the language they use when discussing students' needs—a view that by its rarity suggests some success in transitioning school personnel towards a needs-based model of support.

> Getting staff to change their language when discussing students. (A psychologist)

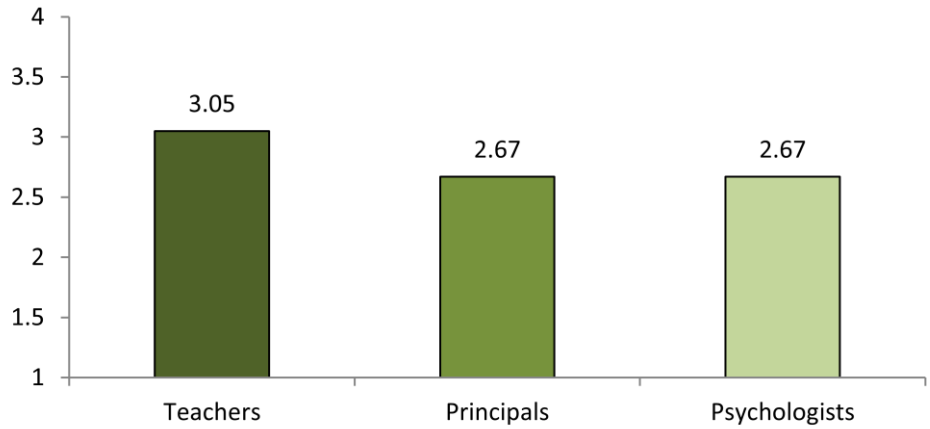
Impact on parents

Along with transitioning school personnel's focus towards students' needs and not their disability, one of the main goals of the AIR program is to transition parents to a model of support that is based on student's instructional and behavioral needs and not a defined area of disability. Consequently, it is critical to examine if and how parents' interactions with the school system have changed since the inception of AIR to address EQ4: *Are there changes in affected parents' interactions with schools and relevant committees since the inception of the AIR program?* Although no data were collected directly from parents in this round of data collection, teachers, principals, and psychologists were asked about their perception of parents' interactions with the AIR program.

Six items were included to measure changes in parents' interactions with the school system since AIR's inception. The six items, presented in Table 9 (page 28), have high internal consistency; the parent impact scale composed of these items had Cronbach's alphas of between 0.75 and 0.90 for each respondent group. Figure 4 shows the mean each respondent group had on the scale. For teachers, the mean indicated agreement that parents were

more involved, whereas the means for principals and psychologists indicated weaker agreement that this is the case. The following paragraphs present more in-depth discussion of respondents' distribution on each item included in the scale.

Figure 4. Parent Impact Scale, Perceptions by Role Group



On nearly all the items, less than half of the respondents felt parents' interaction had increased since the inception of AIR. About a quarter of teachers and principals reported that parents' participation in eligibility/selection committee meetings increased; 44% of psychologists felt the same way. Less than half of the three groups of respondents also reported increases in parents' expectations for their children with IEPs compared to expectations they held for their children before AIR, with the lowest report coming from principals.

However, at least half of the respondents indicated that parents were more receptive to special education services for their children now than when disability labels were used. Additionally, close to half of teachers and principals and more than half of psychologists reported improvement in parental understanding of their children's needs and learning characteristics. A similar pattern held for assessment of parents' enthusiasm. Close to half of teachers and principals, and more than half of psychologists reported that parents seem to be more enthusiastic about the AIR process. Taken together, parents appeared to the respondents to be receptive to special education services and more understanding of their children's needs compared to when disability labels were used, and they also appeared to be more enthusiastic about the AIR process. Program implementers need to focus on translating parents' enthusiasm and receptivity into more involvement with their children's education.

In conclusion, it is apparent that some progress has been made in transitioning school personnel and parents to a needs- rather than disability-based model of support for students. However, considerable progress still needs to be made in reducing the paperwork and burden on personnel, providing needed professional development and resources, and

generating a feeling of engagement among those most responsible for implementing the program and among parents.

Table 9. AIR's Perceived Impact on Parents, by Role Group

	Teachers		Principals		Psychologists	
Provider	n	%	n	%	n	%
In the AIR schools I serve, parents' participation in eligibility/selection committee meetings has increased.	48	27.4	2	26.1	4	44.4
Since our school began AIR, there has been an increase in the participation of parents of students with IEPs in their children's learning processes.	49	29.7	2	9.5	4	57.1
In the AIR schools I serve, parents appear to hold higher expectations for their children with IEPs than they did before.	51	30.4	2	9.5	4	44.4
In the AIR schools I serve, parents are more receptive to special education services for their children than when disability labels were used.	88	50.3	2	61.9	4	50.0
In the AIR schools I serve, parental understanding of their children's needs and learning characteristics seems to have improved.	81	46.6	10	47.6	6	66.7
In the AIR schools I serve, parents seem to be enthusiastic about the AIR process.	64	46.4	9	45.0	6	66.7

Goal 3: Diminish the burden that labels appear to place on students emotionally and the associated low expectations

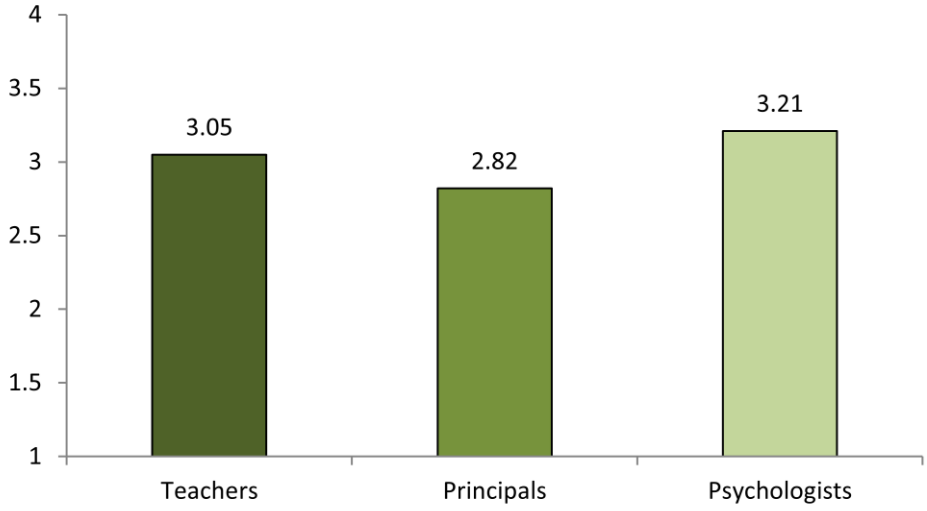
Impact on students

Results from teachers', principals' and psychologists' surveys

In this section, responses from school personnel's surveys were used to address EQ5: *Are there changes in participating students' interactions, behavior, and academic outcomes since the inception of the AIR program?* According to teachers, principals, and psychologists, the AIR program has also had some impact on special and general education students. Eight items were selected to assess the implications of the AIR program for students with IEPs and students in general education. The scale had Cronbach's alphas of at least 0.90 for each of the three respondent groups. As presented in Figure 5, psychologists were most in agreement that students have been positively impacted by the AIR process; their mean of 3.21 indicated they agreed that the AIR process has had positive impact on special education students. Teachers also indicated agreement that the AIR process has had positive impact on special education students. Principals indicated weaker agreement that

the AIR process has had positive impact on special education students; they exhibited a mean of 2.82 on the scale.

Figure 5. Student Impact Scale, Perceptions by Role Group



According to respondents, the AIR program has not made students any more accepting of special education; approximately 54%, 42%, and 43% of teachers, principals, and psychologists, respectively, agreed with this statement (Table 10). Less than a third of teachers, compared with more than half of principals and psychologists thought students with IEP services were more motivated; and less than half of teachers and principals thought they were more self-confident and successful academically. Only about a quarter of principals and psychologists agree with statements indicating positive impacts on behavior. Further, only slightly more than half of teachers and psychologists, and slightly more than 40% of principals reported they have noticed more positive interactions between students with IEP and general education students and less social stigma for students with IEP in AIR schools compared to non-AIR schools. Respondents' belief about the impact of the AIR process on stigma is also illustrated in the quote below.

> I do not really think it makes a significant improvement in the Spec. Ed. process. A child knows when he has difficulty with academics - that is the stigma. (A principal)

Over 60% of teachers and psychologists, and close to 60% of principals, reported that their schools have adopted programs and practices that promote tolerance of students with IEPs since beginning the AIR process. Finally, only 44%, 42%, and 33% of teachers, principals, and psychologists, respectively, reported that they have noticed less teasing and harassment of students with IEPs by their general education peers after the implementation of AIR compared to before.

In summary, survey responses from teachers, principals, and psychologists suggest that the implementation of the AIR program has had some positive impacts on students with

IEPs. The results from teachers', principals', and psychologists' surveys are somewhat supportive of one of its expected direct outcomes, which is to improve student self-regard and academic and behavioral success. The next section presents a more direct assessment of whether there have been significant changes in students' test scores since initiating AIR.

Table 10. Perception of Changes in Students since AIR Started

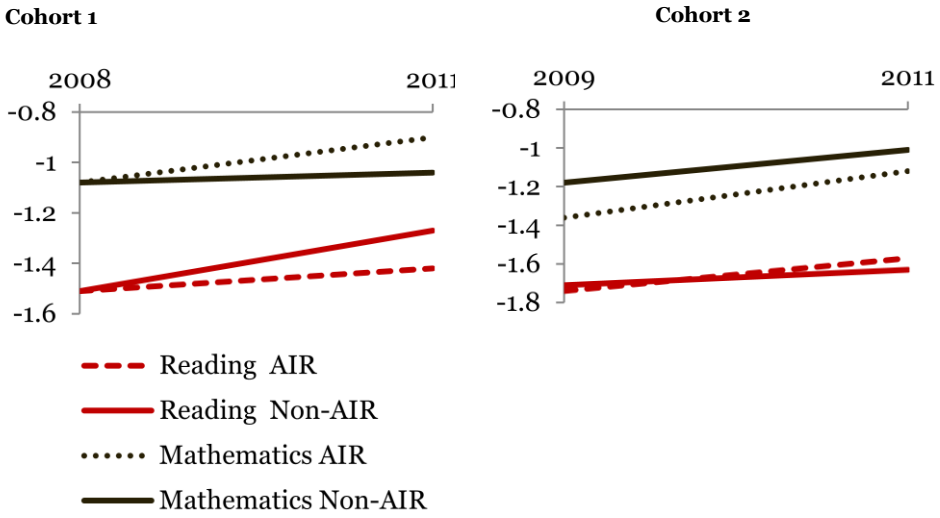
	Teachers		Principals		Psychologists	
Item	n	%	n	%	n	%
In the AIR schools I serve, students seem more accepting of special education services than when disability labels were used.	92	54.4	8	42.1	3	42.9
In the AIR schools I serve, students with IEPs appear to be more motivated than they were when we used disability labels.	56	31.3	7	53.8	3	60.0
In the AIR schools I serve, students with IEPs seem more self-confident than they were before.	81	47.1	8	42.1	3	50.0
In the AIR schools I serve, students with IEPs are more successful academically than when we used labels.	86	47.8	9	45.0	2	40.0
In the AIR schools I serve, students with IEPs are more successful behaviorally than when we used labels.	80	43.7	5	25.0	1	25.0
In the AIR schools I serve, I have noticed more positive social interactions between students with IEPs and general education students than there were before.	96	54.2	8	42.1	4	66.7
In the AIR schools I serve, there is less social stigma for students with IEPs compared with non-AIR schools.	103	57.5	11	44.0	4	50.0
Since our school began AIR, our school has adopted programs and practices that promote tolerance of students with IEPs.	116	67.8	13	59.1	5	62.5
In the AIR schools I serve, I have noticed less teasing and harassment of students with IEPs by their general education peers than before.	66	43.7	8	42.1	2	33.3

Results from WESTEST 2 data

This section presents analyses that address EQ6: *Do students with disabilities attending AIR schools outperform students with similar disabilities in non-AIR schools in mathematics and reading/language arts?* Prior to 2009, the WESTEST was used to assess

performance of students in third to 11th grades. However, the assessment was changed to WESTEST 2 in 2009. Thus, to be able to compare across years, scale scores were standardized within each grade band and year, making comparisons across tests, grades, and years possible. Students' WESTEST/WESTEST 2 mathematics and reading assessment Z-scores were compared for AIR and non-AIR students at baseline and also in 2011 (Figure 6). None of the means were significantly different between AIR and non-AIR students at baseline, indicating that the matching process was relatively successful in controlling for differences in student achievement at baseline. However, the mean of the 2011 WESTEST 2 reading Z-scores of non-AIR students was significantly higher than that of AIR students for cohort 1.

Figure 6. Mathematics and Reading WESTEST/WESTEST 2 Scores for Cohorts 1 and 2 and Their Controls



It is important to also test the difference in gains in mathematics and reading scores between AIR and non-AIR students. The gains in the z-scores of AIR students and non-AIR students between baseline and 2011 were compared using ANOVA. Apart from reading scores for cohort 1, AIR students always had a greater mean gain than non-AIR students. However, the gains in WESTEST/WESTEST 2 scores between 2008 and 2011 were not significantly different for AIR students and non-AIR students. A similar comparison for the 2009 group did not show any significant difference in gains (Table 11).

Table 11. ANOVA of Difference in Gains in WESTEST/WESTEST 2 Scores

		AIR		Non-AIR				
Subjects	Cohort	*M*	*SD*	*M*	*SD*	*df,n*	*F*(df, n)	*p*
Mathematics	Cohort 1 (started in 2008)	0.18	1.03	0.03	1.05	1, 215	1.94	.16
	Cohort 2 (started in 2009)	0.20	1.27	0.15	1.09	1, 215	0.11	.74
Reading/Language Arts	Cohort1 (started in 2008)	0.09	1.45	0.23	1.20	1, 369	1.06	.31
	Cohort2 (started in 2009)	0.15	1.14	0.07	1.33	1, 369	0.22	.64

Discussion

The AIR process has been operational in West Virginia for approximately 3 years. In that time, it has made broad strides towards achieving some of its goals. However, more directed effort is needed to fully accomplish some of its goals.

Regarding its first goal of establishing and reinforcing the commonality of instructional and behavioral needs for students, survey data indicate the AIR program has made limited progress. Although special education students are seen as spending more time in the general education classroom, school personnel indicate that they need more support for this change not to be disruptive. Support in the form of training on differentiated instructional tools and classroom management tools were identified as needs. However, the AIR process seems to have increased collaboration between special education and general education teachers. The process is also contributed to higher implementation and better understanding of the 3-tier process.

The AIR program has made some progress in transitioning teachers, administrators, and parents towards a model of support that is based on the student's instructional and behavioral needs and not a defined area of disability. However, considerable progress still needs to be made in reducing the paperwork and burden of both AIR and the 3-tier model on personnel, providing needed resources, and generating a feeling of engagement among those most responsible for implementing the program and among parents.

Additionally, the survey results suggest that the AIR process has made progress with students in diminishing the burden that a label appears to place on them emotionally and the associated low expectations according to survey respondents. Although the majority of the respondents did not think the AIR process has made students more self-confident or successful academically or behaviorally, at least half of two of the respondent groups reported that the process has engendered reduced social stigma for special education students and more positive interactions between general and special education students.

Analyses in this study reveal some higher, though statistically insignificant, gains in test scores for AIR students in mathematics (both cohorts) and reading (Cohort 2 only). It is likely that this finding may have been affected by attrition as there were 79 fewer students in 2011 for Cohort 1 and 33 fewer students in 2011, reducing the power of the tests. Including these students may have resulted in slightly different outcome. It is possible that these students moved out of town or they may have qualified for special education in a non-AIR category and therefore be taking an alternative test. However, it is unclear whether and how their absence affected the gain scores for the two groups. Regardless, it appears that AIR students have made only limited gains in test scores compared to non-AIR students.

It is not surprising that the AIR process has had limited success in achieving some of its goals. As mentioned in the Introduction to this report, although a negative effect of labeling generally has been documented regarding teacher expectations, some recent studies have shown that not all labels accrue negative effects on students (Levin, Arluke, & Smith, 1982; Hunt, 2006). For example, Hunt (2006) found negative expectations accrued from the dyslexia label but not from the attention deficit hyperactive disorder (ADHD) label. Thus, it is

possible that the exceptionality codes included in AIR were associated with no or the least negative effect on expectations. In some cases, the effect of having a particular label also appears less deleterious than having a general special education label (Riddick, 2000; Taylor, Hume, & Welsh, 2000).

Further, it is important to acknowledge that the effects of labeling on students' sense of self are not always negative. Specific special education labels help certain students by providing an explanation for their behavior. Some respondents in Riddick's (2000) study found labels preferable to judgments that significant people in their lives make about them. One school-age child said in an interview, "I'd rather know I've got dyslexia than think I was an idiot" (p. 658). Labels also may help parents by validating that their child has a problem, removing possible attribution of bad parenting skills that some people might have made about them, and enabling access to services.

Finally, the exceptionality codes chosen to be eliminated for use at the school level in the AIR process were likely to be linked to the lowest level of instructional and behavioral intervention needs, limiting the probability of accruing positive impact. Codes requiring more intense interventions had to be maintained to access certain services as part of IDEA. More positive impacts may have been recorded from including students on the higher end of the continuum of instructional and behavioral needs, who were excluded from the AIR process due to IDEA mandates, as these students may accrue more negative effects from their disability labels.

Limitations

There were some limitations in this project. A critical limitation was that the researchers did not have direct contact with some of the respondents. For example, each principal was responsible for inviting his or her staff to complete the teacher's survey. Hence, there may have been some inconsistency in the types of teachers who completed the survey. In some schools, only special education teachers were invited whereas in others some general education teachers and reading specialists were invited. Four substitute teachers completed the surveys but it is unknown how relevant they were to the process, particularly given that three of them had worked at the school for less than a year. At least 14 teachers included in the survey indicated that they did not have any or sufficient experience with the AIR process or did not know that their schools were participating in the process. Further, in some schools both the principal and the assistant principal responded whereas in others only the principal responded. All these variations can introduce bias into the results obtained from the survey.

Another critical limitation was in the length of time that the respondents had worked. Respondents who began working in the school after the AIR process was initiated were unable to accurately respond to questions asking about how much things have changed since initiating the process. Many indicated this issue in their open-ended responses.

In addition, the 5-point Likert response format for many of the questions did not allow all possible response choices. This was illustrated in the open-ended responses provided that invited additional comments. For example, the *Not Applicable* response choice poten-

tially had many meanings. For some, it meant there has been no change because the schools were previously using a similar approach or because there was no change in practice; for others it meant respondents did not have a response, the question was not applicable to them, they were at a different school so their responses are not applicable to their present schools, and so forth. Consequently, this response option was not useful. The lack of exhaustive response choices may also have affected the other four response options. As indicated by some of the open-ended responses, some respondents may have chosen other response choices because a *no change* option was not offered as a response choice. The problem is important as 14 of 83, 6 of 17, and 2 of 4 open-ended responses provided by teachers, principals, and psychologists, respectively, captured concerns related to response choices.

Better clarification of the difference between RTI and AIR and stronger emphasis in instructions to respondents that the survey is about the AIR process only, would also have been helpful. Several of the open-ended responses provided suggested that respondents were sometimes evaluating RTI rather than AIR. Most respondents found it difficult to separate the two programs even though the survey questions referred specifically to AIR.

Further, another limitation is that only post-test survey data were available for analysis. As such, the study could not really assess change in respondents' attitudes over time. This limitation would have been overcome by the collection of baseline survey data from respondents, a process included in the initial evaluation plan but jeopardized by the failure of the original evaluator to follow through on the proposed initial evaluation.

The accuracy of the findings regarding the gains in scores between groups of AIR and non-AIR students depends on several factors. First, any misspecification in the propensity score could have resulted in biased findings. This concern may be unfounded since the means of the Z-scores for both mathematics and reading were not significantly different between the two groups. Hence, it appears that the propensity score model performed well in selecting students that are similar to AIR students with regard to the previously listed covariates. However, it is unknown how the attrition between the baseline year of AIR and 2011 affected the results obtained. Any error in data entry would also have important implications for the result.

Finally, another critical limitation is that the analysis of assessment data included only students tested on WESTEST 2. There were probably many students in the AIR schools who were in prekindergarten through Grade 2, since many were elementary schools. For these students, there would have been no widely available and systematically collected assessment data, with the possible exception of DIBELS. So, while the study is limited in the claims it can make about the program's impact on test score gains because it could not include these students, it was not possible to improve its scope because there are no other assessments available to draw from that would have had enough students to provide the needed statistical power required for the analysis.

Recommendations

The following recommendations are based on the results obtained from the quantitative and qualitative analyses conducted in the present study.

- *Provide more resources for school personnel.* In order to achieve its first goal—that is, to establish and reinforce the commonality of instructional and behavioral needs for students—more resources need to be provided to teachers on how to provide differentiated instruction and manage the new composition of students that the AIR process promotes. Trainings, increased support for personnel, more time to encourage collaboration, more support personnel, and other resources are needed if the program is to be successful in achieving its goals.
- *Provide more support to school personnel.* To transition teachers, administrators, and parents to a model of support that is based on students' instructional and behavioral needs and not a defined area of disability—the second goal of the AIR program—more support needs to be provided to capitalize upon the reported gains they have made in the area of providing needs-based instructional practices.
- *Reduce negative perceptions of the program held by school personnel.* To make the process more attractive to school personnel, identification and implementation of steps that will make the process seem less burdensome are needed. It is unclear whether it is the AIR or RTI process that contributes to the perception that the process creates additional work with no additional payoff—sometimes delaying the delivery of services to students—but it is certainly critical to reduce this negative perception.
- *Encourage parents' engagement with the AIR model of support based on needs*. For parents—whom survey respondents characterize as already receptive to, and enthusiastic about, the AIR process—efforts need to be directed at engaging them in the new model of support. To transition parents to a model of support that is based on students' instructional and behavioral needs and not a defined area of disability—part of the second goal of this study—higher engagement by parents in the new process is necessary.
- *Have better documentation and aim to increase the fidelity of the AIR program.* Fidelity in implementation which is critical for program success appeared to be low in the AIR process because there was no documentation of how trainings were conducted, and survey data indicated a lack of training. Further, there was a high staff turnover among staff implementing the program, hence lack of documentation suggests variability in how the program was implemented by the different program staff. To enhance the possibility of success, higher fidelity to the program model needs to be one of the goals of future efforts.
- *Include general education students as part of the AIR program.* Considerable additional effort needs to be directed at diminishing the burden that a label can place on a student emotionally, especially implementation of programs that sensitize general education students to the needs of students with exceptionalities. Although about

60% of survey respondents reported that their schools had adopted programs and practices that promote tolerance of students with IEPs, a minority of respondents (among psychologists, only a third) reported seeing less teasing and harassment of students with IEPs by their general education peers as a result of the AIR process. If changes are made only at the teacher, administrator, and parent levels but not at the student level, students with exceptionalities will continue to experience negative interactions with their peers. Children are sensitive to peer appraisal and teasing and this is currently a missing component in this program.

- *Focus specifically on school culture in the AIR program.* Although it is a step in the right direction, simply removing a label is not a panacea for reducing the emotional burden and low expectations that students with special instructional and behavioral needs experience. As mentioned earlier, according to Riddick (2000) labels, on their own, do not necessarily lead to stigmatization; instead the burden of a disability tends to be a direct effect of people's reactions to the disabled individual. Studies by Higgins, Raskind, Goldberg, & Herman (2002) and Riddick (2000) both identified the need to address school culture in regard to stigma and maltreatment of students with more instructional and behavioral needs by their more able peers. Indeed, some studies have found differences in peer relationships and expectations based on disability behavior (Sutherland, Algozzine, Ysseldyke, & Freeman, 2001) and classroom placements of their peers rather than the labels assigned to them (Bak, Cooper, Dobroth, & Siperstein, 1987). The RTI process in West Virginia already tries to limit differences in classroom placements. Specifically, Higgins et al (2002) recommend "developing mentoring programs and the like, as well as strengthening disability awareness curricula and transition services to include consideration of the notion of acceptance of a disability and of persons with disabilities, as well as the label process and its consequences" (p. 16).
- *Thoroughly review the literature at the program planning stage.* Finally, for AIR and other similar interventions to be successful, it is essential to conduct a thorough literature review at the onset to identify factors that are critical for success. Research findings on labels that accrue negative impact and those that do not would have provided needed guidance in designing the AIR process. A consideration might have been given to whether the five exceptionality codes that were included in the AIR process (due to IDEA mandates) were ones that have been found to be associated with negative effects on students and, therefore, those that would accrue positive effects when not used.

Although this study has not fully achieved its first three goals, it appears it is well on its way to doing so if the findings from this study can be incorporated. Further, it is hoped that it has achieved its fourth goal, which is to contribute to the national dialogue associated with research related to early intervention, response to intervention, and appropriate instruction and support for students who demonstrate the need for the protections of IDEA. Results from the present study are critical for engaging policy makers in how to make the special education experience positive for all involved.

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Appendix A. Review of the Research Literature

The Effects of Disability Labels on Students with Exceptionalities

Labels and teacher expectations

Beginning in the 1970s, a series of studies provided evidence that knowing a child's special education label affects teacher expectations for that child. For example, in one study, Foster, Schmidt, and Sabatino (1976) asked two groups of 22 elementary grade teachers to fill out referral forms after viewing a videotape of a nondisabled child engaged in age-appropriate free play and academic activities. One group was told before viewing the videotape that the child was learning disabled and the other group was told the child was normal. "The experimental group rated the child more negatively (p = .001) than the control group," which led the researchers to the conclusion that "the label 'learning disabled' generates negative expectancies in teachers which affect their objective observations of behavior and may be detrimental to the child's academic progress. It is suggested that a system of remediation be adopted that is not based on categories of disability but rather according to the needs of each child" (p. 58).

In a similar but more complex scenario, Foster and Salvia (1977) told 88 elementary school teachers they were participating in a reliability and validity study for a new teacher referral form. This time the teachers were divided into four groups before viewing a videotape of a nondisabled child engaged in age-appropriate free play and academic activities. One group was told the child was normal and they were instructed to be objective in their assessment. Another group was told the child was normal, but no instruction was given about objectivity. A third group was told the child was learning disabled, and the instruction was given to be objective. The fourth group was told the child was learning disabled but no instruction was given to be objective. Of the 32 items on the response form, only 20 were ratable from the information in the videotape. The results showed that "when teachers are asked to rate a labeled child, they are willing to rate in the absence of observable behaviors. It also appears that in the absence of demands to be objective, requests to rate a child produce a high degree of demand to rate behaviors that are not present" (p. 533). They also found that even with the demand to be objective, "teachers perceived more deviance when the child was labeled learning disabled than when he was labeled normal" and without the demand to be objective, the teachers perceived still more deviance when the child was labeled. The demand for objectivity mitigated the deviance perceived, but did not eliminate it.

Whereas Foster and colleagues asked teachers to view a videotape of a normal child, another study had teachers read descriptions of children who had been referred to special education for services. Gillung and Rucker (1977) used the Rucker-Gable Educational Programming Scale (RGEPS) to measure the effects of unlabeled behavioral descriptions on the expectations of teachers. The RGEPS contains brief descriptions of children who had actually been referred to special education. The items describe the behaviors of children who are mentally retarded, emotionally disturbed, or learning disabled but do not include labels. The researchers also used a modified RGEPS that included the labels and administered the instruments to two groups of teachers (one with the RGEPS and one with the modified RGEPS) in a sample of 176 regular ed-

ucation teachers and 82 special education teachers drawn from one urban and six suburban school districts. These researchers found that "Teachers apparently perceived a child described with a label as having more severe academic or behavioral problems and requiring more intensive special services than the same child described without a label" (p. 465). They warn that "educators need to be keenly aware of the negative effects of labels and exercise great caution in their use. . . . In describing such children to teachers, emphasis must be on behavioral descriptions" (p. 465).

In a more recent study of 247 general and special education teachers, Bianco (2005) investigated whether having a disability label in and of itself influenced teachers' decisions about referral to gifted programs. She asked three groups of teachers to read the same description of a student with gifted characteristics (drawn from real life); however one group read the description with the additional information that the student had a learning disability, another group read that the student had an emotional/behavioral disability, and the third group read the description with no disability included. Teachers then were asked to fill out a survey consisting of six questions, one of which asked about teachers' willingness to refer the student for gifted education (the other five questions were distracters that asked about referring the student to afterschool sports or science programs, or for math tutoring, counseling services, or social skills training). Lastly, after the teachers turned in their surveys, she asked them to write about why they responded the way they did to the question about gifted program referral. The results showed significant differences in teachers' willingness to refer students to gifted programs, depending on the label (or lack of one) appended to the description. Specifically, teachers were more likely to "strongly agree" or "agree" to refer the nonlabeled student (91%) for gifted programs than an identically described student with an emotional/behavioral disability (70%) or learning disability (63%). In response to the question about why, teachers who were randomly assigned to the learning disability and emotional/behavioral disability groups who disagreed or strongly disagreed tended to cite one of two issues. "The most frequently cited reason for disagreeing with referral given by teachers in the [learning disability] or [emotional/behavioral disability] group was a mismatch between students' characteristics and expectations in a gifted program (n = 18)" (p. 291). The other most frequently cited reason was lack of IQ data (n = 13). Some teachers in the [learning disability] group expressed the need to protect students from the pressures of a gifted program.

Student behavior as a basis for teacher expectations

The studies described so far measured the effect of several labels—mentally retarded, emotional/behavioral disability (or its earlier designation, emotionally disturbed), and learning disabled. In a more nuanced study by Levin, Arluke, and Smith (1982), 75 high school teachers were asked to evaluate a ninth grade student as described in a school psychologist's report. To vary the diagnostic labeling, a quarter of the teachers were told that the student was dyslexic, a quarter that he was emotionally disturbed, a quarter that he was mentally retarded, and a quarter that he had no disorder. In addition to the labeling information, half of the teachers were given a writing sample that was at grade level, and half were given a sample at below grade level. To add another dimension, teachers were asked questions not only about their optimism regarding the student's academic success, but also about their willingness to offer services to help the student succeed (e.g., create special lessons, stay after school), as a measure of their expecta-

tions for their own behavior. They found that only the emotionally disturbed label was significantly more negative regarding optimism for student success compared with the no label condition. In contrast with the findings about the labels, the student writing samples had a much greater impact on teachers' expectations for the student's success, with the below-grade-level sample adversely affecting expectations. Lastly, the study failed to uncover any significant main effects of labeling or student behavior (in the form of the writing sample) on teachers' estimation of their willingness to provide extra help. The researchers thus concluded that (a) not all labels have the same impact on teacher expectations; (b) student behavior may have a greater impact on teachers' expectations than do many labels; and (c) teachers' expectations can be adversely affected, while their classroom behavior may not be.

Student behavior as a basis for peer expectations and relationships

In addition to concerns about the impact of labels on teacher expectations, educators have expressed concern about the impact of labels on the schoolmates of students with disabilities. However, research suggests that students are more influenced by the behavior of their fellow students than the labels that have been assigned to them.

For example, in a small study of fourth graders, Sutherland, Algozzine, Ysseldyke, and Freeman (2001) investigated whether learning disabled children were socially rejected because of what they are called (labeled) or because of what they do. Children in four group conditions all viewed a videotape of a fourth-grade boy in two segments—one while he was doing seatwork in class and another while he was playing. The child in the video was exhibiting age-appropriate behavior in both segments. Some of the children were told he was learning disabled, some were told he was normal. A third group was told something positive about the child—that he often told funny stories and made people laugh; a fourth group was given a neutral portrayal of him sometimes finishing all his work and following instructions from teachers, and other times not. No effects were observed relative to the assignment of a special education label; and the children who were told something positive about the child in the videotape before seeing his non-task (playing) behavior tape segment held a higher opinion of him than those who were told something neutral. The researchers suggest that children's judgment of their peers at this age are not affected by special education labels, but that emphasizing positive qualities of a classmate to his or her peers may prove beneficial.

In another study, Bak, Cooper, Dobroth, and Siperstein (1987) located a suburban school in Massachusetts where labels were not used and that had regular classrooms with mainstreamed children. Seventy-seven children from five classrooms, Grades 4–6, participated in the study (none had a disability). Each of the classrooms had children who attended either a resource room for 25% of the day or a special classroom for up to 80% of the day. Children assigned to the resource room had IQ ranges from 85 to 100; those in the special classroom had IQ ranges from 50 to 70. The latter group were part of the regular class for homeroom, unified arts, library, gym, lunch, and occasional science and social studies projects. Children in the study were randomly assigned to two conditions defined by two fictitious groups of children, one group assigned to the *resource room* and the other assigned to the *special classroom*. The children in the resource room condition were presented with a vignette about children who were in their same grade who left class each day to get special help in the resource room. The children in the special classroom condition read a vignette about children in their same grade level who

started their day in homeroom with everyone else, but who then spent most of their day in a classroom for children with special needs. They were administered a 22-item expectancy questionnaire that described different academic and nonacademic activities, and asked participants to circle "yes" or "no" depending on whether or not they thought the children in the vignette they read could perform each activity. According to Bak and colleagues, "The results of this study clearly show that children are sensitive to the differences between peers who attend different educational placements from their regular classrooms. Children responded to the de facto labels of the resource room and special classroom—they saw resource room targets as significantly more capable than special class targets" (p. 154). Further, the researchers assert that "the absence of formal labels did not prevent children from forming negative (although realistically pessimistic) expectations based on their experiences with special class children's academic limitations" (p. 154). Bak and colleagues recommended that teachers be aware of the fact that children are sensitive to differences between peers in different placements.

In fact, children begin to discern differences at an early age. Studies have shown that typical children begin to classify others as disabled and nondisabled at around the age of 5, although their understanding of the disability is mainly based on physical and action signs that they observe, for example that someone cannot walk (Lewis, 1993, 1995 in Cunningham and Glenn, 2004). The shift from physical to social and psychological conceptions emerges after that, at around 8 years, when children can identify others with emotional disturbance as a group. Once children begin to make social comparisons and form social categories they also begin to attach value judgments based on their experience and the attitudes of others (Maas, Maracek, & Travers, 1978 in Cunningham and Glenn, 2004).

Stigma and disability

This leads us to a discussion of the experiences of students with disabilities and their parents, and their views of their status—and their labels—in the school community and elsewhere.

In an early study, Jones (1972) investigated 139 mildly mentally retarded students' perceptions of being placed in special education classes. Students in the study reported feeling shame about being in special classes and not wanting other students to see them there; being made fun of; lying about what classes they are taking; having difficulties in keeping a girlfriend; and having concerns about negative impacts on postschool job placement.

In another study, Higgins, Raskind, Goldberg, and Herman (2002), drew upon data collected in a 20-year longitudinal study of 41 individuals with learning disabilities, who had attended the Frostig School in Pasadena, California, when they were teens; at the time Higgins and colleagues wrote their article, the students were in their mid-thirties. The Frostig Center operates a day school for students with disabilities, including dyslexia, nonverbal learning disabilities, high functioning autism, and attention deficit hyperactivity disorder; the Center also conducts research on these learning disorders and develops ways to improve instruction. The researchers reported,

> In many regards, our transcripts point out how the difficulties faced by persons with [learning disabilities] mirror those of persons with other types of disabilities, especially in terms of dealing with stigma directed at them by the larger society. For ex-

> ample, Higgins (1980) summarized the line of research on stigmatization in sociology as it applies to the deaf, mentioning four processes of stigmatization: discrediting, master status, spread, and scrutinization. He describes *discrediting* … as focusing on a particular characteristic that is scorned and ridiculed. With the deaf it is often signing, while persons with LD get discredited on the basis of oral reading, spelling, or other academic deficits. (p. 14).

When drawing implications from their research, the authors note that "Our participants have shared painful experiences of being teased, hounded, bullied, and ridiculed. In almost every case, the stigmatization and abuse received by this group far exceeds the severity of their difficulties…. Perhaps it is time to move beyond the special education community and appeal to general educators and regular classroom teachers to discourage such blatant injustice" (Higgins, Raskind, Goldberg, and Herman, 2002, p. 16).

Mitigating effects of labels—the case of dyslexia

Some disabilities, such as dyslexia and high functioning autism, are not immediately evident, so the first function of the label is to prove the legitimacy of the impairment (Reid, 1996; Riddick, 2000) and, in the case of dyslexia, to challenge assumptions about the correlation between literacy skills and overall intelligence.

In Riddick's (2000) study of dyslexia, she found that many children with dyslexia felt stigmatized "because of visible signs like their poor spelling or handwriting or because they always finished last not because of the label dyslexia" (p. 658). As one student said, "No one has ever really ridiculed me for my dyslexia, but I have been ridiculed for not being able to read things" (p. 658). In her research she found that the majority of adults and children she studied found the label of dyslexia helpful at a private level—many were emphatic about its importance. One school-age child said in an interview, "I'd rather know I've got dyslexia than think I was an idiot" (p. 658). Some also valued having other students know they have dyslexia because it provides a positive, or at least less negative, message about the nature of their difficulties, which might otherwise be attributed to laziness, carelessness, or lack of intelligence. Only about half of the children and adults in Riddick's study, however, felt this way, with the other half preferring that no one outside of their families know that they have dyslexia. This preference seemed based in the fear that others would have a negative view of their basic intelligence. Some of Riddick's subjects suggested that other students in the school should be educated about what dyslexia means.

Along these same lines, Taylor, Hume, and Welsh (2010) conducted a study in England to compare the difference in children's self-esteem for those labeled as having dyslexia (N = 26), general special education needs (N = 26), or no learning difficulties (N = 23). The term *special education needs* is the British equivalent of the term *learning disabled* in the United States. All 75 children completed an age-appropriate version of the Culture-Free Self-Esteem Inventory and a standard test of reading ability. Results showed that self-esteem scores for the general special education needs group were significantly lower than for either the dyslexia group or the no learning disabilities (control) group. Also, there was no significant difference between the dyslexia group and the control group. On the basis of these findings, the authors suggest that "being labeled as having a general [special education] need may negatively affect children's self-esteem because, unlike the label dyslexia, this label offers very little in the way of an explanation

for the child's academic difficulties and because targeted interventions are not as available for those with a less specific label" (p. 191).

Riddick (2000), too, found that parents of children with dyslexia preferred the specific label rather than the more general term *special education needs*. She suggested that what people object to in the use of these general terms is the misattributions that can be made about the nature of a child's impairment, which could affect how others responded to them

Based on an analysis of four court cases involving students with dyslexia, Norwegian researcher Per Solvang (2007) suggests that educators develop an "ambivalence perspective" (p. 79) that is cognizant of both the potential pros and cons of the dyslexia label. On the bright side, for many students, discovering that they have a condition due to physical factors that are no fault of their own is a relief at the personal level by removing negative explanations such as lack of motivation or intellectual ability. Parents of students who received the dyslexia diagnosis most valued the resource allocation aspect of the diagnosis, which provided special services to assist their children. On the dark side, according to Solvang, the diagnosis of dyslexia can lead to identifying the problem as residing with the child, who becomes the problem bearer, thus relieving the family and school of responsibility. A medical diagnosis of dyslexia also identifies the child as having an organic defect instead of being simply neurologically different. Solvang cites Ronald Davies, an American dyslexia activist, who argues that dyslexics learn differently. "They are picture thinkers, they are intuitive and have special gifts in seeing things in multidimensional perspectives. These abilities are above the average, but are seldom developed in school" (Solvang, 2007, p. 88).

Mitigating effects of labels—the case of high-functioning autism

The mitigating effects of labels in the case of high-functioning autism, or Asperger's syndrome are less clear. For example, in a qualitative study using in-depth semistructured interviews, Gray (2002) studied the experiences of 32 mothers and 21 fathers of children with Asperger's syndrome in Australia, relevant to felt and enacted stigma. He found that the large majority of these parents did experience felt stigma, imagining that others were critical of their child-raising abilities, which made them feel embarrassed. About half of the parents experienced enacted stigma, most commonly avoidance when, for example, they visit someone's home but are never invited back; they also experienced hostile staring and rude comments. Occasionally the parents would try to defuse situations by explaining the nature of their child's disability. Based on his interviews, however, Gray found that "the presence of a medical diagnosis in itself did not seem generally to offset the stigmatizing effects produced by their children's behavior."

In a qualitative study, researchers interviewed nine students at a college for young people with high-functioning autism spectrum disorder, who provided a verbal account of their experiences of being told their diagnosis and their general perceptions of autism. Four of the students did not learn of their diagnosis until many years after the diagnosis had been made. The researchers' analysis suggested that "because of this delay in disclosure, autism might be an 'absent presence' for part of the lives of people with autism. In addition, the delay in disclosure could evoke a diverse range of reactions, including feelings of shock and disappointment, and not wanting to believe or know that they had autism" (Huws & Jones, 2008, p. 102). However, another theme in this study was that, irrespective of the delay in disclosure, learning that they

had autism enabled students to retrospectively develop an understanding of previous life events, including why they had been treated differently when they were younger. It helped some of the students in the study—and those around them—understand why they had certain difficulties. This analysis suggests that "the diagnosis and knowledge of 'having' autism can have potential benefits for some individuals" (p. 103). Some other participants in the study, however, felt concerned that having the label might lead to people making stereotypic judgments about them, although this did not necessarily bear out in their actual experience. The disclosure of the diagnosis for some participants in the study ended up disrupting plans they had for the future. One participant had plans to go to a different college; after learning of his autism and coming to terms with the diagnosis, however, he was able to take advantage of special programs offered by some institutions for students with autism. The authors conclude with the observation that "Whether being told that they had autism was perceived as a positive or a negative event, it would appear that all participants had, to some degree, reworked their sense of identity" (Huws & Jones, 2008, p. 105).

Labels: A synopsis

Labels seem to function in both negative and positive ways in education. Early evidence showed that knowing a child's label—especially the labels of mentally retarded, emotional/behavioral disability, and learning disability—affected teacher perceptions and expectations for success (Bianco, 2005; Foster & Salvia, 1977; Foster, Schmidt, and Sabatino, 1976; Gillung and Rucker, 1977). Other research showed that only certain labels (i.e., emotionally disturbed) influenced teachers' expectations for student success, and that teachers may be more influenced by student behavior, such as a sample of student work (Levin, Arluke, & Smith, 1982).

According to some studies, expectations of nondisabled students regarding their peers with disabilities were primarily influenced by the behavior of the disabled students (Sutherland, Algozzine, Ysseldyke, & Freeman, 2001) or by their placement in resource rooms versus special classrooms (Bak, Cooper, Dobroth, & Siperstein, 1987)—not their disability label.

Students with disabilities experienced both felt and enacted stigma and there were many reports of being teased, ridiculed, and bullied (Jones, 1972; Higgins, Raskind, Goldberg, & Herman, 2002). There were also reports of parents of children with high-functioning autism experiencing stigma, most commonly embarrassment and avoidance by others (Gray, 2002).

In the case of dyslexia, labels often produced a mitigating effect by providing an acceptable explanation for a student's inability to read or spell, instead of others considering them to be lazy or intellectually disabled (Reid, 1996; Riddick, 2000; Solvang, 2007; Taylor, Hume, & Welsh, 2010). Further, the specific label of *dyslexia* was found preferable to the more general terms, *learning disabled* (United States) or *special education needs* (United Kingdom) (Riddick, 2000; Taylor, Hume, & Welsh, 2010). This finding did not necessarily hold for other disabilities, such as Asperger's syndrome or high-functioning autism (Gray, 2002; Huws & Jones, 2008).

Other positive effects of labeling described in the literature included helping parents by validating that there was a problem and enabling them to access services for their child; and by providing a medical explanation for a problem, which can serve as a welcome alternative to attributing undesirable behaviors to poor parenting (Reid, 1996). However, many of these positive

functions may also result from response to intervention (RTI) approaches, which also identify educational needs and provide appropriate interventions.

Lastly, both students (Riddick, 2000) and researchers (Higgins, Raskind, Goldberg, & Herman, 2002) point out the need to address issues of school culture, especially stigma and mistreatment of students with disabilities by their nondisabled peers. Higgins and colleagues (2002) wrote

> It is the hope of the authors that administrators and teachers of 'mainstream' students will develop a proactive curriculum of tolerance and impartiality toward individuals with disabilities, and failing that, at least begin to admonish systematically their worst tormentors. (p. 16)

They recommend activities "for educators, school counselors, and parents include establishing counseling groups focused on coming to terms with an LD, implementing peer support groups, developing mentoring programs and the like, as well as strengthening disability awareness curricula and transition services to include consideration of the notion of acceptance of a disability and of persons with disabilities, as well as the labeling process and its consequences" (p. 16).

Response to Intervention (RTI)

This review provides an introduction to response to intervention (RTI), including how it is defined, reasons for its growing popularity, an introduction to an emerging body or research, a brief discussion of what it all means, and suggestions about directions for future research.

What is RTI?

The National Center on Response to Intervention (NCRTI), funded by the U.S. Office of Special Education Programs offers the following definition of RTI:

> Response to intervention integrates assessment and intervention within a multi-level prevention system to maximize student achievement and to reduce behavioral problems. With RTI, schools use data to identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities or other disabilities. (NCRTI, 2010, p. 2)

Key to this definition is the premise that by intervening early, struggling students will obtain the skills they need and avoid special education placement later (Newman-Gonchar, Clarke, & Gersten, 2009). NCRTI (2010) describes four essential components to RTI:

- A school-wide, multi-level instructional and behavioral system for preventing school failure
- Screening
- Progress monitoring
- Data-based decision making for instruction, movement within the multi-level system, and disability identification (in accordance with state law) (p. 1)

As for the multitier (or multilevel) system, most observers describe three levels of intensity:

1. High quality core instruction that meets the needs of most students in the general education classroom
2. Evidence-based interventions of moderate intensity that address the learning or behavioral challenges of most at-risk students
3. Individualized intervention(s) of increased intensity for students who show minimal response to secondary prevention (NCRTI, 2010, p. 4)

Another way to look at RTI is as a way to coordinate and gain coherence among the general classroom, special education, and Title I services for struggling students (Newman-Gonchar, Clarke, & Gersten, 2009).

According to Douglas Fuchs and Lynn Fuchs (2006), two researchers from Vanderbilt University who have done extensive research and development in RTI dating back to the early 2000s, this approach is seen by most educators as a way to deliver early intervention, especially for early *reading* problems.

> This is not accidental. Many of the same policymakers behind RTI were also responsible for Reading First, a major component of No Child Left Behind (2002), which requires schools to use scientific knowledge to guide selection of core curricula and to use valid screening measures and progress monitoring to identify students in need of more intensive instruction. In a sense, RTI may be understood as an important aspect of Reading First and current educational policy. (Fuchs & Fuchs, 2006, p. 94)

Why is there so much interest in RTI?

Fuchs and Fuchs (2006) point to two major reasons for the growing interest and adoption of the RTI model: (a) the skyrocketing costs of special education and (b) the shortcomings of the IQ-achievement discrepancy model for identifying children with learning disabilities. During the 1976-1977 school year, a year after passage of the Education of All Handicapped Children Act of 1975, less than 2% of children had been identified as learning disabled. With the passage of the Act, which legitimized learning disability as a special-education category, the proportion jumped to more than 6% in the 1999-2000 school year—which became a very expensive proposition for districts and states (Fuchs & Fuchs, 2006).

One of the main culprits for this dramatic rise was the difficulty, using the IQ-achievement discrepancy method of LD identification, in properly distinguishing between children with true disabilities and those whose learning deficits are correctable with appropriate instruction (Fuchs & Fuchs, 2006). There is little agreement in how to compute the discrepancy, how great it should be, or which IQ tests should be used, which has led to inconsistency in the prevalence of learning disabilities within and among states, and a general impression that "the [learning disability] designation is whatever teachers and parents want it to be" (Fuchs & Fuchs, 2006, p. 96).

RTI, on the other hand is seen as urging the appropriate use of research-based approaches to assessment and instruction, leading many to the expectation that, logically, it should decrease the number of children incorrectly labeled as disabled and provide more targeted help

within the context of general education for students who, for various reasons, have fallen behind. This leads us to the main question addressed in this paper.

What do we know about the impacts of RTI?

Status of research to date. Until recently, developers and proponents of RTI have relied on studies of individual components (e.g., peer tutoring) to put together research-based approaches to intervention, but little research had been done on the RTI process itself (VanDerHeyden, Witt, & Gilbertson, 2007). However, an emerging body of research—much of which is limited in its generalizability due to methodological limitations—provides some evidence of the effectiveness of the RTI approach to identification and placement of students with learning disabilities. One meta-analysis and two research reviews provide systematic overviews of this emerging research base.

Meta-analysis by Burns, Appleton, and Stehouwer (2005). This research team set out to answer the following questions:

1. How effective are the large-scale RTI models currently in practice as compared to those developed for research?
2. Does RTI lead to improved systemic and student outcomes?
3. On average, what percentage of the student population was determined to have a disability under RTI? (Burns, Appleton, and Stehouwer, 2005, p. 384)

They conducted a comprehensive search of the major research indexes and databases, and located 21 studies that met their criteria for inclusion in a meta-analysis.[4] Eleven of the studies examined the effects of at least one of four widely adopted RTI models: (1) the Heartland Agency (Iowa) Model, (2) Ohio's Intervention Based Assessment, (3) Pennsylvania's Instructional Support Teams, or (4) the Minneapolis Public School's Problem-Solving Model. All four models use group-level problem solving; that is, a team of educators selects research-based learning experiences for individual students based on their assessments of the students' needs. The remaining 10 studies described results of intervention models that were developed and implemented by researchers. The studies were further categorized by unit of analysis (school or student) and by the type of outcome being studied—student outcomes (i.e., measures of academic skill, growth in a particular skill, and/or time on task completion) or systemic outcomes (i.e., referrals to or placement in special education, duration of student time in special education, and number of children retained in grade). The researchers computed effect sizes using Cohen's *d* (Cohen, 1988) and unbiased estimates of effect (UEE), which is a method for weighting the estimation of the effect by using *d* and the sample size for each study (Hedges, 1982).

In answer to their first research question, they found strong UEEs for both categories of models, that is, the four field-based RTI models and the 10 models implemented by university faculty for research; however the UEEs for the field-based models were stronger. "Field-based

[4] Briefly stated, these criteria included (1) the implementation of an intervention, (2) measures of either student learning or systemic outcomes, (3) a unit of analysis at either the student or school level (not district or statewide), (4) at least one between-group and/or within-group comparison, (5) quantitative data that could be used to compute effect sizes, and (6) a study report written in English (Burns, Appleton, and Stehouwer, 2005).

RTI models resulted in a UEE of .94 for student outcomes and 1.80 for systemic outcomes. RTI models implemented for research led to a UEE of 1.14 for student outcomes and 0.47 for systemic outcomes" (Burns, Appleton, and Stehouwer, 2005, p. 387). Effect sizes (and UEEs) of .80 and above are considered to be strong. The researchers suggested the differences between the field-based and researcher-implemented models may be a result of the field-based models having been in operation longer and having undergone refinement over a period of years.

In response to their second question about the ability of RTI to improve systemic and student outcomes, Burns and colleagues found that the UEE for student achievement and systemic outcomes both exceeded 1.0 (UEE = 1.54 and 1.02, respectively). Burns and colleagues observed, "Finding that both systemic and student outcomes improved with an RTI model in use is a promising sign" (Burns, Appleton, and Stehouwer, 2005, p. 389).

Finally, in answer to their third research question, this meta-analysis looked at the mean percentage of the student population that was determined to have a disability under RTI, finding on average that less than 2% of the student population was identified as LD among the field-based RTI models, which is much lower than estimates of the population as a whole (5.7% in 2002).

The researchers pointed out that all of the field-based studies were quasi-experimental, which may have posed threats to the internal validity. They suggested the need for randomized controlled trials focused both on systemic and student outcomes to confirm these findings, and recommended that researchers look carefully at fidelity of implementation issues.

Research review by Hughes and Dexter (n.d.).[5] This research team was also interested in research that investigated the effects of RTI as a holistic approach and not as an aggregation of individual research-based interventions. They, too, conducted an extensive search of the major indexes (i.e., PsychINFO, ERIC, Google Scholar, and ProQuest), reviewed reference lists of studies, and, additionally hand searched several relevant journals (1996 to January 2008). They found only 11 studies that met their criteria for inclusion in the review.[6] Next they conducted a descriptive analysis of each of the studies, noting for each study several attributes (summarized in Table 12).

[5] The authors' description of their literature search strategy indicates that this review was likely produced in 2008 or later.

[6] Briefly stated their criteria included (1) publication in a peer-reviewed journal, (2) use of at least two tiers of an RTI model, (3) the reporting of quantitative measures of student academic/behavioral outcomes and/or systemic outcomes (Hughes & Dexter, n.d.).

Table 12. Summary of Characteristics of RTI Models in 11 Studies

Attribute	Findings
The RTI model used (i.e., field-based or a researcher-designed model)	10 field based, 1 research based
Use of a problem-solving (i.e., school personnel made team-based decisions about needed interventions on an individual student basis) or a fixed protocol for determining interventions	7 problem solving, 4 fixed protocol
Grade levels	11 elementary level, 4 extending into secondary level
Number of schools and students involved	Number of schools from 1 to 227; number of students from 10 to 3,101
Implementers (teachers, researchers, or a combination)	1 researcher-implemented, 7 teacher-implemented, 3 researcher- and teacher-implemented
Study design	3 historical contrast, 3 single-case, 3 quasi-experimental; 1 correlational analysis, 5 descriptive methods (no randomized controlled trials)
Measured outcomes	4 reading progress, 1 math performance, 1 behavior, and others focus on special education referrals or fidelity of implementation.

Source: Synthesis of information in Hughes and Dexter (n.d.)

Despite the complexities presented by this variation in study methodologies and purposes, Hughes and Dexter (n.d.) presented four major findings:

1. All of the studies that examined the impact of RTI on student academic achievement found some improvement.
2. All but one of the studies that measured changes in academic achievement studied reading achievement at the elementary level; only one study with a small sample (N = 14) looked at math achievement.
3. The studies that focused on the impact of RTI on referral and placement rates showed the rates remaining steady or decreasing slightly.
4. Factors considered important for scalability and sustainability of RTI programs—described in most of the studies—included the following:
    - extensive, ongoing professional development,
    - administrative support at the system and building level,
    - teacher buy-in and willingness to adjust their traditional instructional roles,
    - involvement of all school personnel, and
    - adequate meeting time for coordination. (Hughes & Dexter, n.d., p. 9).

Overall, Hughes and Dexter characterized the research supporting RTI as "emerging." They reported that there had been no randomized controlled trials, and urged more longitudinal research.

Summary of nine key studies by Newman-Gonchar, Clarke, and Gersten (2009). This research team focused on RTI approaches to helping struggling students learn mathematics. In this case the authors focused more on the characteristics of the described programs than the rigor of research, but offered appropriate caveats about the limitations of the studies in their summaries. Writing for an audience of practitioners, their goal was to share what had been learned about nine programs that included the following features: (1) a defined screening process to identify students in need of intervention; (2) the delivery of a tier 2 intervention, and (3) a procedure to monitor student response to the intervention. Their findings are summarized in Table 13.

As described by these authors, the studies by Fuchs, Fuchs, and their colleagues have the most rigor, and provide the best evidence to date about the ability of Tier 2 mathematics interventions to reduce referrals to special education, and perhaps reduce later math disabilities. They seem to work best when they are aligned with whole class Tier 1 interventions (see especially Fuchs, Fuchs, & Hollenbeck, 2007; and Fuchs, Fuchs, & Craddock, in press). Other studies provide evidence, although nothing like certainty, that there is a baseline to the intensity and duration of additional treatment needed; 15 minutes of Tier 2 tutoring for 2nd grade students, 3 or 4 times a week led to significant improvements (Bryant, et al., 2008), while 5 minutes did not (VanDerHayden & Burns, 2005). The studies summarized by Newman-Gonchar, Clarke, and Gersten (2009) in this report also provide evidence that even a narrowly focused intervention (math computation only) in teacher approaches to Tier 1 and 2 interventions may be able to produce more appropriate and accurate referrals of students for evaluation and placement in special education services.

Table 13. Summary of Findings for Mathematics RTI Models in Nine Studies

Authors	Study design	No. of students	Tier	Grade	Description of intervention	Outcome(s)
Fuchs, Compton, et al. (2005)	Randomized controlled trial	70 in treatment /69 in control	2	1	Regular mathematics instruction plus 30 minutes of intensive small group instruction followed by 10 minutes of computer-based instruction; mastery of topics assessed each day with reteaching if necessary for at-risk students	Significant improvement in three major performance measures; one measure (fact fluency) continued to show weakness
Bryant, et al. (2008)	Regression discontinuity	51	2	1, 2	15-minute tutoring sessions 3 or 4 days a week in addition to regular instruction for at-risk students	First graders showed gains, but not statistically significant; second graders showed statistically significant gains.
Fuchs, Fuchs, & Prentice (2004)	Randomized controlled trial	201 in four groups (see description)	1	3	Hot Math—a program that emphasizes transfer of problem-solving strategies to different contexts—was administered to three groups of students: Group A (60 control, 69 experimental) students not at-risk for reading or math difficulties; Group B (5 control, 8 experimental) students at-risk for math disabilities only; Group C (20 control, 12 experimental) students at-risk for both math and reading disabilities; Group D (12 control, 15 experimental) students at risk for reading disabilities only. All groups spent similar amounts of time on math each week (about 275 minutes); control groups used regular curriculum, experimental groups spent part of their time with Hot Math.	Significant effects found for experimental groups using Hot Math as a whole class, Tier 1 intervention. Students at risk for math disability (MD) improved less on computation and labeling; students with both math and reading problems improved least on these two measures. Students with only MD improved in understanding as much as their nondisabled peers.
Fuchs, Seethaler, et al. (2008)	Randomized controlled trial	42*	2	3	In addition to their regular classroom mathematics instruction experimental group students received one-on-one tutoring for 20-30 minutes three times a week for 12 weeks.	In four word-problem measures the treatment group effects were significant for two and not significant for two; all effect sizes were positive but the power of this study was weak due to small sample size.

Table 13 continued on next page

Table 13. Summary of Findings for Mathematics RTI Models in Nine Studies

Authors	Study design	No. of students	Tier	Grade	Description of intervention	Outcome(s)
Fuchs, Fuchs, and Hollenbeck (2007)	Randomized controlled trial	N not provided	1 & 2	3	Hot Math (word problem focus) was used for experimental groups in both regular classroom instruction and in supplemental tutoring for at-risk students. Four groups of at-risk students were compared, those who received (1) Hot Math in classroom and tutoring; (2) Hot Math in classroom with no tutoring; (3) regular classroom instruction and Hot Math tutoring; and (4) regular classroom instruction and no tutoring.	Fewer students were at-risk for MD after they received Hot Math classroom instruction; even fewer were at risk after they received both classroom and tutoring instruction. "This appears to reduce the prevalence of mathematics disabilities" (p. 22).
Fuchs, Fuchs, and Craddock (in press)	Randomized controlled trial	1,141 (119 classrooms)	1 & 2	3	This study was structured similarly to Fuchs, Fuchs, and Hollenbeck (2007) using a different word problem approach, *schema broadening instruction* (SBI), in place of Hot Math. The experimental tutoring groups included a self-regulation component in addition to SBI, but the SBI content was closely aligned for the classroom and tutoring treatment groups.	At-risk students who received the SBI tutoring (Tier 2 instruction) were able to narrow the achievement gap with non-at-risk peers. Nearly half as many at-risk tutoring students were designated as having MD as the at-risk control students. There was no difference between the SBI classroom and the typical classroom instruction groups.
VanDerHayden, Witt, & Gilbertson (2007)	Integrated time series (with multiple baseline components)	2,708 (5 schools)	1 & 2	Elementary grades	The researchers examined the impact of Screening to Enhance Equitable Educational Placement (STEEP) on teacher requests for pre-referral evaluations of students for possible special education placement. The authors phased the intervention into each school in a staggered fashion, collecting baseline data for 1 to 3 years before the intervention. In Tier 1 all students were screened for computational fluency; if a class mean was below a benchmark the whole class received an intervention that lasted for 10 minutes for 10 days. Students who were unsuccessful received an extra 10 minutes of individual tutoring during regular classroom time (this was considered Tier	Teachers requested fewer referrals, and those students they did refer were more likely to be found eligible for special education. The proportion of minority students did not change as a result of the STEEP intervention. These results must be considered exploratory because of the narrow focus (computation only) and the brief duration of the intervention.

Table 13. Summary of Findings for Mathematics RTI Models in Nine Studies

Authors	Study design	No. of students	Tier	Grade	Description of intervention	Outcome(s)
					2). Tier 2 students also received rewards for scoring higher than their last score. Only students who did not respond to the Tier 2 intervention were recommended for evaluation.	
Adroin, Witt, Connell, and Koenig (2001)	One shot case study with staggered implementation	14 students (2 class-rooms)	1 & 2	4	This is a smaller exploration of the STEEP process (see above) using a very brief intervention. Fourteen at-risk students were given a "Can't Do Won't Do" assessment, where they were rewarded for surpassing their previous score on subtraction problems. A peer tutoring component provided practice time, with tutor and tutee switching roles (14 minutes). At the end of this session only five students were deemed to need additional time (they received 20 minutes of instruction). In the end, one student was referred for evaluation, having not responded to the intervention.	No inferences can be drawn from this study due to the lack of a control group. However, all but one of the students improved their achievement scores on subtraction.
VanDerHayden & Burns (2005)	One shot case study	No N provided (1 school)	1 & 2	3, 4, 5	In another STEEP study, the goal was to examine the effectiveness of using screening and progress monitoring data to plan and deliver mathematics instruction. All of the classes in the school scored below a determined benchmark on computational fluency. The Tier 1 intervention lasted for 30 minutes a day (with peer tutoring as the core of this instruction). Students were tested each day; low scorers received an additional 5-minute scripted lesson each day (Tier 2). Students who achieved mastery moved up to the next level.	Results from the SAT 9 showed little change for students scoring below average before the intervention, but students who scored above average improved. This suggests (although without an experimental design cannot substantiate) that 30 minutes of classwide peer tutoring with an additional 5 minutes of instruction for struggling students was not helpful in raising the achievement of struggling students.

* The authors did not mention how the students were divided between control and experimental groups.
SOURCE: Synthesis of information from Newman-Gonchar, Clarke, and Gersten (2009)

What does this all add up to?

The emerging research indicates the following outcomes of RTI:

- *Reductions in percentages of students identified as LD*. Characterized as a systemic improvement by Burns, Appleton, and Stehouwer (2005) in their meta-analysis of 11 studies, they found that, on average, less than 2% of the student population was identified as LD among the field-based RTI models compared with estimates of the population as a whole (5.7% in 2002). Hughes and Dexter (n.d.) in their descriptive review of the literature did not indicate such a large effect, reporting that placement rates remained steady or decreased slightly.
- *Gains in student achievement*. Burns and colleagues (2005) also found strong positive effects on student achievement, with a UEE of 1.54. Work by Fuchs, Fuchs and colleagues focused on mathematics interventions has shown promise for certain interventions both in the regular classroom (Tier 1) and in supplemental instruction (Tier 2); the interventions are even more powerful when the same approach is used in both tiers for students at risk of mathematics difficulties (Fuchs, Fuchs, & Hollenbeck, 2007; and Fuchs, Fuchs, & Craddock, in press).

Where do we go from here?

The research base is still new for studying the outcomes of RTI, but there have been some good studies done, with more on the way. In addition to the ongoing work by the team at Vanderbilt, the U.S. Department of Education's Institute of Education Sciences is conducting evaluation studies of key programs and services supported under the Individuals with Disabilities Education Improvement Act of 2004. Efforts to develop RTI approaches to the identification of and early intervention for children at risk of specific learning disabilities were stimulated by this law's provisions. The 60-month evaluation (2008-2013) will address the following questions:

- What are the impacts of a range of Response to Intervention models on academic outcomes—such as reading achievement, grade promotion, and identification for special education—for students in elementary schools?
- Do the impacts of these RTI models vary for different groups of students within study schools?
- What is the range of RTI practices and policies currently being used by a representative sample of districts and schools, and how do the RTI models in the impact study fit into this broader context? (National Center for Education Evaluation and Regional Assistance, n.d.)

These are all good questions, which the West Virginia Department of Education may want to investigate here in the state. In addition, Hughes and Dexter (n.d.) suggest examining the factors considered important to the success and sustainability of RTI programs. In any case, RTI seems to be an innovation worth additional research and development. It could help reduce unneeded placements of students in special education programs, reducing costs and freeing up resources for children who truly need services.

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Appendix B. Survey Instruments

AIR Teacher Survey questions 03.16.11

Item Number	Question	Output/ Outcome Number(s)
1.	Since our school began AIR, I have noticed a reduction in teachers' references to student disability labels.	2
2.	Since our school began AIR, I have noticed a reduction in specialists' references to student disability labels.	2
3.	Since our school began AIR, I have noticed a reduction in administrators' references to student disability labels.	2
4.	Since our school began AIR, student disability labels are not as important to me.	8
5.	Since our school began AIR, I realize I can provide appropriate instruction to students without knowing their disability label.	4, 15
6.	It makes more sense for instructional purposes to discuss learning/behavioral needs than disability labels.	1
7.	I understand the concept of "people first" language.	1, 9
8.	When talking with parents, the AIR process has helped me move away from using disability labels and toward describing students' abilities and needs.	1
9.	Since we began AIR, parents' participation in selection committee meetings has increased.	3
10.	Since we began AIR, I have had sufficient training to allow me to differentiate, adapt, and modify classroom instruction for students with IEPs.	4
11.	Since we began AIR, IEPs include richer descriptions of students' abilities and learning needs.	5
12.	Since we began AIR, IEPs are more useful to me as a teacher.	8
13.	Since we began AIR, IEPs I have seen no longer include categorical labels.	5
14.	At the end of this year, the students selected through the AIR process will most likely be in the same instructional placement that they would have been if we were still using labels.	6, 18, 22
15.	Since our school began AIR, there has been a decrease in the percentage of students identified for special education services.	22
16.	Since our school began AIR, our general education teachers and interventionists work more collaboratively.	7
17.	Since our school began AIR, our special education teachers provide more support to all students within the general education classrooms.	7
18.	Since our school began AIR, teachers have had higher expectations for students with IEPs.	9
19.	Since our school began AIR, parents appear to have higher expectations for their children with IEPs.	9, 14
20.	Since our school began AIR, administrators have had higher expectations for students with IEPs.	9

Item Number	Question	Output/ Outcome Number(s)
21.	Since our school began AIR, students with IEPs appear to be more motivated than when we used disability labels.	16
22.	Since our school began AIR, I have noticed less teasing or harassment of students with IEPs by their general education peers.	9, 10, 12
23.	Since our school began AIR, we have increased our efforts to implement the 3 tier instruction model before requesting a multidisciplinary evaluation for special education.	13
24.	Since our school began AIR, I have noticed more positive social interactions between students with IEPs and general education students.	9, 10, 12
25.	There is less social stigma for students with IEPs now that we use the AIR process.	9, 10, 12
26.	Since our school began AIR, our school has adopted programs and practices that promote tolerance of students with IEPs.	9
27.	Since our school began AIR, parents are more receptive to special education services for their children than when disability labels were used.	10
28.	Since our school began AIR, our school community has an improved regard for special education programming, services, and staff.	10
29.	Since our school began AIR, I feel that special education teachers' contributions to general education instruction and decision-making are more valued.	10
30.	Since our school began AIR, we have increasingly grouped students with IEPs by learning needs instead of by disability categories.	11, 15,
31.	Since our school began AIR, general educators have been more willing to differentiate, accommodate, and modify instructions to students with IEPs.	11, 15
32.	Since our school began AIR, special educators have provided more services to students without IEPs.	11
33.	Since our school began AIR, students are more accepting of special education services than when disability labels were used.	12, 16
34.	There is an improved understanding of Tier III because of the AIR process among all teachers.	13,
35.	There is an improved understanding of special education services because of the AIR process among all teachers.	13
36.	The system of disability did a better job than the AIR process of directing students to services they needed.	8
37.	Since our school began AIR, I feel that general education teachers' contributions to special education processes and decision-making are more valued.	8
38.	Since our school began AIR, there is an improved parental understanding of their child's needs and learning characteristics.	14
39.	Since our school began AIR, there has been an increase in the participation of parents of students with IEPs in their children's learning processes.	3, 14
40.	Since our school began AIR, students with IEPs seem more self-confident.	12, 16

Item Number	Question	Output/ Outcome Number(s)
41.	Since our school began AIR, students with IEPs are more successful academically than when we used labels.	17
42.	Since our school began AIR, students with IEPs are more successful behaviorally than when we used labels.	17
43.	Since our school began AIR, students with IEPs spend more time in the general education classroom.	6, 18, 22
44.	I believe in the value and principles of the AIR process.	8
45.	I am enthusiastic about the AIR process.	8
46.	Since our school began AIR, applying RTI processes to the five disability categories has resulted in delays in IEP services to some students.	8
47.	Since my school began AIR, I would characterize Student Assistance Team (SAT) meetings as one of collaboration among all stakeholders involved.	8
48.	Since my school began AIR, the AIR process has resulted in eligibility/selection committee discussions that focus on learning/behavioral needs rather than disability labels.	8
49.	The AIR process has demonstrated that many students with disabilities do not need to be labeled to be served.	8
50.	Parents seem to be enthusiastic about the AIR Process.	8

Open-ended questions

Based on your experience what is the best part of the AIR process?

Based on your experience what is the most difficult aspect of the AIR process?

Any additional comments?

AIR Principal Survey questions 03.16.11

Item Number	Question	Output/ Outcome Numbers(s)
1.	Since my school began AIR, I have noticed a reduction in teachers' references to student disability labels.	2
2.	Since my school began AIR, I have noticed a reduction in specialists' references to student disability labels.	2
3.	Since my school began AIR, student disability labels are less important to me.	8, 9
4.	Since my school began AIR, I realize I can provide appropriate services to students without knowing their disability label.	4, 15
5.	It makes more sense for instructional purposes to discuss learning/behavioral needs than disability labels.	1
6.	I understand the concept of "people first" language.	1, 9
7.	When talking with parents, the AIR process has helped me move away from using disability labels and toward describing students' abilities and needs.	1
8.	Since my school began AIR, parents' participation in eligibility/selection committee meetings has increased.	3
9.	Since we began AIR, I have had sufficient training to be successful in guiding AIR implementation.	4
10.	Since we began AIR, my teachers have had sufficient training to allow them to differentiate, adapt, and modify classroom instruction for students with IEPs.	4
11.	Since we began AIR, IEPs include richer descriptions of students' abilities and learning needs than before.	5
12.	Since we began AIR, IEPs are more useful to me as a principal.	8
13.	Since we began AIR, IEPs I have seen no longer include categorical labels.	5
14.	Since our school began AIR, there has been a decrease in the percentage of students identified for special education services.	6, 18, 22
15.	At the end of this year, the students selected through the AIR process will most likely be in the same instructional placement that they would have been if we were still using labels.	6, 18, 22
16.	Since my school began AIR, our special education teachers provide more support to all students within the general education classrooms.	7
17.	Since my school began AIR, our general education teachers and interventionists work more collaboratively.	7
18.	The system of disability labels did a better job than the AIR model of directing students to services they needed.	8
19.	Since my school began AIR, teachers have had higher expectations for students with IEPs.	9
20.	Since my school began AIR, parents appear to have higher expectations for their children with IEPs.	9, 14

Item Number	Question	Output/ Outcome Numbers(s)
21.	Since my school began AIR, administrators have had higher expectations for students with IEPs.	9
22.	Since my school began AIR, students with IEPs appear to be more motivated than when we used disability labels.	16
23.	Since our school began AIR, I have noticed less teasing or harassment of students with IEPs by their general education peers.	9, 10, 12
24.	Since my school began AIR, we have increased our efforts to implement the 3 tier instruction model before requesting a multidisciplinary evaluation for special education.	13
25.	Since my school began AIR, I have noticed more positive social interactions between students with IEPs and general education students.	9, 10, 12
26.	There is less social stigma for students with IEPs now that we use the AIR process.	9, 10, 12
27.	Since my school began AIR my school has adopted programs and practices that promote tolerance of students with IEPs.	9, 12
28.	Since my school began AIR, parents are more receptive to special education services for their children than when disability labels were used.	10
29.	Since our school began AIR, our school community has an improved regard for special education programming, services, and staff.	10
30.	Since my school began AIR, I feel that special education teachers' contributions to general education instruction and decision-making are more valued.	10
31.	Since my school began AIR, we have increasingly grouped students with IEPs by learning needs instead of by disability categories.	11, 15
32.	Since our school began AIR, general educators have been more willing to differentiate, accommodate, and modify instructions to students with IEPs.	11, 15
33.	Since my school began AIR, special educators have provided more services to students without IEPs.	11
34.	Since my school began AIR, students with IEPs are more accepting of special education services than when disability labels were used.	12, 16
35.	There is an improved understanding of Tier III because of the AIR process among all teachers.	13
36.	There is an improved understanding of special education services because of the AIR process among all teachers.	13
37.	I believe in the value and principles of the AIR process.	8
38.	Since our school began AIR, I feel that general education teachers' contributions to special education processes and decision-making are more valued.	8
39.	Since our school began AIR, there is an improved parental understanding of their child's needs and learning characteristics.	14
40.	Since our school began AIR, there has been an increase in the participation of parents of students with IEPs in their children's learning processes.	3, 14

Item Number	Question	Output/ Outcome Numbers(s)
41.	Since my school began AIR, students with IEPs seem more self-confident.	12, 16
42.	Since my school began AIR, students with IEPs are more successful academically than when we used labels.	17
43.	Since my school began AIR, students with IEPs are more successful behaviorally than when we used labels.	17
44.	Since my school began AIR, students with IEPs spend more time in the general education classroom.	6, 18, 22
45.	I am enthusiastic about the AIR process.	8
46.	Since our school began AIR, applying RTI processes has resulted in delays in IEP services to some students.	8
47.	Since my school began AIR, I would characterize Student Assistance Team (SAT) meetings as one of collaboration among all stakeholders involved.	8
48.	Since my school began AIR, the AIR process has resulted in selection committee discussions that focus on learning/behavioral needs rather than disability labels.	8
49.	Parents seem to be enthusiastic about the AIR Process.	8
50.	The AIR process has demonstrated that many students with disabilities do not need to be labeled to be served.	8

Open-ended questions

Based on your experience what is the best part of the AIR process?

Based on your experience what is the most difficult aspect of the AIR process?

Any additional comments?

AIR Psychologist Survey questions 03.16.11

Item Number	Question	Output/ Outcome
1.	In the AIR schools that I serve, I have noticed a reduction in references to student disability labels from teachers.	2
2.	In the AIR schools that I serve, I have noticed a reduction in references to student disability labels from interventionists.	2
3.	In the AIR schools that I serve, I have noticed a reduction in references to student disability labels from administrators.	2
4.	Since our school began AIR, student disability labels are not as important to me.	1
5.	I have improved my skills in problem solving and evaluating students without focusing on their disability labels.	4,15
6.	It makes more sense for instructional purposes to discuss learning/behavioral needs than disability labels.	1
7.	When talking with parents, the AIR process has helped me move away from using disability labels toward describing students' abilities and needs.	1
8.	In the AIR schools that I serve, parents' participation in eligibility/selection committee meetings has increased.	3
9.	I have had sufficient training to be successful in guiding AIR implementation.	4
10.	Teachers in the AIR schools that I serve have had sufficient training to allow them to differentiate, adapt, and modify classroom instruction for students with IEPs.	4
11.	In the AIR schools that I serve, there has been a decrease in the percentage of students identified for special education services.	6, 18, 22
12.	At the end of this year, students selected through the AIR process will most likely be in the same instructional placement that they would have been if we were still using labels.	6, 18, 22
13.	In the AIR schools that I serve, special education teachers provide more support to all students within the general education classrooms.	7
14.	In the AIR schools that I serve, general education teachers and interventionists work more collaboratively than before AIR was implemented.	7
15.	In the AIR schools that I serve, teachers have had higher expectations for students with IEPs.	9
16.	In the AIR schools that I serve, parents appear to have higher expectations for their children with IEPs.	9, 14
17.	In the AIR schools that I serve, administrators have had higher expectations for students with IEPs.	9
18.	In the AIR schools that I serve, students with IEPs appear to be more motivated than when we used disability labels.	16
19.	In the AIR schools that I serve, I have noticed less teasing or harassment of students with IEPs by their general education peers.	9, 10,12

Item Number	Question	Output/ Outcome
20.	In the AIR schools that I serve, we have increased our efforts to implement the 3-tier instruction model before requesting a multidisciplinary evaluation for special education.	13
21.	In the AIR schools that I serve, I have noticed more positive social interactions between students with IEPs and general education students than before.	9, 10,12
22.	In the AIR schools that I serve, there is less social stigma for students with IEPs compared with non-AIR schools.	9, 10,12
23.	As a result of participation in AIR, the school that I serve has adopted programs and practices that promote tolerance of students with IEPs.	9
24.	In the AIR schools that I serve, parents are more receptive to special education services for their children than when disability labels were used.	10
25.	In the AIR schools that I serve, the school community has shown a higher regard for special education programming, staff, and services.	10
26.	In the AIR schools that I serve, I feel that special education teachers' contributions to general education instruction and decision-making are more valued.	10
27.	In the AIR schools that I serve, we have increasingly grouped students with IEPs by learning needs instead of by disability categories.	11, 15
28.	In the AIR schools that I serve, general educators have been more willing to differentiate, accommodate, and modify instructions to students with IEPs.	11, 15
29.	In the AIR schools that I serve, special educators have provided more services to students without IEPs.	11
30.	In the AIR schools that I serve, students are more accepting of special education services than when disability labels were used.	12, 16
31.	There is an improved understanding of Tier III because of the AIR process among all teachers.	13
32.	There is an improved understanding of special education services because of the AIR process among all teachers.	13
33.	In the AIR schools that I serve, I feel that general education teachers' contributions to special education processes and decision-making are more valued.	8
34.	In the AIR schools that I serve, there is an improved parental understanding of their child's needs and learning characteristics.	14
35.	In the AIR schools that I serve, there has been an increase in the participation of parents of students with IEPs in their children's learning processes.	3, 14
36.	In the AIR schools that I serve, students with IEPs seem more self-confident than before.	12, 16
37.	In the AIR schools that I serve, students with IEPs are more successful ACADEMICALLY than when we used labels.	17
38.	In the AIR schools that I serve, students with IEPs are more successful BEHAVIORALLY than when we used labels.	17

Item Number	Question	Output/ Outcome
39.	In the AIR schools that I serve, students with IEPs spend more time in the general education classrooms.	6, 18
40.	Since our school began AIR, applying RTI processes to the five disability categories has resulted in delays in IEP services to some students.	8
41.	I believe in the value and principles of the AIR process.	8
42.	In the AIR schools that I serve, I would characterize Student Assistance Team (SAT) meetings as one of collaboration among all stakeholders involved.	8
43.	In the AIR schools that I serve, the AIR process has resulted in eligibility/selection committee discussions that focus on learning/behavioral needs rather than disability labels.	1, 2
44.	In the AIR schools that I serve, teachers present evidence-based data at SAT meetings to support their requests for special education evaluation.	8, 9
45.	The system of disability labels did a better job than the AIR model of directing students to services they needed.	8
46.	I am enthusiastic about the AIR process.	8
47.	In the AIR schools that I serve, parents seem to be enthusiastic about the AIR Process.	8
48.	The AIR process has demonstrated that many students with disabilities do not need to be labeled to be served.	8
49.	In the AIR schools that I serve, there has been a decrease in the percentage of students referred to special education services.	15

Open-ended questions

1. Based on your experience what is the best part of the AIR process?
2. Based on your experience what is the most difficult aspect of the AIR process?
3. Additional comments?

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West Virginia Department of EDUCATION

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