Inclusion for Students With Fetal Alcohol Syndrome: Classroom Teachers Talk About Practice

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ABSTRACT: The authors aimed to investigate the perceptions and experiences of regular education classroom teachers whose students included at least 1 child diagnosed with fetal alcohol spectrum (FAS) disorders. The authors collected data over a 3-year period in 3 school districts in the Pacific Northwest. Data included interviews with classroom teachers, notes from classroom observations, and medical and educational documents. The authors studied FAS inclusion, including descriptions of academic performance, behavioral patterns, and articulation of the strategies that classroom teachers used. The authors also identified problems associated with FAS inclusion in hopes that an increased understanding of these issues results in the improvement of educational experiences for other students with FAS and their teachers.

KEYWORDS: *at-risk students, fetal alcohol syndrome, mainstreaming, teacher strategies*

IN *THE BROKEN CORD*, Michael Dorris (1989) wrote about his frustrations with his son Adam's educational experiences:

> My recognition that Adam had a problem more serious than a "slow start" came in bits and pieces over the course of many years. In retrospect, the signs were all there, but at the time I stored in a file of nagging worry the poor hearing, the convulsions, the hundreds of repetitions of even the most basic instructions, the abbreviated attention span, the many minor, dismissible incidents, mistakes, and shortfalls . . . I periodically concluded that Adam's teachers must be incompetent, badly trained, or lazy when they failed to stimulate his performance in the classroom. I protested haughtily to principals, counselors, even, on one occasion, to the federal government. (p. 65)

Dorris eventually recognized that his son's development had been irreversibly affected by the birth mother's drinking of alcohol while she was pregnant, and, as a result, Adam had fetal alcohol syndrome (FAS). *The Broken Cord*, which tells Adam's story, was the winner of the 1989 National Book Critics Circle Award and 1989 Christopher Award and was adapted by ABC into a television movie. Through Dorris's story about Adam, hundreds of thousands of people became aware of the facts and human realities of FAS. Unfortunately, today, stories of similarly affected students continue to unfold in classrooms throughout the country, and thousands of classroom teachers and other school personnel work tirelessly to provide students with FAS with positive and enriching educational experiences.

In June 1973, Jones and colleagues' article that described the birth defects of eight children of alcoholic mothers was published (Jones, Smith, Ulleland, & Streissguth, 1973). Jones and Smith's (1973) article, titled "Recognition of the fetal alcohol syndrome in early infancy," was published in the same journal in November. These two studies initiated an international dialogue and convergence of opinion by medical professionals regarding the effect of alcohol on certain children who had been exposed to it before birth. By 1979, a total of 618 confirmations of children with FAS from various countries around the world had been made (Smith, 1979). As the scientific world increasingly researched, described, and confirmed the prevalence and devastating effects of FAS, in 1981, the United States became the first country to formulate a national policy advising women not to drink during pregnancy (Surgeon General's Advisory on Alcohol and Pregnancy, 1981). In 1989, the U.S. Congress passed legislation that required the labeling of alcoholic beverages to warn women about the potentially harmful effects of alcohol on unborn children, and throughout the late 1980s and early 1990s, the media publicized the problem and warned about the effects of mixing alcohol with pregnancy (Streissguth, 1997). Despite these efforts and conclusive scientific evidence linking alcohol and FAS, the problem persists and solutions remain

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evasive. It is likely that U.S. schools will serve students with FAS in the foreseeable future.

The terms *fetal alcohol syndrome* and *fetal alcohol effects* (FAE) refer to individuals who have suffered from prenatal exposure to alcohol. The difference is one of degree, with FAS referring to the more severe effects. Researchers have described in detail the physical characteristics—particularly facial characteristics—of a young child with FAS (Cicero, 1994; Hall, Peltier, & Noonan, 1994; Streissguth, 1997). Many individuals also suffer from associated medical conditions relating to the heart, liver, kidneys, and urogenital tracts (Abel, 1987). Visual and auditory perception, balance, and motor coordination may all be impaired (Becker, Randall, Salo, Saulnier, & Weathersby, 1994). In addition, FAS is a leading cause of mental retardation (Williams, Howard, & McLaughlin, 1994). Although only 20% of individuals with FAS are classified as mentally retarded (i.e., having an IQ of less than 70), the average IQ scores for individuals with FAS or FAE are 70 and 90, respectively (Streissguth). Most children with FAS demonstrate learning disabilities; Weiner and Morse (1994) reported that among adolescents with FAS, their average reading, spelling, and mathematics acheivement levels were fourth, third, and second grade, respectively.

Providing appropriate educational experiences for students with FASD is a challenge. Confounding the obvious difficulties is the fact that FAS is not recognized as a category of disability by the Individuals with Disabilities Education Act (1997). Hence, a school-aged child diagnosed with FAS is not automatically eligible for special education services. Although many children with FAS qualify for special services on the basis of associated disorders, the regular education classroom teacher is primarily responsible for the educational experiences of FAS students. The reality is often overwhelming for parents and teachers alike.

The purpose of the present article is to describe the experiences of regular education classroom teachers who have had students in their classroom instructional programs who were diagnosed with FAS. We conducted the present study in the tradition of qualitative research to "uncover the meanings of events in individuals' lives" (Janesick, 1994, p. 217). We hope that the results and recommendations promote discussion among educators. We also hope that elements of our study inform the practice of other researchers because most students with FAS or FAE spend the majority of their school days in regular education classrooms.

Related Research

Researchers have provided limited assistance for classroom teachers who manage students with FAS. Streissguth (1997) advocated for school-based FAS support teams comprising school professionals who would meet regularly to discuss achievements and needs, appoint an advocate for the student, collaborate with the parents of students with FAS, and coordinate with other community personnel and service organizations. Also relevant for teachers is professional literature that addresses specific needs of students with FAS from the field of special education. For example, because students with FAS are typically distractible, techniques that apply to attention deficit disorder may be applicable to students with FAS (Loftus & Block, 1996). Other researchers (Burgess & Streissguth, 1992; Harper, 2001; Loftus & Block; Streissguth) specifically regarded FAS inclusion and clusters around several main ideas, including the provision of a structured environment, breaking larger tasks into smaller segments, need for contextualizing and repeating concepts and developing social skills.

Establishing a structured environment is recommended as appropriate for both longer and shorter periods of time (i.e., entire day, 60-min period). This type of environment is characterized by a predictable schedule with rules that are clear and consistently applied. Streissguth (1997) stressed the need for teachers to "vigorously pursue absences, tardiness, and any other deviations from the student's routine behavior" (pp. 220–221). Harpur (2001) reminded teachers that structure is not synonymous with control and an overly controlling environment may be counterproductive. The goal is for the teacher to provide enough structure to help students with FAS stay in control while holding the student accountable for both self-control and setting realistic goals. Other environmental considerations include reductions in physical stimuli, such as light and sound (Weiner & Morse, 1994), which may prevent students from becoming overstimulated.

Breaking tasks into small segments accompanied by explicit instructions is also a part of the conventional wisdom. Students with FAS do not necessarily infer directions as expected, from indirect or implicit speech, so the use of explicit and direct language is important. Addressing physical education teachers, Loftus and Block (1996) conveyed that the direction "Show me how you can travel at different levels and different speeds" (p. 5) may elicit highly inappropriate behavior from the student, such as bumping into walls or running into peers. Instead, Loftus and Block wrote that "Show me how you can gallop at a medium speed following the black line on the floor" (p. 5) is the type of direct and explicit directive that will more likely result in the desired behavior. Streissguth (1997) reminded teachers that small segments alone do not guarantee success and that frequent feedback and freedom from timed pressure are also important components of a successful instructional program: "A good teacher will give students with FAS or FAE plenty of time, encouragement, and praise" (p. 221). Gentle reminders to stay on task are also viewed to be critical for success, as is the need to intervene quickly at the first sign of inappropriate behavior to try to help the student "maintain and regain control" (Loftus & Block, p. 6).

Harpur (2001) recommended that teachers contextualize abstract concepts and focus students on key parts of the teacher's demonstrations: "FASD teens need to be shown how concepts link, and, if possible to be shown in different modalities . . . [such as] speech, writing, pictures, acting out" (p. 5). Loftus and Block (1996) reminded teachers that students may not attend to the critical aspects of the teacher's demonstration, thus teachers may need to direct attention through verbal instructions. Loftus and Block also stated that repetition is key to learning, whether the concept is concrete or abstract: "Teachers need to repeat information constantly to help ensure that some of it has been encoded" (p. 5). Harpur recommended that students with FAS work with older students on skills that support their ability to use written records—such as notebooks, planners, schedules, and calendars—as memory aids.

In addition to the academic content and related behavioral issues, the development of social skills is also critical (Burgess & Streissguth, 1990). Students with FAS typically struggle with interpersonal skills and need assistance in learning how to collaborate with others and communicate effectively. To develop articulation and promote self-reflection, teachers can ask students with FAS how they feel and what they need for academic success.

Method

Participants and Settings

We used qualitative methods to develop a better understanding of how classroom teachers included students diagnosed with FASD in their classrooms. We selected classroom teachers because of their relationship with certain students who, in turn, were part of a larger, 4-year case study of five students with FASD (Ryan & Ferguson, 2002; Ryan, Ferguson, & Dybdahl, 2003). Of these five students involved in the larger case study research project, three were K–12 school-aged during the 3-year period in which we collected classroom teacher data. Table 1 provides relevant medical and educational information for these three students. We collected and summarized records when students joined the project (for Allan and Oscar, 2001; for Ellie, 2002). As noted in Table 1, we updated the special education eligibility data.

We identified the teachers of these three FAS students as potential participants. All teachers who were contacted agreed voluntarily to participate and all became a part of this study. Table 2 shows relevant information regarding participating teachers' content specialties, years of professional experience, site assignments, and gender. A total of 13 teachers participated across three sites. Duration of professional experience ranged from 1 to 24 years. Content specialties included elementary education, English and language arts, keyboarding, mathematics, physical education, reading, and science. Of the 13 participants, 7 were men and 6 were women.

Public school districts in one of three sites employed all teachers. These sites were located hundreds of miles apart from and had little resemblance to one another, despite being located in the same state (Ryan, Ferguson, & Dybdahl, 2003): Windy Way is a predominantly Yu'pik community (62%) of approximately 5,000 people and accessible only by air or boat. Fishport, a small town of approximately 4,000 people, is primarily White (86%) and located on the state road system. Island City has a population of approximately 8,000 people, with White (67%) and Tlingit (18%) cultural roots. Island City is also accessible only by air or boat.

Data Collection and Analysis

Methods for data collection included (a) on-site individual or group interviews with teachers, (b) observation of participants' classrooms, and (b) collection of relevant educational and medical student records. We used interviews as the primary source of data in support of our goal of describing the participant perspective (i.e., the classroom teachers' perspectives of including students with FAS). These methods allowed researchers to operate in an authentic setting and promoted opportunities for teacher reflection on the meaning of their experiences with students with FAS. Our study falls within the tradition of interpretive research (Bogdan & Biklen, 1982; Hamilton, 1994; Schwandt, 1994).

All interviews were taped and transcribed verbatim. In a 3-year period, 26 interviews were completed in the field with a total of 13 regular education classroom teachers. In all, 8 teachers were interviewed more than one time, either during the course of 1 year or because the student continued with the teacher for more than 1 year. All interviews were conducted at a place and time convenient to the participant. In most cases, the place was the teacher's classroom, and in all cases, the interview was private; that is, only the interviewer and teacher were present. Teachers tended to be available during planning periods, lunch hours, and before and after school. The role of the interviewer was somewhat directive, and the question format was semistructured (Fontana & Frey, 1994). During the interviews, topics germane to FAS were explored, such as teacher knowledge about FAS and the value of diagnosis, as well as teaching in general, including experience, training, philosophy, and curriculum. In this format, participants were encouraged to speak freely about their experiences. For the present study, teacher comments and classroom observations that preceded most of the interviews were used. Interviews were approximately 1 hr, although some teachers freely engaged with the interviewer for nearly 2 hr. Interviews and observations were conducted on site for 2 days. A total of 16 site visits were made. On-site time resulted in numerous opportunities to interact with

TABLE 1. Educational and Medical Information for Three School-Aged Students Diagnosed With Fetal Alcohol Syndrome (FAS)

Variable	Allan	Ellie	Oscar
Age	15	9	14
Gender	Male	Female	Male
Ethnicity	Caucasian	Tlingit	Yupik
Grade placement	9	3	6
Results of state benchmark examinations			
Reading	—	Not proficient	Below proficient
Writing	—	Below proficient	Below proficient
Mathematics	—	Below proficient	Below proficient
Summary of psychological evaluation			
WISC-II			
Verbal IQ	107	—	—
Performance IQ	106	—	—
Full scale IQ	107	—	—
WISC-III			
Verbal IQ	—	70	—
Full scale IQ	—	78	—
Stanford–Binet			
Verbal reasoning	—	—	85
Nonverbal reasoning	—	—	99
Composite score	—	—	95
Special education			
Classification	Emotionally disturbed	Other health impaired	Other health impaired
Date of eligibility	April 8, 2002	November 22, 2002	Spring 2002
FAS diagnosis	Static encephalopathy and sentinel physical findings	Static encephalopathy and sentinel physical findings	Neurobehavioral disorder and growth deficiency
FASD results			
Growth deficiency	3	1	—
FAS facial features	3	3	—
CNS damage or dysfunction	3	3	—
Prenatal alcohol	—	4	—

Note. FASD = fetal alcohol syndrome diagnostic; CNS = central nervous system. WISC-II = Wechsler Intelligence Scale for Children, 2nd ed.; WISC-III = Wechsler Intelligence Scale for Children, 3rd ed. The Alaska Diagnostic Team used the University of Washington's FASD 4-Digit Code for assessing FASD diagnosis. The numbers correspond to the values on a scale ranging from 1 (*no risk*) to 4 (*high risk*) and given across the areas of growth deficiency, facial features, CNS damage or dysfunction, and prenatal alcohol. Physicians provided a numerical value on all aspects of the four areas.

TABLE 2. Profile of Regular Classroom Teacher Participants

Participant number	Content specialty	Years of professional experience	Gender
1	Elementary	20+	Female
2	Elementary	10	Female
3	Elementary	10	Female
4	English or language arts	7	Female
5	Keyboarding	1	Male
6	English or language arts	2	Female
7	Mathematics	6	Female
8	Mathematics	8	Male
9	Physical education	20+	Male
10	Physical education	12	Male
11	Reading	13	Male
12	Reading	20+	Male
13	Science	1	Female

classroom teachers and other school personnel outside of the formal interview format. Noninterview interactions were recorded in field notes.

A total of 121 hr of classroom observation at three sites were completed during the 3-year period. Extensive descriptive field notes accompanied all classroom observations. Classroom observations were arranged in advance with the participants and preceded the teacher interviews. We sat either by the teacher or in a self-selected location to minimize intrusion, but we sat where we could still observe the student. We typically sat in the back corner of the classroom, took notes on a laptop, and interacted minimally with the students. Observations focused on the teacher's curriculum, teaching and management styles, and patterns of interaction with all students, particularly with the student being observed. We also focused on the student's engagement with the curriculum, peers, and teacher. Field notes contained summaries of relevant informal conversations, such as chance meetings with teachers that resulted in additional information regarding relevant topics. We used classroom observation notes during the teacher interviews to introduce or probe interview topics. These notes were used also to provide continuity and follow-up with the teachers who were interviewed multiple times during the 3-year study.

Interview data were analyzed inductively following standard procedures for interpretive research (Janesick, 1994; Morse, 1994). Following transcription, we read and reread all interviews and independently noted patterns and themes; then, together we compared notes and discussed what we noted. Then, we read all interviews again and determined categories for coding. The first author coded data (teacher interview transcripts and classroom field notes) by hand and then collated them through electronic cut and paste. The second author reread all original, hand-coded data to verify accuracy of the coding. To identify themes across participants and sites, we then read and analyzed the code-specific reports that were generated. We maintained rigor through data and investigator triangulation. Other factors ensuring rigor included the cross-site nature of the study as well as the extended period of time in the field (3 years). To ensure reliability, transcribed interviews were provided to participants for member checking.

Results

Several themes emerged from the analysis of the data: strong patterns across sites, developmental levels, and content areas. In keeping with the goal of listening to teachers talk about their practice, quotations from participants' are included in this article.

Teacher training for FAS inclusion had either not occurred or was perceived as ineffective by the participants. Although a few of the participants could not recall having had any training (e.g., course work, seminars, workshops, in-services) that addressed working with FAS-diagnosed students, most of the teachers had received some information. Unfortunately, however, from the teachers' perspectives, the training was not effective. Reasons for this perceived ineffectiveness varied. One reason was related to the scheduling of the in-service. One teacher stated, "Even though we are all anxious to learn, it's hard to focus on Saturdays, which is when they make us do it from eight to four. And so I can't recall everything from that seminar." Along that same line, another teacher stated,

> The way they created those new teacher in-services, I do have a complaint with, 'cause I sit there and they do a lot of stuff that just drones on and on for the first half of the morning. And then they'll throw in some things . . . like FAS, something to better understand the people that you're working with. They usually do that at the end of the day . . . it's very difficult to be as sharp as a tack.

A second reason for the perceived ineffectiveness of the training for some teachers was that during the training sessions, the teachers were not aware that they had any students diagnosed with FAS, and, hence, they did not perceive the information as relevant. One teacher said, "But then I forgot about it because I didn't know that I had any [students with FAS]." Another teacher added, "I guess it would be helpful to know ahead of time that you're going to be dealing with a student [who's] diagnosed" with FAS. Other teachers criticized the training that they had received as being unrelated to the reality of their classrooms. One teacher found that the training focused on the physical and behavioral characteristics of the students "but not anything as far as how to better teach or things like that." Another teacher was more outspoken regarding the impractical nature of some of the training that she had received:

> When these people come in, they do have ideas. And they say, ok, this is the best atmosphere for the child, or this is the way you need to teach them. But what they don't do is come into your classroom to see the load that you're already carrying. . . . You almost have to be a one–to-one teacher . . . to do what they're asking you to do. And that is extremely frustrating.

Teachers of students with FAS spoke enthusiastically and optimistically about the need for and their desire to participate in teacher training focused on FAS. Despite the fact that teachers felt that they had not profited from past training experiences, they enthusiastically expressed the belief that more information would improve their practice and if "real" information were forthcoming they would be eager to participate: "Definitely, I wish I had a lot more information"; "I know that there's more information since 10 years ago." The teachers with 20 years of experience were as optimistic as were new teachers. One teacher stated, "I would really hope that we could get strategies and

techniques for being more successful in working with FAS and FAE kids. It just seems like the numbers are increasing." According to one teacher, eagerness to improve her practice extended beyond FAS:

> It might give me some other strategies that I could use with not just FAS kids but all my kids. A lot of these kids have a hard time focusing and turning homework in and doing the regular everyday demands of school.

Others held the view that the benefits of training extended beyond the classroom:

> So more training would certainly help everybody, even, you know, our support staff not just us . . . or not just the school, within the community also. I mean the whole community and the whole district. Because it is a team effort as far as what do we see. What do we know needs to be done? How are we going to help and what resources can we use?

In formal interviews and outside the interview context, all teachers across the sites, regardless of grade-level assignment, repeatedly expressed this desire to do better, make a difference, and learn more.

In their classrooms, teachers regarded students who were diagnosed with FAS as students with individual needs. Teachers conveyed that they accepted and viewed all children as individuals and recognized that students in today's classrooms represent a vast array of abilities and achievements.

> Researcher: "Has it been useful for you to know about his diagnosis?"
> Teacher: "No, mainly because so many of my kids are like him that aren't diagnosed with it. They just, they're at lower levels and half of them can't pay attention. The content might be above their head and they're lost or they're not interested. Or they truly are struggling to understand it. . . . Many of my kids are so different, you know, they're so spread out that it doesn't really affect what we do."

In relation to treating students as individuals, teachers did not stereotype their students; rather, they observed and drew conclusions on the basis of observations. Referring to one of her students, an elementary school teacher stated, "She's not disruptive like you read about FAS. If anything, she stays within her shell more than you'd like to see." A high school English teacher noted, "I'm just not seeing the behavior that I read on that sheet really."

Students diagnosed with FAS were evaluated as making academic progress in keeping with their abilities and teacher expectations for the class. There were no cases in which teachers indicated that the student should not be included in the classroom program. In reference to one student with FAS, a teacher stated, "He actually does fine with the math. The math isn't the issue. He's one of my stronger math students. The problem is he misses days." Or, an elementary teacher said:

> In the classroom, she's cooperative and seems attentive to what we're doing. She doesn't always want to do every assignment as completely as she could. But she has a lot of encouragement from the aides that work with her. So, I think she can and does complete most of her work pretty well.

Practice at all three sites included some form of homogeneous grouping, and teachers gauged academic achievement relative to the homogeneous group-level assignment. Educational records indicated that all students with FAS were behind expected grade level in all subject areas.

In evaluating the student's progress in relation to peers, teachers, in general, expressed more concern about behavioral issues than about academic issues.

> "Some days he is really engaged and focused. And other days he's just not even there at all. And then some days like yesterday, he's really engaged and then he just kind of loses it. . . . His days vary. He's so unpredictable."

Across students and sites, data indicated that teachers had perceived similar behaviors in their students with FAS, including wandering attention spans, propensity to be easily distracted, and avoidance of engagement with the assignment or content. Teachers across content areas (Grades 7–12) noted manipulative behavior and unpredictable, volatile mood swings. However, despite these observations, no teacher indicated that the student had the worst behavior problem in their class, and no teacher suggested exclusion from class on the basis of behavior. One teacher stated, "He's certainly not my worst physical education student . . . and he's really not my worst motivational challenge, not by a long shot."

The teachers across sites identified some academic and behavioral strengths and challenges of mainstreamed students with FAS. They identified a similar set of cognitive and academic strengths. Visualization was one strength, and examples varied broadly: "She loves word finds"; "He's a pretty good speller"; "He wants to search the Internet and download games"; "If he can visualize it using other people as examples that he knows, he seems to understand a lot easier." Teachers identified mathematics as a subject area that students with FAS more readily grasped: "He actually does fine with the math. . . . He's one of my stronger math students"; "In math, she receives tutoring on daily work and has a 93% [grade in the class]." Other teachers talked about how relevancy and contextualization improved performance. Regarding one student, a teacher stated:

> We're studying animals right now. . . . Animals are so relative to their life. . . . He seems to be understanding the stuff and he made some comments yesterday that kind of shocked me 'cause none of the other kids were thinking out loud like he was thinking. . . . I mean, he was really trying to figure out [whether] it was internal fertilization or external.

Physical education teachers for both of the male students diagnosed with FAS enthusiastically described successful participation: "I couldn't get him, I mean, we couldn't get going fast enough some days. And now he didn't like every activity that we participated in, but he loved being with the group and moving."

Teachers also observed and articulated cognitive and content challenges, including difficulties with thinking skills, handwriting, and the writing process in general: "The hardest thing for her to do is to come up with original ideas. She relies on what other people say or what other people tell her."

> Researcher: "How does he problem-solve and complete the various science activities?"
> Teacher: "He likes to work with a partner when we're doing those kinds of activities and they're working cooperatively. . . . Sometimes I'll just get papers from him and they'll just be blank or some really off-the-wall answers."

Junior high and high school classroom teachers have a narrow and partial view of the student with FAS. In elementary school, because students are typically assigned to one classroom, the teacher is able to develop a more holistic view of his or her students, which includes academic progress in all content areas, behavioral patterns from arrival at school until dismissal, interactions with peers and adults throughout the day, special services received and available, and the degree and nature of parental involvement. In some cases, as one elementary classroom teacher who participated in our study demonstrated, teachers and students may also develop close bonds and trust relationships that result in the sharing of nonschool aspects of their lives:

> I still find her quite needy for my support and . . . involvement with her and you'll probably see that at lunchtime. She still relies on me to be the one [who] eats with her. . . . I think she really does rely on me as a friend as well as a teacher, someone she can share extra time with.

Another elementary school teacher was concerned about sending one student to junior high with his low academic skills because she feared that he would not get the academic support he needed. Her concern led her to initiate a special education referral in the hopes that the student's qualification would lead to additional support services. She stated:

> One of the reasons why we had tested, we referred him was that in order for him to go on up to junior high, it was better for him to receive the additional services that he needs academically. He's still below level for reading and writing and math and in order for him to succeed, . . . we'd rather send him up with, you know, with an IEP, with a plan at least, for him rather than sending him up with nothing.

In contrast, the junior high and high school teachers who participated in this study taught six classes per day, and students at those grade levels had no assigned primary, or homeroom, teacher. Each classroom teacher was responsible for teaching a specific content and scheduled interactions were limited to 60- or 90-min classes. Teachers in these schools were provided with one planning period each day. Within these settings there was limited contact among the regular education teachers, special education teachers, and parents. Only 4 of 13 teachers at the junior high and high school levels responded that they had coordinated with the special education teacher. All of these teachers remarked that the coordination had been helpful for the students, although for 3 of the participants, it was not ongoing but rather initiated to solve a particular problem. In terms of communication with parents, only 2 of the junior high and high school teachers stated that they had contact. In both cases, contact was limited to negative reports, and both teachers were soliciting parental assistance. There was no evidence that parents and these 2 teachers were in contact except to solve specific problems. The following is an example:

> Researcher: "Do you have any idea how many other of Alan's teachers are calling home?"
> Teacher: "I have no clue."

Junior high and high school teachers also stated that they did not have adequate time to communicate with each other. In general, teachers were unaware of the students' progress in other classes and of what opportunities may be available schoolwide to support the learning of the students diagnosed with FAS.

> Researcher: "Is he getting any special help in terms of his reading and writing skills?"
> Teacher: "I really honestly don't know."

Teachers were frustrated with this lack of time, information, and opportunity for collaboration. One teacher's statement summed up the feeling of many other teachers:

> I feel like if teachers were doctors and we had a cure, only our classroom or our students would know about that cure because we don't do rounds and we don't have time to collaborate very much with our colleagues and to get to find out what's successful with certain trends or certain behaviors exhibited.

Teachers have developed strategies that work in their classrooms to support the academic growth and behavioral challenges of students with FAS. Each teacher in this study used specific strategies in the classroom to support students, and there was a remarkable similarity of strategies that all teachers used. We named the strategies on the basis of teacher description and classroom observation. Teacher comments were included in our discussion to provide a more authentic description of their practice (see the Appendix).

Focus and Refocus

All teachers mentioned distractibility and the need for the teacher to focus and refocus the students on the task. Refocusing may involve a repetition of the directions; but more often, teachers stated that a gentle reminder, a hand on the shoulder, or a nudge was all that was needed. Classroom observations demonstrated that a teacher may have to refocus the student 10 or more times during a 90-min period, and some teachers mentioned that teacher patience was an essential element of effective refocusing. One

teacher said, "I know that there is a problem and it makes you more patient. So when you start to get frustrated as a teacher, you don't blame yourself or beat yourself up." Many teachers stated that they knew immediately when it was going to be a difficult day for the student; thus, they used the refocusing strategy early in the instructional period usually in combination with other strategies such as seat assignment and development of self-control.

Provide Individual Attention

All teachers stressed the importance of providing individual attention to the students. In elementary school, this was partially accomplished through coordination with the special education department and special education teacher aides. In other cases, teachers were able to negotiate opportunities in the regular education classroom to touch base with the student, respond to a question, or supply additional explanation. Several teachers noted that they strategically took advantage of times when other adults were in the classroom to provide more individual attention. Overwhelmingly, teachers were available to their students during lunch, after school, and during other free times.

Establish a Positive Relationship

Though teachers agreed that a positive relationship was important, their styles differed. For example, one teacher stressed the importance of using classroom time to promote a positive climate, whereas another teacher noted that he focused on building positive relationships by initiating interactions outside the classroom environment. Some teachers involved the students in team-building activities, whereas others used cooperative grouping or volunteered for extra duty responsibilities. One teacher called home to report good news and another used a point system that led to a reward. Many teachers mentioned that pushing the student or becoming angry or frustrated were ineffective ways to interact. One teacher and student engaged in negative interaction; this teacher stated the following:

> I probably have dealt harshly with him. . . . My demands aren't so much on academic performance as they are on behavior performance. And I really insist that he stay on task and not run around, not disrupt people, and he likes to do things like that. And I have little patience for him. So I've probably been way more harsh on him than he would like to be treated.

In this situation, the student was reassigned to another teacher and classroom.

Facilitate Partner Work

All teachers in this study used some variation of partner work. Variations included cooperative groups, assigned small groups, self-selected small groups, assigned partners, and cross-age tutors. Teachers were strategic in facilitating partner work, and students were observed to be more on task if they worked with partners as opposed to working alone.

Attend to Seat Assignment

All of the junior high and high school teachers stated that they used seating as a strategy to help the students. Teachers also agreed that this strategy was a "mixed bag" in that sometimes it was effective and sometimes it was not. As 1 teacher said, "Well, he didn't do any work, but at least he stayed in his seat."

Promotion of Self-Control

Although all teachers mentioned the impulsivity of students with FAS, only some teachers, ranging from elementary through high school instructors, indicated that they were trying to address the problem by helping the students develop more self-control. The strategy involved the teachers explicitly stating or pointing out the problem and requesting the student to take charge.

Discussion and Recommendations

1. In-service programs that practically and relevantly address the regular education teachers' efforts to successfully include students with FAS in their classroom programs should be included, and teachers should be provided with schedules for in-service programs that facilitate the teaching and learning processes.

Teachers value information and believe that information will improve their practice. At the same time, teachers want practical and relevant information regarding "how to deal with it when they've gotten to your last nerve." The only participant in this study who had found her in-service experience to be helpful stated, "They showed a video and had some discussion maybe for 3 or 4 hours." This format provides teachers with the opportunity to ask questions, share experiences, and brainstorm strategies. Classroom teachers are practicing inclusion and have observations, ideas, and a disposition to improve practice. Their suggestions for improving the effectiveness of in-service programs that deal with FAS are important for providers.

2. School districts should become familiar with the advocacy model (Streissguth, 1997) and implement some variation of this model for each student diagnosed with FAS in the school.

It is counterintuitive to believe that the fractured and narrow view that junior high and high school teachers have of students with FAS is adequate support for the student's well-being, and two of the students with FAS were institutionalized during this study. One high school student was sent to

an out-of-state institution after completing ninth grade and a middle school student was sent to an in-state institution after completing seventh grade. However, the few times that teachers communicated directly with special education departments or parents, they obtained positive results. Because of the emphasis of U.S. schools at these levels on content acquisition and short class periods with various content specialists, it is unrealistic to expect that teachers will be able to find more time. An advocate's role is to get to know the student personally, academically, and behaviorally. An advocate would coordinate among all interested and involved parties inside and outside of the school. Students with FAS are subjected to educational systems and institutions that they may not understand and are expected to relate to adults who have different agendas, expectations, and styles. At the same time, students with FAS are among the least able to sort out multiple stimuli and construct coherent understandings. An advocacy program could be helpful.

3. Teachers' efforts at inclusion through research programs that focus on helping classroom teachers should be supported.

Currently, many school districts in the United States have formed FAS diagnostic teams that include representation from medicine, psychology, state bureaucracies, social work, school administration, and special education (Ryan & Ferguson, 2002). However, once the diagnostic team has accomplished its task, classroom teachers and schools are left without any assistance, or even a road map, to educate the newly diagnosed child. It is time to direct increased attention to research efforts that more specifically identify the cognitive and behavioral characteristics of students with FAS and practices that support such students in the classroom.

Teachers have found strategies that have been successful in their classrooms. Research programs may further elaborate on these strategies, define more explicitly their application, and identify additional promising practices. Researchers may also address the need to maintain a positive climate and interactions. How can teachers be supported day to day? How can their energy be renewed? Also, for inclusion to be successful, students with FAS need to be supported in their learning. What are the learning strengths? How are students with FAS learning in our schools? What are students with FAS learning in our schools? According to the teachers who participated in this study, students with FAS favor visual learning. If additional research has verified this conclusion, what curricular modifications would follow? What teaching techniques and methods would be recommended? Every day, thousands of teachers across the United States work with students diagnosed with FAS. Schools function and students learn because hard-working teachers enter classrooms each day, determined to do their best for all students. Their efforts should be supported with government-funded research programs focused on issues related to teaching and learning for students with FAS.

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AUTHOR NOTES

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APPENDIX
Teacher Comments for Strategies

Strategy	Content	Teacher comments
Focus and refocus	High school English	"Some days are worse than others, you know. Some days he's kind of off, but when I'd remind him, he's right back on."
	Junior high English	"And he can do the work well with all the things. It's just a matter of getting him on task. Usually it takes some prodding."
	Elementary school	"She needs reminders. And not only in here. She needs reminders in the small group as well. . . . She does get off track."
Individual attention	High school mathematics	"And the biggest thing actually I do is just focus on the math and then as those disabilities come up, work one on one with them. You can help them at lunchtime."
	Junior high mathematics	"He'll come in after school and gets extra help. . . . Sometimes I'll see him in the hallway and he'll ask, you know, something. And I'll help him."
	Elementary school	"She does receive help absolutely every day in reading with a support person besides myself."
Establishing a positive relationship	Junior high English	"He always seems really quick to, he responds well to me. I give him a lot of positive reinforcement at the same time."
	Junior high mathematics	"Respecting the students, you know, they're going to respect you. Sometimes you pull students out of the class and have to have a talk with them about attitude. I just tell them, "It's not 'cause I don't like you. It's just 'cause I don't like your attitude at the moment." And they seem to respond well to that kind of talk . . ."
	Elementary school	"You want to build a community spirit of taking care of each other. Every child is valuable. So, you want to make sure to find something in that child that can be shared."
Partner work	Junior high English	"He likes working with other students; if I tell them they can work as a partner, then he definitely likes doing that. I'll pick a student that I know they match up pretty well and he'll work really well like that."
	Junior high health	"He is more successful in a very small group setting of his peers . . . being cautious of who you choose to have, if you match up in pairs, kind of handpick."
Seat assignments	Junior high English	"He's easily distracted. So, his placement where he's seated in that room makes a big difference on how focused or how well he can pay attention."
	Junior high health	"He's actually asked to go out in the hall or to go down to the special education room and work, 'cause he realizes when he's on his own, he can work better, when he doesn't have all the distractions around him, he does work better. And lately that has been a strategy."
Promoting the development of self-control	High school mathematics	"He'll say, 'Can I go in the hall?' I'll say, 'No, you can get yourself under control. You gotta learn to do that.'"
	Junior high science	"I basically just talked to him about staying on task and asked him what was going on and why he was having a hard time focusing."
	Elementary school	"I want him to know that he has these certain limitations and to be aware of them. Because the older he gets and the more mature he gets, I think the more self-control, it becomes more and more important."