JOURNAL OF THE AMERICAN ACADEMY *of* SPECIAL EDUCATION PROFESSIONALS

SPRING, 2006

JOURNAL of the AMERICAN ACADEMY *of* SPECIAL EDUCATION PROFESSIONALS (JAASEP)

Spring, 2006 Edition

Table of Contents

A NATIONAL PERSPECTIVE: AN ANALYSIS OF FACTORS THAT INFLUENCE SPECIAL EDUCATORS TO REMAIN IN THE FIELD OF EDUCATION

Lautrice M. Nickson
PhD Program Student in Educational Leadership
Prairie View A&M University
Assistant Principal
Coulson Tough K-6 School
Conroe Independent School District
Conroe, Texas

William Allan Kritsonis, PhD
PhD Program in Educational Leadership
Prairie View A&M University
Distinguished Alumnus (2004)
Central Washington University
College of Education and Professional Studies
Visiting Lecturer (2005)
Oxford Round Table
University of Oxford, Oxford, England
ACRL – Harvard Leadership Institute (2006)
Harvard Graduate School of Education
Harvard University, Cambridge, MA

ABSTRACT

The purpose of this article is to analyze factors that influence special educators to remain in the field of education. School administrators are perplexed by the large number of teachers who decide to leave the field of education after three years. The retention rates of special educators' require school administrators to focus on developing a qualified workforce. Careful attention to the working conditions and the induction of early career special educators is needed if we are to build a committed and qualified teaching force (Billingsley, 2004).

The purpose of this article is to discuss factors that influence special educators to remain in education. Teaching is a relatively large occupation- it represents 4% of the entire civilian workforce (Menchaca, 2004). For at least two decades there has been a shortage of fully certified special education teachers in the United States. However, it is only recently that this shortage has received significant attention from policy makers at the national level (Billingsley and McLeskey, 2004). Policymakers and education leaders have become convinced that if they are going to make significant improvements in the quality of education, good teachers are critically important (Kaff, 2004). Resolving the personnel shortage issue in special education is a difficult task that many administrators are faced with. Keeping good effective teachers constitute a valuable human resource and should be one of the most important agenda items for school leaders (Darling-Hammond, 2003).

Support

Burnout and attrition continue to rise among teachers. In the field of special education it has reached epidemic proportion. The annual attrition rate for special education teachers

has been estimated to be between 8% and 10%. Central administration, building administrators, and other teachers must provide support to special education teachers in order to decrease the attrition percentage (Gersten, et. al., 2001).

Special education teachers are more likely to stay in the field of education if they view their schools as good places to work. Positive work conditions include a wide range of variables and a positive school climate. School climate is a good predictor to indicate if a teacher will stay in a particular school. Teachers are more likely to remain in teaching if they perceive their schools as a great place to work. According to Singh and Billingsley (1996) perceptions of principal support increased for teachers of emotional disorders and other special education students, so did their job satisfaction.

Mentoring

Researchers point to the first year of teaching as being pivotal to teachers' futures in the field (Boe, Bobbitt, Cook, Whitener, & Weber, 1997, Mastropieri, 2001; Wisiniewski & Gargiulo, 1997 as cited in Wasburn-Moses, 2005) and recommend that new teachers be given mentors. Mentors can ease the transition process by offering support and suggestions. They can also serve as role models for finding satisfaction in teaching children who have special challenges (Stempien and Loeb, 2002). Mentors should be matched with novice special educators who can provide advice and direction in stressful situations (Wisniewski & Garguilo, 1997).

Experienced mentors help beginning teachers deal with issues that they may encounter on a daily basis. Through mentors, novice teachers are also provided feedback, instructional strategies, and insights into district guidelines as they relate to special education. Research stresses the importance of providing a special education mentor for special education novice teachers even if the mentor works in a different school. It would be difficult for even an experienced regular education teacher to explain the many protocols that special education teachers must follow.

Staff Developments

In order for students to improve academically, professional development is a critical support that must be provided for all teachers. Teachers desire new challenges because they want to learn, develop better skills, and obtain greater knowledge about their practice (Rosenholtz, 1989). Many experts in the field of education believe that staff development is crucial for novice teachers when deciding if they will continue in the field of education.

Level of Education

Banks and Necco (1987) found that the typical graduate degree holder taught for over three years longer than the average undergraduate degree holder". Attrition rates of teachers with graduate training were significantly lower than the attrition rates of teachers with only a B.A. (Bogenschild et al.,1988).

Work Conditions Factors

Work condition factors include those variables that may be influenced mostly directly by school district administrators. Special education administrators, principal support, teacher assignment, role problems, and stress are all factors that influence work conditions. Principal support, role problems, and stress were found to be significantly related to both job satisfaction and commitment and thus indirectly related teachers' expressed intentions to remain in the field of special education (Cross and Billingsley, 1994).

Job Satisfaction

Job satisfaction directly correlates with teacher retention. Research states that workplace conditions play an important factor in the detraction of job satisfaction for teachers: the more factorable the conditions, the higher the more satisfied that they will be in their jobs. Salaries, retirement benefits, and health insurance programs are important, but they are often less important than other factors. Teachers who work in building where there is a lack of administrative and parent support or the school climate is not conducive to learning then the chance of higher attrition rates are possible. Norton (1999), states that if an employee is not satisfied, he/she may seek employment elsewhere.

Administrators have been charged with the daunting task of maintaining a qualified, diverse, and stable teaching force. However, as Nicholas & Sosnowsky (2002) state, special education teachers are leaving the field in much greater numbers than their peers in general education. In fact, special educators leave the classroom at about twice the rate of their regular education colleagues some areas report attrition rates as high as 50% yearly (Mitchell & Arnold, 2004). This is a critical challenge in special education today.

Keeping good teachers in special education classrooms is a priority for school leaders. In order to cultivate qualified special educators, school leaders must provide conditions in which they can grow professionally (Billingsley, 2004). For example, they must create work environments that sustain special educators' involvement and commitment (Billingsley, 2004). Administrators are searching for other ways to keep special education teachers in the classroom.

In conclusion, this investigation was concerned with identifying other factors that may contribute to higher special education teachers' retention. Specifically, this investigation will look at several factors that the literature identifies as influencing teacher retention. These factors are: supportive administrators, job satisfaction, commitment, school climate, and mentor programs. Further research in this area is critical to the retention of special educators in the field of education.

References

Banks, S.R., & Necco, E.G. (1987). Alternative certification, educational training, and job longevity, Action in Teacher Education, 9, 67-73.

Billingsley, B. (2004). Promoting teacher quality and retention in special education, Journal of Learning Disabilities, 37, (5) 370-376.

Billingsley, B and McLeskey, A. (2004). Special Education teacher retention and attrition: a critical analysis of the research literature. The Journal of Special Education, 38(1), 39-55.

Bogenschild, G.G., Lauritzen, P., & Metzke, L. (1988). A study of teach attrition. Milwaukee, WI: Marquette University, College of Education. (ERIC Document Reproduction Service No. ED 311 614).
Cross, L.H., & Billingsley, B.S. (1994). Testing a model of special educators' intent to stay in teaching. Exceptional Children, 60, 411- 21.
Darling-Hammond, L. (2003). Teachers what leaders can do. Association for Supervision and Curriculum Development, 60, (8), 7-13.
Gersten, R., Keating, T., Yovanoff, P. & Harniss, M.K. (2001). Working in special education: Factors that enhance special educators' intent to stay. Exceptional Children, 67, 549-567.
Kaff, M. (2004). Multitasking is multitaxing: Why special educators are leaving the field. Preventing School Failure, 48(2), 10-17.
Menchaca, V. (2004). A wake-up call for principals: Are your novice teachers leaving? Catalyst Change, 33, 25-27.
Mitchell, A. & Arnold, M. (2004). Behavior management skills as predictors of retention among south Texas special educators, Journal of Instructional Psychology, 31 (3), 214-219.
Nichols, A.S., & Sosnowsky, F.L. (2002). Burnout among special education teachers in self-contained cross-categorical classrooms. Teacher Education and Special Education, 25 (1), 71-86.
Norton, S. (1999). Teacher retention: reducing costly teacher turnover. Contemporary Education, 70, (3), 52-55.
Rosenholtz, S. (1989). Workplace conditions that affect teacher quality and commitment: Implications for teacher induction programs. The Elementary School Journal, 89, 421-439.
Singh, K. & Billingsley, B.S. (1996). Intent to stay in teaching: teachers of students with emotional disorders versus other special educators. Remedial and Special Education, 17(1), 37-47.
Stempien, L. & Loeb, R. (2002). Differences in job satisfaction between general education and special education teachers implications for retention. Remedial and Special Education, 23(5), 258-267.
Wasburn-Moses, L. (2005). How to keep your special education teachers. Principal Leadership, 5 (5), 35-38.
Wisniewski, L &Gargiulo, R.M. (1997). Occupational and stress and burnout Among special educators: A review of the literature. Journal of Special Education, 32(3), 325-346.

Published with permission by Dr. William Allan Kritsonis, Editor-in-Chief, NATIONAL FORUM JOURNALS, 17603 Bending Post Drive, Houston, Texas 77095 - www.nationalforum.com

EDUCATIONAL GAMES: A TECHNIQUE TO ACCELERATE THE ACQUISITION OF READING SKILLS OF CHILDREN WITH LEARNING DISABILITIES

Beryl Charlton
Randy Lee Williams
and
T. F. McLaughlin
Gonzaga University

ABSTRACT

This study evaluated the effects of educational games on the performance of eight elementary school students with learning disabilities. The effects of educational games were evaluated in a multiple baseline design across students. The results indicated that each student improved their performance on reading when educational games were in effect. These differences were also educationally significant. Practical considerations and implications of educational games for adoption in the classroom were discussed.

Learning to read can be a discouraging experience for children who have difficulty grasping concepts and skills. Such students may need practice in order to master what some children do after one trial. Carnine, Silbert, Kameenui, and Tarver (2004) have postulated the more highly motivated a remedial reader is, the greater the student's success. Unmotivated students will not receive the benefit of increased instructional time, careful teaching, and a well-designed program. These children may become discouraged with difficulties they encounter in their reading experiences. Unless some element of fun is introduced along with instruction such students may become bored and *turned-off*. (Koran & McLaughlin, 1990).

Games may relieve the drudgery of drill (Baker, Herman, & Yeh, 1981; Koran & McLaughlin, 1990) and can introduce an element of fun helping to motivate the learning disabled child. Among those supporting the role of educational games in the learning process has been Harris (1968). Harris noted that many kinds of drill, disguised as games become play rather than distasteful drill and practice. Golick (1973) felt that for those children who need more time and extra help to master a skill there is the challenge to find activities that are novel and interesting. Ginsburg and Opper (1972), that children take and active part in the learning process. Through games that they play, they practice the skills they are in the process of learning. This, Golick says, is an important aspect of play and subsequently of games.

The first part of this study was designed to determine if poor readers' acquisition of consonant digraphs and consonant blends could be accelerated when teacher instruction was combined with educational games. The second part of the study evaluated the effects of educational games on elementary students' acquisition of *vowel variable* skills.

Method

Participants and Setting

Eight elementary students served as the participants. These children were chosen for the study because each experienced learning and/or social/emotional problems confirmed by the school psychologist's assessments. The subjects were five boys and one girl ranging in age from 7.0 to 10 years of age. A description of each of the students can be seen below.

Participant	Age	Full Scale WISC-R IQ	Disability Designation	Reading Problems	Teacher Reports
Bud	7.0	95	LD/ADHD	Visual Discrimination and poor word recognition	A wide variety of behavior problems are seen in the classroom
Katie	7.0	95	LD	Visual memory word analysis, and word recognition deficits	Shy and withdrawn
Ray	7.3	120	LD	Blending and auditory and visual deficits	Letter reversals with b and d, p and q
Hector	7	89	Ld/Language Delayed	Auditory processing, blending, and visual discrimination deficits	Articulation disorders due to physical problems of an enlarged tongue and too may teeth
Bill	710	72	LD	Poor visual memory	Highly motivated
Moe	10.0	94	LD	Severe auditory and visual deficits	Stubborn and non-compliant
Gus	7.0	91	LD	Visual memory deficits	Non-compliant
Joe	10	116	LD	Visual Memory word analysis, and word recognition deficits	Short attention span, high rates of off-task behaviours

Bud, age 7, (I.Q. 95 WISC-R), a grade-two student with a variety of behaviour problems, was diagnosed as ADHD, and had apparent low motivation. Bud's blending and auditory discrimination were good, but his visual discrimination and word recognition were poor.

Katie, age 7, (I.Q. 95 WISC-R), was a shy withdrawn grade-two student. She had a positive attitude toward school but had low motivation. Her blending and auditory discrimination were also good, but visual memory, word analysis, and word recognition were weak.

Ray, age 7, (I.Q. 120 WISC-R), was a pleasant, cooperative grade-two student. Despite high motivation he experienced difficulties in the reading program. He added, omitted, and substituted words and letters within words. He made frequent reversals with the letters, *b, d, p,* and *q*. Ray blended with difficulty and there was little generalization of reading skills. Both the auditory and visual modalities were weak although the visual channel was stronger.

Hector, age 7, (I.Q. 89 WISC-R), was a Japanese boy for whom English was a second language. He was a highly motivated grade-two boy. He was pleasant and cooperative. Hector's problems were complex. He experienced a serious articulation problem due to under-bite and enlarged tongue, requiring speech therapy. He experienced considerable difficulty with auditory processing. This raised the question that there might be a hearing (acuity) problem caused by periodic swelling of adenoids. Auditory discrimination and blending were weak as was visual discrimination, word analysis and word recognition. Two of his few strengths were visual memory and high motivation.
Bill, age 10, (I.Q. 72, WISC-R), was a grade-three boy with low motivation. He put little effort into his work, was defiant, and related poorly to peers and adults. Bill's auditory discrimination was good, and he blended sounds well. Word analysis was good, but visual memory was poor.

Moe, age 10, (I.Q. 94, WISC-R), a recent arrival from Ireland was a grade-three student . He was a gentle boy in speech and behaviour, although competitive. A recent psychological report stated that Moe was emotionally upset due to his father's death prior to his move to Canada. Testing revealed that Moe experienced severe disabilities in both auditory and visual modalities. Auditory discrimination and sound blending were weak. Visual discrimination, word analysis and word recognition were poor. His strength was in the visual channel.

During the second part of the study two students, Gus and Joe, were additional participants. Gus, age 7, (I.Q. 91 WISC-R), was a grade-two student with low motivation., He vacillated between cheerful cooperation and stubborn resistance. Auditory discrimination and sound blending were good. Visual memory, visual discrimination, and word analysis were not as strong.

Joe, age 10, (I.Q. 116 WISC-R), was a good-humoured grade-three student with a stutter since age four. He was easily distracted, was off-task often, and did not put a consistent effort into his work. His auditory discrimination and sound blending were weak. Visual

discrimination, word analysis, and word recognition were not strong, but visual memory was good.

Each day the students in both experiments received one hour of remedial reading instruction in a resource program. The grade-two students attended at one period of the day, while grade-three students attended at a later period.

Classroom and Personnel

The resource room was bright and cheerful. It was located centrally, facilitating movement to and from the classrooms. There was one Special Education Teacher in charge of the students' program and instruction. During this study three grade-12 Special Project students helped with preparing such materials as charts, flashcards, and educational games. Their presence made it possible for the teacher to give more individual attention to the children participating in the program. The experimenter spent a considerable amount of time training the Special Project students before they could work with the children.

Materials

The materials used in this study were carefully selected to supplement teacher instruction, to meet the needs of the students and to provide adequate practice and review of the skills (e.g. consonant blends). Speech-to-Print Phonic lessons (Durrell & Murphy, 1972) were supplemented by self-correction practice on the same skills. Sets of Dolch Phonic cards were used along with such teacher-made materials as flash cards and Language Master Programs. Two booklets of Spirit Duplicating Masters (Creative Teacher Press, 1979) provided additional practice in learning the blends and vowels variables.

The New Open Highways (Gage, 1974) was designed to meet the needs of children who experienced problems in reading. The accompanying consumable workbooks provided practice in decoding and generalization of skills. To supplement *The New Open Highways* series, Addison Wesley, series, *Big Boy* , was employed. This series is especially developed for slow moving groups of students. Although there is no accompanying workbook for each basal, the manuals provide the extra suggestions for skills development and enrichment needed for learning different children.

Teaching Procedures

In planning remedial instruction, we strove to give as much remedial instruction as possible, initiating this instruction as soon as possible for the learning disabled students participating in this study. Our aim was to move them quickly through the basal readers, starting with *Rolling Along*, level 11, *More Power*, Level 2^1 *Moving Ahead*, Level 2^2. (Gage, 1974). The sequence of the basal series (Addison Wesley, 1974) was; *New Friends for Big Boy*, level 1^2, *Do Some New Things*, level 2^1 (transition), *For the Birds*, Level 2^1, *Hi, Ho, Hortense*, $^{2\text{-}2}$

Across all experimental conditions the students received teacher-instruction alone. A systematic approach to teaching phonic skills (e.g. blends) was implemented with the Speech-to-Print approach (Durrell-Murphy, 1972). These teacher-led lessons help

students develop the basic visual-auditory skills necessary for success in reading. This approach was used to teach the students to attach the sound of speech to printed letters. Through this technique the children are made aware of each initial sound (e.g., *ch*) by hearing and seeing a list of words containing those phonemes. The students repeat the words, emphasizing the phonemes. Attention is called to the position and action of the lips, teeth and tongue in making the sounds. An awareness of the phoneme is established, the student listens for it in the new words, indicating his/her recognition by holding up a multiple response card..

A visual-tactile approach was used along with the above technique. This procedure substitutes symbols for letters. The 26 letters of the alphabet were divided into two groups, each group given its own colour--orange and green. The Cuisenaire Rods were used in this study: orange representing consonants and green vowels. The arrangement of these symbols provides formulas for producing words. The consonants and vowels are represented in such a manner to try to make the task of associating sound to symbol easier for the child.

When teaching a word containing a consonant blend (e.g., *brim*), the word is printed on the blackboard by the teacher. The students construct the words, i.e., an orange rod is positioned where each consonant would go and a green rod where each vowel would go. In the case of blends and diagraphs two orange rods are placed on top of each other to indicate one sound or a blend of sounds. When teaching a short vowel sound, as in the consonant-vowel-consonant pattern, the teacher selects a list of tri-grams containing a short vowel sound (e.g., *bat, pat, cap* etc.). The children make the word pattern with the Cuisenaire Rods. With the consonant-vowel-consonant patter, the green rod standing for the vowel lies flat, indicating that it is a short vowel sound (see Appendix E). When making the consonant-vowel-consonant plus and *e* pattern, the middle green rod, standing for the vowel is upright, indicating that the vowel sound is on. The signal or silent *e* lies flat. This visual-tactile technique allows students to act upon the learning situation. Through such visual-tactile-kinesthetic techniques there is greater possibility of transfer to take place.

Testing and Reliability

Each day the children were tested. They were given a list of 20 partial words to complete. This they did as a response to the teacher's oral cues. A sample of a partial word included in the testing for consonant blends might be, ____*op*, which might become, *chop* or *blop* according to the teacher-dictated prompt (teacher might say *chop* as the prompt). A different list of partial words was prepared to test the students' mastery of the vowel variable sounds. A sample of a partial word included in this quiz might be, *h___t,* which might become, *hat, hate, hart*, etc., according to the teacher-dictated cue. The order of cues employed each day varied. However, the same list of partial words was given each day.

Reliability checks were taken on a weekly basis. All three Special Project students took turns checking the test results, using an answer key. On the day that there was to be a reliability check, the teacher corrected the papers, keeping the results on a separate sheet,

so that there were no marks or scores on the actual quiz paper. The two grading results were then compared. There was total agreement during both parts of the study.

Educational games. With the initiation of educational games the time structure was reorganized to allow 15 minutes daily of game playing. The game designs and purposes were similar for both parts of the study. There were card and board games whose purposes were to teach, reinforce, and motivate the students. Both teacher-made and commercially prepared games were employed. Card games were made to teach and give further experience with blends, digraphs, and/or vowel variables. Words containing skills being currently taught were printed on two and one-half by three inch cards. A multiplicity of games were placed with these words and others. When the enthusiasm waned with one card game, a new card game was begun. The game, *Go Fish*, could be changed for *Concentration* or *Old Maid*, Many other card games were also used. Card games were used to help the children learn a skill. They provided the practice learning disabled children need and they provided an element of fun. Often children possess knowledge, but do not use it. Playing card games was employed to create an atmosphere where the child would use the skill in order to win. Card games have a quick pace and seem to keep motivation high. The children must attend to the play or lose out. As each card is played, the skill being taught is more controlled.

Word puzzles. This game design stresses visual analysis, blending, and visual memory. Words were printed on two and one-half by three inch cards and these were cut neatly into two parts. The students were to fit the word parts together, correctly. The word list was printed on the back of an envelope, so that the children could check their completed word-puzzle with it. The puzzle was stored in this envelope.

Word Dominoes. Words containing such phonic skills and the vowel variables were printed on *domino-shaped* cards. The children matched a specific skill, e.g., short and long vowel sounds. The purpose of the game was to improve blending, word-analysis and the transfer of phonic skills.

Word Classification. Words containing examples of blends, digraphs, and/or vowel variable sounds were printed on small cards. The children classified these into their proper categories: short vowels in one group, long in another, and those controlled by an *r* in a third group. Classification games were used to teach students the similarities, and properties that denote one class from another, and to help them perceive the utility of it, e.g., to perceive the utility of a grapheme used in different words, in different situations.

In this study all games were employed to provide the necessary practice of the skills. In addition, the games were to furnish the opportunity, through discussion, and actively acting upon the learning situation to help the child to understand the usefulness of the skills being learned.

Educational Games
Card Games

These were played with similar rules designed to teach and reinforce the consonant blends, digraphs, and vowel variable sounds.

Picture Cards and Spinners
The purpose of these games is to develop sound-symbol relationship of consonant digraphs by associating the sound represented by such digraphs as *ch, sh, th,* or *wh,* with the written symbol.

The child spins the spinner, names aloud the picture the arrow points to, as *chick*. Finds a card having a picture with the same digraph sound and makes a match. If the player makes a match he or she then discards from the number of cards which have been dealt. The winner is the player who first discards all of his/her cards. (See Appendix M)

Controlled Board Games
Such games were used to provide the opportunity for practice and strengthening of skills taught in this study. The skills, such as digraphs, were printed directly on the game board. A die was required for the play. Upon throwing the die the student moved the number of spaces indicated by the toss, naming the word or grapheme in the space at which they stopped.

Open Board Games
Open Board Games had no skills printed on the face of the board. One such board could be used to give further practice in a variety of skills. All that was required for the play was a die and a deck of cards. Each deck was designed to teach and strengthen a specific skill.

Results
The number of correct blends and digraphs for the six children across experimental condition produced a grand mean score of 7.0 for the six students at the end of baseline I

After the initiation of educational games there was a substantial increase in correct responses. The mean score for each child exceeded the criterion score of 19 correct. The children reached the mastery criterion between 6 and 14 days after Educational Games were introduced.

With the return to baseline there was a decrease in correct responses. The mean score of the six students was 11 points out of a possible 20. With the reintroduction of the games the score rose quickly to criterion level. For five of the six children the criterion score of 19 was reached within five to eight days. Hector's achievement improved to 18 out of 20.

The number of vowel variable sounds correct for the eight children across experimental conditions are. The mean score of the eight students during baseline I was 10. After initiation of educational games, seven of the eight children reached mastery criterion score of 19 points within 3 to 12 days. Hector did not reach mastery criterion. He did

improve from about three problems correct in baseline to about 10 correct with the games.

During follow-up, on all three skills studied, spot-checking was done on a weekly basis. A mean criterion score of 19 was maintained during the five week follow-up period in the first part of the study. During follow-up in the second part of the study a mean criterion score of 19 was maintained over a period of seven out of eight subjects. Hector's mean score during follow-up was 9.0.

Discussion

The results indicate that games can accelerate learning when they are combined with teacher-instruction. The students did profit from a carefully planned program, and their progress was more rapid once the games were introduced. Seven of the eight students achieved 95 percent mastery of the reading skills taught.

The study also showed that the educational games need not be expensive. Although commercial games were used in the study, they need not have been. Teacher-made games can be constructed quickly and economically. It seems that those developed by a teacher can relate more closely to the student's need. If a child should require help with a skill, e.g., blends, a game can be made to strengthen the blend sounds. The cost is minimal so that when one game is no longer needed it can be replaced as soon as the need for change is indicated.

This study shows that children learning disabilities can benefit greatly from additional instruction. The opportunity provided through playing games, to experience the needed practice induces overlearning. Hovland (1959), suggested that prior learning is not transferable to new learning tasks until they are first over-learned. Brophy and Evertson (1976), reported that mastery learning levels of 80% to 85% seemed to produce significant learning gains without negative student attitudes toward instruction.

The criterion level of correct answers to be given for the skills dealt with in this study was 95 percent. The results across follow-up conditions, from four to seven weeks, showed that the skills were mastered and maintained by seven out of eight students. Teacher observation indicated that the students' enthusiasm toward their remedial program remained high. The concentrated teaching and regular testing did not produce any negative comments or apparent negative attitudes toward instruction.

While it is important to teach and to teach well so that the skills are mastered, it is equally important to understand the value of what has been taught. We have suggest the value of over-learning for there to be a transfer of learning to new material, it seems that the student may need to see the utility of what he learns or there will be little or no generalization (Conley, Derby, Roberts-Gwinn, Weber, & McLaughlin, T. F. 2004). Several of our studies have stressed the importance of improving the fluency of students in reading as a way to improve the generalization of treatment outcomes over time (Falk, Band, & McLaughlin, 2003; O'Donnell, Weber, & McLaughlin, 2003. Flavell (1970), indicated the difference between *production deficiency* and *mediation deficiency*. He

noted that a child may fail in a task because he has not yet understood the relations that are needed for it; but he may fail despite having attained information because he is still unable to perceive their usefulness. Carnine et al., (2004), suggested that games can serve as supplementary or reinforcing agents in gaining mastery of skills. For children who need help the games can function as a new and effective means of practice for learning. However, the practical value should not detract from the fun of playing the games. The procedures could be utilized in both the resource room and/or classroom., It might be useful to enlist the aid of volunteers. Carnine et al., (2004), suggested that the more severe the student's deficit, the more careful the instruction must be. They caution, therefore, that the volunteers should not assume too large a responsibility unless they are well-trained and are monitored. In this study, there were tutors who received careful training by the Special Education Teacher. They worked with four students who were in the resource room at the same time as the teacher worked with the children involved in the study. This study was concerned with teaching the learning disabled child so that the child masters and maintains specific skills. One important question unanswered is whether what has been learned will be transferred to a new situation, and to what degree, e.g., will the long vowel sound learned be recognized in new sight vocabulary words. It seems that more research needs to be conducted in area of prior knowledge being transferred to new materials and situations.

The task of teaching reading, and teaching it well, is a complex one. It places a heavy responsibility on the teacher. As Special Education teachers we must not become so involved with teaching skills that we overlook the necessary element of fun; an important ingredient in learning. The educational games can provide this element of fun. The dramatic improvement across all students, involved in this study, shows clearly that when educational games are combined with teacher instruction, learning can be accelerated.

References

Brophy, J. & Evertson, C. (1976). *Learning from teaching: A developmental perspective*. Boston: Allyn & Bacon..

Bucicin, T. & Howenstine, D. (1979). *Spirit duplicating masters. Blends.* Huntington Beach, CA: Creative Teaching Press.

Carnine, D., Silbert, J., Kameenui, E. J., & Tarver, S. G. (2004). *Direct instruction reading* (4th ed*). .* Upper Saddle River, NJ: Pearson.

Conley, C. M., Derby, K. M., Roberts-Gwinn, M., Weber, K. M., & McLaughlin, T. F. (2004). An analysis of initial and maintenance of sight words following picture matching and copy, cover, and compare teaching methods. *Journal of Applied Behavior Analysis, 37,* 339-350.

Durrell, D. & Murphy, H. *Teacher's manual for speech-to-print phonics.* New York: Harcourt Brace Javonovich, Inc.

Falk, M., Band, M., & McLaughlin, T. F. (2003). The effects of reading racetracks and flashcards on sight word vocabulary of three third grade students with a specific learning disability: A further replication and analysis. *International Journal of Special Education, 18*(2), 51-57**.**

Flavell, J. (1970). *Developmental studies of mediated memory*. In H. W. Reese & L. P. Lipsit (Eds.), *Advances in child development and behaviour, Vol 5* (pp.217-247) New York: Academic Press.
Gibson, E.,. & Levin, H. (1970). *The psychology of reading* (3rd ed.) Cambridge, MA: MIT Press. .
Ginsburg, H.,& Opper, S. (1971). *Piaget's theory of intellectual development*. Englewood Cliffs, NJ: Prentice-Hall.
Golick, M. (1973). *Deal me in! The use of playing cards in teaching and learning*. New York: Jeffrey Norton Publishers.
Harris, A. (1968). Research on some aspect of comprehension. Rate of flexibility and study skills. *Journal of Reading, 25,* 123-145.
O'Donnell, P., Weber, K. P., & McLaughlin, T. F. (2003). Improving correct and error rate and reading comprehension using key words and previewing: A case report with a language minority student. *Education and Treatment of Children, 26,* 237-254.
Open Highways Reading Series. (1974). Glenview, IL: Scott Foresman and Co: Author.
Platt, P. (12974). *Big Boy Reading Series.* Menlo Park, CA: Addison-Wesley Publishing Company. .
Van Derford, J. (1979). *Duplicating masters: Vowel sounds.* Huntington Beach, CA: Creative Press.

The Editors of JAASEP wish to thank Dr. Marg Csapo, Editor of the *International Journal of Special Education* for reprinting permissions from 2005 Volume 20, no.2.

INCLUSION IN EARLY CHILDHOOD PROGRAMS: A KALEIDOSCOPE OF DIVERSITY

JoAnn Belk
Mississippi State University

ABSTRACT

Programs for young children are ever changing, becoming a kaleidoscope of diversity as inclusion is implemented. Inclusion of students with diverse levels of disabilities has caused concern from parents and teachers. This article presents some concerns that arise from inclusion and ways of dealing with them.

Problem

All areas of education face changes and challenges constantly. Early childhood education is no exception. A recent challenge teachers in early childhood face is the advent of inclusion. Implementing inclusion in early childhood classrooms creates more diversity among the children. Inclusion of students with various disabilities has caused concern among parents and teachers. There are some concerns that need special attention when including students with disabilities in the early childhood classrooms. This article describes some of the concerns and ways of dealing with them.

Research conducted over the past 30 years has indicated that some 6% to 10% of children and youths have emotional or behavioral problems that seriously impede their development and require treatment in order for these children to function adequately in school and society (Kauffman, Lloyd, Baker, & Riedel, 1995). According to Roach, Halvorsen, Zeph, Giugno, and Caruso (1997), these data may not accurately reflect the number of children with disabilities that are being served in the general education classroom. Many states are believed to be under-reporting the actual number of children placed in general education classrooms.

Reforming public education to accommodate the needs of special education children placed in regular classrooms is a vital issue (Fried, 1998). For several years there have been arguments concerning the placement of children with disabilities in the regular classrooms.

When inclusion children are placed in the regular classrooms the teachers are required to provide individualized instruction for the inclusion children. This may take away time the teacher is able to spend with the other children. In addition, many teachers feel inadequately prepared to deal with the inclusion children. The effects of placing inclusion children in regular classrooms have been both positive and negative (Baines, 1994).

Many public school systems are working with the communities to address problems such as these. One school system that has developed a successful approach to these problems is the Cincinnati Public School System. The school system, along with numerous businesses and concerned citizens, began a study entitled *Inclusion 2000*. Inclusion 2000

is designed to promote awareness by including people with disabilities in educational and community projects.
Many businessmen feel that the Inclusion 2000 is good business sense because nearly 25% of the population in Cincinnati have someone in their households with a disability. One of the goals of the program is to change negative attitudes about people with disabilities (http://inclusion.ort/htdocs/2000/index.html). Placing the inclusion child in the regular classroom provides group interaction and a feeling of universality for the child (Fields, 1995). As the students accept each other, they recognize common problems and work cooperatively to solve those problems. It is also import for the teacher to model acceptance of the inclusion children.

Over the past few years, researchers have been putting together valuable information concerning including children with disabilities in the early childhood programs (Jones & Rapport, 1997). It is the responsibility of all educators to increase their knowledge of early childhood education and develop an awareness of their responsibilities to all children. Early childhood educators need help in providing the best possible instruction for all children, including the children with disabilities who will be placed in the regular classrooms. The following suggestions will help the teachers deal with the inclusion children when they are placed into the regular classrooms.

Preparing for Inclusion
Initially, teachers need to be prepared to deal with inclusion children. Schnailberg (1996) described some ways to help teachers. Organizing inservice training for the teachers who have inclusion students is very helpful. Working with a special education consultant to help develop the curriculum for the children is important. Providing released time for teachers to attend inclusion conferences also helps teachers. In addition, it is very important to involve parents in the program. Conferences should be held with parents regularly. Parents should provide information concerning the strengths, talents, and gifts of the included child so that teachers can focus on what the child can do (McConnell, Hubbard-Berg, & Keith, 1996). Parents should be kept informed of the children's progress. They should be advised of problems that occur and work with the teacher in finding solutions to the problems. As the child's first teacher, parents play an important role in the child's educational program.

Once the child is placed in the class, one of the first concerns is letting group members get to know each other as a way of building trust and acceptance. As trust builds, group members feel more accepted by the group. To a student with a disability, acceptance is a constant issue. Stussman (1997), a former special education student, gives his personal point of view on inclusion by sharing how he felt when separated from regular classroom students. He points out how students can become withdrawn and unhappy with school once there is a realization of the separation from regular children. After being told by his friend that his friend was going into a "regular class" he remembers the sadness that he felt because he was still in the special education class. At age 11, his parents realized that he wasn't being challenged academically and had him placed in the regular classroom. By the end of the second year, he was reading on grade level. From there he went on to receive a college degree and today has a successful career as a technology coordinator.

Stussman (1997) gives this advice to teachers and parents of children with special needs: "Do not limit children. If children do not perceive barriers, they will amaze you with what they are capable of doing" (p. 21).

A first grade teacher, Anita F. Miles, (1998) described how her nephew began to reach many of the important milestones in his life due to the modeling he saw from peers after being placed in a regular classroom. She described his excitement of being invited to his first "real" birthday party by one of his classmates. Miles (1998) stated that studies have shown that the development of social skills is often linked to future occupational success or failure. Being placed in regular classrooms allows inclusion students to learn social skills through interaction with their peers (Smith & Dowdy, 1998). Placing students with disabilities into the regular classroom with their peers reflects the inclusion philosophy that acknowledges the importance of the real world for students' learning (Van Dyke, 1995). Research on best practices indicates that special needs students that are not segregated or taken out of the regular classroom do better academically and socially (McLeskey & Waldron, 1995; Van Dyke, 1995) than those students who are taken out of the regular classroom.

Teachers need to prepare children for the inclusion child that will be added to the class. They can do this by talking with them about the child before he/she is placed in the classroom. Teachers need to help the children develop an awareness and understanding of the child's physical and mental problems. For example, to understand the hearing impaired child, the teacher might ask the children to cover their ears as she speaks to them. For the visually impaired child, the teacher might blindfold some of the children and let other children lead them around the classroom. This would demonstrate the difficulties a hearing and visually impaired child has to cope with. Ways the children can help the inclusion child need to be discussed. Through simulations, class discussions, and modeling, teachers can help children develop an awareness and understanding of the inclusion child.

Classroom Environment

Another concern is the classroom environment. The physical arrangement of the classroom may need to be modified. Furniture may need to be rearranged to provide more space for pathways for children in wheelchairs. In the inclusive classroom students are doing different things, independently and with others. They are moving from one learning environment to another. The classroom needs to be arranged to allow for freedom of movement. Learning centers should be used. These should be used in small groups or with partners. Learning centers provide academic and social skills. The classroom should be student-centered. Students should have the opportunities to make choices. This helps develop responsibility. The children should consider the classroom a community in which each student is important and contributes to the success of the community.

Adapting the Curriculum

The curriculum should be modified to meet the needs of the inclusion child. Cutting (1998) listed the following ways to adapt the curriculum:

· Adapt the way instruction is delivered to the learner, by speaking more slowly

and extending the time allowed for the child to respond.
· Place the students in cooperative groups as an effective approach to accommodating diverse interests and capabilities.
· Adjust the extent of participation required. For example, during a map activity, the included learner can hold the globe while others point out locations.
· Adapt the amount of time allowed for learning or reduce the amount of work to be completed.
· Determine how the special student responds best to instruction. If the child has strong oral language skills, allow him or her to answer questions orally instead of in writing. Some students may be able to respond by pointing to pictures or by writing on the computer. (p. 7)

Teaching Strategies

Another concern of teachers is that inclusion children must acquire the skills to adjust, cope, and succeed in regular education classrooms. Their ability to do this affects their self-concepts. Teachers can help these children by using strategies that enhance self-concept and self-efficacy. Kendall and DeMoulin (1993) have identified strategies teachers may use: (a) use peer tutoring, (b) present lessons in a multisensory manner, (c) design lessons to include relevant materials, (d) provide "student active" learning centers. (e) design lessons so that students will have small successes and attainable goals, (f) teach to the personal interests of the students, and (g) provide motivational activities before each lesson followed by step-bystep sequential directions and instructions, and ending with a review of the lesson. An important element of the success of these children is the belief of the regular classroom teacher that children with disabilities can learn successfully and deserve the opportunity to learn in a classroom with children their own age (Van Dyke, 1995). Many of the teaching strategies that help inclusion children to succeed will also help children in the regular classroom to be successful as well.

Mainstreaming disabled students into a computer classroom is frightening to some teachers. Helping the students to acquire computer skills is challenging. One teacher who faced this challenge was Joyce A. Burtch (1999). She was used to dealing with computers in a regular classroom, but mainstreamed children seemed almost impossible to handle. A colleague introduced her to KIDLINK on the web. KIDLINK is a grassroots, nonprofit organization whose goal is to build better worldwide relationships. Through this organization Burtch was able to obtain the help she needed to work with the inclusion children. She communicated with other teachers who were working with disabled students. They shared ideas and encouragement. With enthusiasm and support from the organization, Burtch's students were able to successfully participate in a computer-based project, write a book, and demonstrate the value of cooperative learning.

Assessment Procedures

When the "included child" is assessed by the same means as the other children in the classroom they tend to fall behind and become discouraged. Use of standardized tests do not accurately measure their progress (Vann, 1997). With the national move to inclusive settings in elementary classrooms, teachers need a better way than standardized testing to assess students.

Gettinger and Stoiber (1998) suggested using performance-based tests such as "teachers' storytelling." Performance-based testing indicates individual progress made by students. It also allows for observation and reflection. Portfolios are also good to use for assessing inclusive children.

Portfolios indicate progress over time. The teacher can look through the samples of the children's work and determine whether the children are progressing or if additional help is needed. The children's strengths and weaknesses can be determined. Another important way the portfolio helps in assessment is that it gives the children as well as the teacher a time for reflection. Self-evaluation is a critical aspect of portfolios. Portfolios are extremely useful for parent conferences. They provide parents an opportunity to examine the child's work instead of just looking at letter grades. This gives the parents a much better insight into the child's progress.

Conclusions

As more children with disabilities are being included in the regular classroom, teachers must be prepared to deal with inclusion. The classroom environment, adapting the curriculum, teaching strategies to use, and assessment present valid concerns for teachers and parents.These concerns can be alleviated through preparation, organization, planning, and support from the administration. By helping the teacher to acquire the necessary skills and information needed to work with inclusion children, everyone benefits. Having inclusion children in the classroom can be an exciting, challenging and rewarding experience.

References

Baines, L. (1994). *Mainstreaming–one school's reality*. Phi Delta Kappan, *76*(1), 39-40, 57-64.

Burtch, J.A. (1999). *Technology is for everyone*. Educational Leadership, *56*(5), 33-34.

Cutting, S. (1998 Jan./Feb.). *Inclusion: Keys to making it work*. Schooldays, 6-7.

Fields, T.H. (1995). *Inclusion with students*. Journal for Specialists in Group Work, *7*(20), 91-98.

Fried, R.L. (1998). *School reform–when interests collide, whose needs come first?* Phi Delta Kappa, 265-271.

Gettinger, M., & Stoiber, K. (1998). *Critical incident reporting: A procedure for monitoring children's performance and maximizing progress in inclusive settings*. Early Childhood Education Journal, *26*(1), 39-46. http://inclusion.org/htdocs/2000/indes.html

Jones, H., & Rapport, M. (1997). *Inclusive early childhood education*. Educating Children With Disabilities, *30*, 57-61.

Kauffman, J.M., Lloyd, J.W., Baker, J., & Riedel, T.M. (1995). *Inclusion of all students with emotional or behavioral disorders? Let's think again*. Phi Delta Kappa, 542-546

Kendall, R.M., & DeMoulin, D.F. (1993). Mains*treaming students with disabilities using self-efficacy*. Education, *114*(2), 201-205.

McConnell, T., Hubbard-Berg, L., & Keith, D. (1996). *Elementary school inclusion start up strategies*. Inclusive Education Programs, *3*(9), 1-2.

McLeskey, J., & Waldron, N. (1995). *Inclusive elementary programs*. Phi Delta Kappa, *77*(1), 300.
Miles, A.F. (1998). *From a teacher's perspective: Full circle on inclusion*.
Roach, V., Halvorsen, A., Zeph, L., Giugno, M., & Caruso, M. (1997). *Providing accurate placement data on students with disabilities in general education settings*. Consortium On Inclusive Schooling Practices Issue Brief, *2*(3), 1-10.
Schnailberg, L. (1996, March). *Right for Rafael?* Teacher Magazine, 33-37.
Smith, T.E.C., & Dowdy, C.A. (1998). *Educating young children with disabilities: Using responsible inclusion*. Childhood Education, *76*(2), 317-320.
Stussman, B. (1997, March). *Inclusion isn't all academic*. The Education Digest, 18-21.
Vann, A.S. (1997, May). *Inclusion: How full?* The Education Digest, 29-33.
Vann Dyke, R . (1995, February). *How to build an inclusive school community: A success story*. Phi Delta Kappan, 475-479.

Published with permission by Dr. William Allan Kritsonis, Editor-in-Chief, NATIONAL FORUM JOURNALS, 17603 Bending Post Drive, Houston, Texas 77095 - www.nationalforum.com

OVERCOMING CHALLENGES AND IDENTIFYING A CONSENSUS ABOUT AUTISM INTERVENTION PROGRAMMING

Carolyn E. Stephens
University of Georgia

ABSTRACT

Identifying effective interventions to help children with autism reach their potential has been a source of disagreement among professionals and parents for decades. The complexities of the challenges that face children with autism, and uncertainty about best practices, have delayed progress. This article identifies seven critical program components that address some of the challenges associated with providing effective and efficient autism intervention programs. The results for children who participate in these programs encourage belief in the ability of children with autism to respond with positive change to appropriately designed and implemented interventions.

The number of children with autism entering public school systems has increased dramatically in the last 15 years (National Research Council, 2001; Yeargin-Allsopp, et al. 2003). In response, schools are struggling to meet the demands for skilled personnel and effective program structures (Peeters & Gillberg, 1999; Simpson, 1995). Professionals have disagreed about how best to identify components necessary for appropriate programs, how to implement programs that meet a broad range of children's needs, and how to match efficient and effective services to specific characteristics of individual children (Anderson & Romancqyk, 1999; Brown & Bamberra, 1999; Cohen, 1999; Feinberg & Vacca, 2000; Pfeiffer & Nelson, 1992).

This article presents a brief historical perspective on factors that have complicated implementation of effective interventions on the large scale necessary to meet the needs of school systems in the United States. It also presents seven program components that, based on the literature, may significantly improve results of any comprehensive intervention. These seven program characteristics are supported by many professionals from multiple disciplines involved in studying needs of children with autism. In this regard, the use of the word *professionals* includes teachers as well as others, such as speech and language pathologists, psychologists, and program administrators. Changes in autism interventions are clearly moving in a positive direction in which children are demonstrating motivation to learn in programs that can address the developmental deficits that interfere with their learning (Bryan & Gast, 2000; Koegel, Koegel, & McNerney, 2001).

Multiple factors Influence Development of Effective Systems of Intervention

The literature identifies at least four factors that have contributed to the difficulty many program administrators face in trying to provide effective and sufficient services for

children with autism (Conderman & Katsyannis, 1996; Feinberg & Vacca, 2000). They include the following: (a) Characteristics of autism interfere with learning, (b) Programs maintain low expectations based on historically poor long-term results, (c) Funding resources are limited and intensive programs are costly, and (d) Parents and professionals have had divergent points of view about some fundamental issues.

Characteristics of Autism Interfere with Learning

The unique learning characteristics of those diagnosed with autism vary widely from typical learners, and contribute to the complexities of determining a single best treatment (American Psychiatric Association (APA), 1994, Campbell, Schopler, Cueva, & Hallin, 1996). Atypical patterns of attending to stimuli impede children with autism from focusing on critical aspects of tasks (Koegel, Koegel, Frea, & Green-Hopkins, 2003; Smith & Lovaas, 1998). Atypical choices in reinforcement interfere with children's correct responding to tasks assigned (Heflin & Alberto, 2001). Social interactions that contribute to early learning experiences of typically developing children are often replaced with preferences for focusing on objects rather than people (Garfield, Peterson, & Perry, 2001; Pierce & Schreibman, 1995). Receptive and expressive languages develop unevenly and usually assume unique patterns, which require adaptations or specific methods of intervention to overcome (Lamers, & Hall, 2003; Koegel, 1995). When learning does occur, unless children reach a level of mastery and self-motivation in using new skills, they often fail to generalize their use in natural settings (Anderson, Taras, & Cannon, 1996). As a result, specific learning strategies and environments are necessary in order to maintain children's attention to task and their motivation for school progress.

Behavior differences in children with autism are resistant to change and often do not respond to common methods of discipline and reinforcement in schools. When interventions do not address the broad range of behaviors characteristic of children with autism, children remain isolated from their communities, disrupt their families' lives, and show poor long-term outcomes (Abelson, 1999; Norton & Drew, 1994; Sanders & Morgan, 1997). Behaviors frequently include self-injury, aggression, property destruction, odd vocalizations, sleep disturbances, or stereotypical self-stimulation. Preoccupations with aimless and repetitive behaviors add to children's isolation from meaningful social interactions with teachers and peers that are essential for emotional development and cognitive growth (Koegel, Koegel, Harrower, & Carter, 1999)..

Programs Maintain Low Expectations Based on Historically Poor Long-term Results

Low expectations for children with autism have been perpetuated in part because standardized scores, language assessments, and levels of educational placements tend to remain in a disabled range over time for most individuals (Feinberg & Beyer, 1998; Simpson, 1995). Deficits in motivation during testing, combined with weak general knowledge, cause many children with autism to perform poorly on tests that are normed

on typically developing individuals (Oren & Ogletree, 2000). Children's specific problems with language can severely limit correct responding in testing situations (Schwartz, Boulware, McBride, & Sandall, 2001). Difficulties in generalizing use of learned skills further interfere with meaningful test results (Olley, 1999). With poor test scores, cycles of failure for many children with autism are perpetuated.

The bulk of past research and clinical evidence also supports low expectations for most children. Long-term outcomes for children with autism indicate that small improvements in programs do not dramatically improve results (Rogers, 1998). Skeptical professionals dismissed rare reports about individuals with autism who tested in the normal range of intelligence or functioned independently in general education classrooms (Lovaas, 1987; McEachin, Smith, & Lovaas, 1993). Investigators who report best outcomes in addressing the multiple areas of difficulties for children with autism often advocate full day comprehensive programs that are not easily defined using results of empirical studies (Pfeiffer & Nelson, 1992; Strain & Schwartz, 2001). Critics of the investigators claiming significant levels of higher functioning attribute optimistic reports to research weaknesses, such as inadequate outcome measures, an initially higher functioning experimental group, or nonrandomized, unmatched control groups (Gresham, Beebe-Frankenberger, & MacMillan, 1999; Gresham & MacMillan, 1998). In this research climate, administrators are reluctant to support programs that offer what they believe are false hope to families (Simpson, 1995).

After the late 1980's, research and a few remarkable autobiographical accounts by adults with autism, began to change attitudes among some professionals. The lack of clear empirically supported answers resulted in continuing conflicts among those professionals who set conservative goals and those who plan for more independent functioning (Smith & Lovaas, 1998; Wolery, 2000). Some professionals maintain what they consider is a healthy skepticism about unproven potential in children with autism. Programs target adaptive functioning in specially structured environments, with expectations that many children can function best as adults in specially designed group living and working settings (Mesibov, Adams, & Klinger, 1997). Other professionals recommend programs in which the overall goal is to enable children to function individually within natural settings, in their own families, and in their own larger communities (Maurice, 1993; Maurice, Green, & Luce, 1996; Campbell et al. 1996). Although some professionals believe greater progress for children with autism is possible with improved methods of instruction and comprehensive treatment approaches, most stop short of expecting normalization of development and learning (Donnellan, 1999).

Funding Resources are Limited and Intensive Programs are Costly

Legislative demands in the last 15 years and recent increases in numbers of children with autism in school populations present public systems with unavoidable financial and personnel demands in order to meet minimal program requirements (Charman, 2002; Dunlap, 1999; Feinberg & Vacca, 2000). Intensive and comprehensive autism

intervention programs, claiming to produce the largest numbers of individuals achieving normal levels of functioning, require more direct service hours and staff than traditional school programs provide (Greenspan & Wieder, 1997; Koegel et al. 1999; Simpson, 2001; Strain & Schwartz, 2001 Smith & Lovaas, 1997). School administrators remain reluctant to support what they believe are probably unreasonable costs for questionable results (Feinberg & Vacca, 2000; Greenspan & Wieder, 1999; Koegel et al. 1999; Smith & Lovaas, 1998). For teachers already in public schools, new programs require in-service planning and broad system support for training, supervision, and hours necessary for adequate preparation and collaboration (Dunlap, 1999). In all of this, teacher training programs and practica must evolve rapidly to keep pace with the significant changes in intervention that result from current research activity and demonstration projects (Conderman & Katsiyannis, 1996).

A growing number of families and professionals expect public school programs to realize the social and intellectual potential for more children with autism. While some are reluctant to provide budget allocations for a minority population of children in their systems without sufficient evidence that short term expenses will significantly limit the amount of funding required in the future (Symon, 2001; Williamson, 1996). Others pursue resources such as private grants, university personnel, multiple public agencies, peer mentors, and parents as treatment providers to fund and staff intensive programs (Bondy, 1996; Luiselli, Wolongevitz, Egan et al., 1999; New York State Department of Health, 1999; Ozonoff & Cathcart, 1998; Peeters & Gillberg; 1999; Pierce & Schreibman, 1995; Simpson, 2001; Smith & Lovaas, 1998;). The multiple challenges in providing appropriate interventions for children with autism present program administrators with significant difficulties to over come. Some parents still remain dissatisfied with the quality of current programs and pressures for program administrators continue (Kohler, 1999).

Parents and Professionals have had Divergent Points of View about Fundamental Issues

Even parents of young children with autism seeking intervention for the first time, are often aware of well-publicized attitudes expressed by some professionals towards parents that do not facilitate collaborative team efforts. These include issues related to professionals' attitudes about parental roles in contributing to their children's disabilities, parents interfering in reasonable school placement decisions, and parents setting unreasonable goals for interventions (Donnelly, Bovee, Donnelly et al., 2000; Folstein, 1999). Parents, for their part, are less likely than they were in the past to accept expert professional advice about program planning without questioning the knowledge or capabilities of those who offer the advice (Feinberg & Vacca, 2000). As a result of their concerns about adequacy of programs available for their children, some parents request services that have little empirical evidence of effectiveness.

Parents today perceive that there is legislative support for public systems to prepare children to function in settings where they would participate normally if they had not been disabled (Council for Exceptional Children, 2000; Stowe & Turnbull, 2001; Roper & Dunst, 2003). Parents compare poor effects of traditional school programs of the past

with global and significant changes some children with autism reportedly experience in intensive, comprehensive, and financially costly nontraditional programs (Campbell et al. 1996; Greenspan & Wieder, 1997; Maurice et al., 1996; MacEachin et al., 1993; Rogers, 1998; Symon, 2001). Disagreements within parent-professional teams about what are adequate services, at times, result in abbreviated programs with few necessary elements of appropriate intervention approaches (Schwartz et al. 2001; Smith & Lovaas, 1997; Woods & Wetherby, 2003). Although both groups try to fulfill their responsibilities to children with autism, their differences in interpreting the literature limit program effectiveness.

Seven Critical Program Components are Described in the Autism Literature

The literature identifies significant challenges facing intervention decision makers as they develop new programs and strengthen old ones. The literature also serves as a source for empirically supported critical program components that strengthen interventions (Campbell, 2003; Dunlap, 1999; National Research Council, 2001; Pfeiffer & Nelson, 1992; Rogers, 1998). The critical components address communication, social, and behavioral areas of functioning that form the triad of diagnosing criteria for autism (APA, 1994). The program components target a wide range of deficit areas in order to enable children with autism to act more independently, have real choices in natural contexts, and appropriately communicate socially and academically. The seven critical program components that represent a consensus among professionals are identified as:

1. Autism interventions that are supported by empirical evidence should begin as early as possible.
2. Parents should be teachers and decision makers in collaborative teams with professionals with autism expertise.
3. Families and professionals should individualize communication strategies using a broad range of scaffolding approaches.
4. Professionals should individualize instructional strategies to enable children to demonstrate regular cognitive growth.
5. Programs should provide multiple opportunities for social engagement supported by scaffolding from adults and peers.
6. Adults should teach children pivotal behaviors, including behaviors for initiating, maintaining, and generalizing skills across natural settings and motivate children to function capably in all settings.
7. Children should be given multiple opportunities to learn the social-cognitive skills related to theory of mind concepts about other people's thinking.

A diversity of theoretical approaches, empirical methods of investigation, and professional disciplines support the seven program components that form a consensus among many professionals studying autism intervention. The program components discussed below are not sufficient to change inadequate, unsuccessful programs that have weak theoretical underpinnings into successful ones. However, children with autism in programs without these seven components, are not likely to reach high levels of meaningful, life enhancing functioning.

Early and Evidence-based Intervention

Evidence is strong and undisputed in support of the first program component. Autism interventions that are supported by empirical evidence should begin as soon as toddlers and preschoolers can be identified (Klinger & Renner, 2000; New York State Department of Health, 1999; Osterling, Dawson, & Munson, 2002; Rogers, 1998, Simpson, 2001; Wolery, 2000; Woods & Wetherby, 2003). With the help of reliable screening and diagnostic instruments for young children with autism developed in recent years, children can begin intervention at younger ages than was possible in the past (Lord, Risi, Lambrecht, Cook, Leventhal, DiLavore et al., 2000; Stone, Coonrod, and Ousley, 2000).Courchesne, Karns, David et al., (2001) provide evidence that children with autism may be born with brain sizes within a normal range at birth but deviate from average patterns of growth in the first few years of their lives.

Empirical evidence from programs representing varied intervention approaches, supports the long-term positive effects for children with autism when interventions begin as soon as children at risk are identified (Greenspan & Wieder, 1997; 1999; Lovaas, 1987). McEachin et al. (1993) described the lasting effects for almost 50 % of the children in their intensive intervention group who began treatment when they were preschoolers. McGee, Morrier, and Daly (1999) describe the necessity of providing adequate programs for young children with autism when they can benefit most in preschool inclusion. Identifying children early and beginning intervention programs during critical first years is a major step in improving results for children with autism.

Collaborative Teams

The second critical program component is that parents should be teachers and decision makers in teams that include professionals with specific expertise in autism theory and practice (Anderson & Romancyzk, 1999; Greenspan & Wieder, 1999; Lovaas, 2003; Mahoney & Perales, 2003; Ozonoff & Cathcart, 1998; Sheinkopf & Siegel, 1998 Smith, 2001). Studies demonstrate the capability and positive effects of parents participating as teachers for their children with autism (Greenspan & Wieder, 1997; Ozonoff & Cathcart, 1998; Sheinkopf & Siegel, 1998). Parents' successes depend, not only on their own motivation and maternal styles of relating but, on adequate professional support.

Studies also show the variety of functional areas that can be affected when parents are trained to implement intervention strategies. Siller and Sigman (2002) studied synchronization of mothers' behaviors with the behaviors of their children with autism. Children of mothers who were better at synchronizing their behaviors with their children's behaviors had higher levels of communicative functioning at 1, 10, and 12 years of age compared to children participating in less synchronized interactions. Lovaas (1987) found that children maintained and generalized skills better when parents were trained to implement intervention strategies. Drew and colleagues (2002) taught mothers strategies for increasing their interactions with their preschool children with autism (Drew, Baird, Baron-Cohen et al. 2002). Mahoney and Perales (2003) taught 20 mothers a Responsive Teaching curriculum in one hour weekly sessions for eight to fourteen months. Young children with autism significantly improved social-emotional functioning after mothers implemented the relationship-focused strategies.

Marshall and Mirenda (2002) found that parents of a four year old with autism were highly motivated to participate in a program addressing his problem behaviors. The boy's parents were taught to use positive behavioral supports at home. The parents learned the strategies and continued to use them after their training ended. Another study addressed challenging behaviors in three young boys with autism (Moes & Frea, 2002). Consultants and parents jointly conducted functional assessments in the natural settings where problem behaviors occurred. The boys responded with dramatic decreases in tantrum behaviors and the families continued interventions after the collaborative phase ended. Multiple studies using varied techniques demonstrate the important roles parents can play in intervention for children with autism when professionals support them adequately.

Individualized Communication

The third important component for autism intervention programming involves the use of individualized techniques that enable children to effectively communicate with others. (Bondy & Frost, 1994; Greenspan & Wieder, 1999; Koegel et al. 2001; Marshall & Mirenda, 2002; Sheinkopf & Siegel, 1998; Olley, 1999; Smith, 2001; Symon, 2001; Woods & Wetherby, 2003). Individualizing communication methods for children involves both teaching them ways to communicate effectively to others as well as presenting information using strategies that enable children to comprehend communications. McCathren (2000) found that a preschooler with severe communication and cognitive delays dramatically increased her frequency and clarity of communication when her teacher implemented prelinguistic milieu training strategies. Ross and Greer (2003) found that five elementary school children increased efforts to communicate with vocal speech sounds after learning through motor imitation and mand training procedures. Whittaker and Reynolds (2000) taught four boys with severe autism and learning disabilities to use hand signaling using dyadic proximal communication strategies. All boys showed more hand signaling with an adult during experimental sessions (mean 35.5) than they showed during classroom interactions (mean 7).

Uses of technology in intervention programs have resulted in dramatic improvements in comprehension and responding behaviors for some children with autism (Blischak & Schlosser, 2003). Kimball, Kinney, Taylor, and Stromer (2003) taught two children to follow activity schedules using a PowerPoint program on desktop computers. Children improved in areas of independence and in predicting, preparing for, and transitioning between activities. Children improved targeted skills and they also increased efforts to communicate with others. Wert and Neisworth (2003) measured effects on four children's spontaneous requesting behaviors at home after they watched video self-modeling examples. Children increased spontaneous social engagement and requesting behaviors at home and generalized the new behaviors to school settings. Given the primary difficulty children with autism have in initiating and participating in interactions using nonverbal gestures and verbal language, productive teaching strategies and technological techniques are important options for children to improve communicative functioning with others.

Cognitive Progress

The fourth critical program component for autism intervention relates to the need to adequately prepare professionals to overcome learning differences of children so they can achieve and demonstrate regular cognitive progress (Scheuermann, Webber, Boutot, & Goodwin, 2003). When professionals receive adequate and specific autism intervention training, evidence indicates that they are able to help children make meaningful progress in cognitive skills (Anderson & Romancsyk, 1999; Charlop-Christy, & Daneshvar, 2003; Dunlap, Kern, & Worcester, 2001; Mirenda, 2001; Olley, 1999; Oren & Ogletree, 2000; Smith 2001; Wolery, 2000). Professionals need broad knowledge bases and specific expertise to make good choices in both assessment methods and instructional strategies. In order to accurately measure progress, school personnel must learn formative and summative evaluation methods that are practical, reliable, and valid for children with autism (Oren & Ogletree, 2000).

Teachers must choose appropriate instructional methods based on individual differences in form and function of children's behaviors. Koegel et al. (2003) described successful intervention strategies for two boys with autism whose behaviors were disruptive in their inclusive classrooms. Priming techniques, in which school assignments were presented to children the day before they were presented in class, resulted in improvements in the boys' behaviors and in their correct academic responding. Appropriate and salient techniques for modeling behaviors help children with autism succeed academically. A young girl with autism learned generative spelling skills by watching her teacher's model on videotape. The girl maintained spelling gains for most words after a four-week follow-up period (Kinney, Vedora, & Stromer, 2003). Charlop-Christy, Le, and Freeman (2002) measured children's language and play behaviors following video and in-vivo modeling conditions. Both forms of modeling resulted in increases in the children's use of expressive labels, independent play, spontaneous greeting, oral comprehension, conversational speech, cooperative and social play, and self-help skills. However, generalization of new skills only occurred in the video modeling condition. Intervention programming must provide varied opportunities for learning that are scaffolded by adequately trained teachers in order for children to benefit in cognitive functioning.

Social Engagement

The fifth critical program component is provision of scaffolding support from others during multiple daily interactions with peers in order to teach children the reinforcing qualities of social engagement (Lovaas, 2003; McGee et al., 1999; Pfeiffer & Nelson 1992; Strain & Schwartz, 2001). Direct instruction in classrooms, which is supported by sound research, remains important for children with autism, but in addition, child-driven, positively affective, social engagement should be a part of daily activities (Campbell, 2003; Dunham & Dunham, 1990; 1995; Rogers, 1998). In a study by Robertson, Chamberlain, and Kasari (2003), positive social interactions of children with autism with their general education teachers in inclusive settings affected children's social acceptance

by other students. Saxon, Colombo, Robinson, and Frick (2003) found a correlation between high levels of joint attention social interactions and positive cognitive, adaptive, and language outcomes.

An integrated play group involving twin autistic boys and three sisters from another family demonstrated the positive effects of teaching peers to scaffold play interactions in children with autism (Zercher, Hunt, Schuler, & Webster, 2001). The boys increased the frequency of responding to joint attention bids from the sisters, although they did not increase their initiation of joint attention engagement. The effects of positive social engagement on a range of social and academic behaviors are promising topics for further research.

Pivotal Behaviors

A number of behaviors that are typically difficult for children with autism to master are pivotal to intervention success (Koegel et al. 1999; Koegel, Koegel, Shoshan, & McNerney, 1999). The sixth critical program component addresses pivotal skills deficits, with emphasis on improving children's motivation, initiation, maintenance, and generalization of new skills in all natural settings (Burack, Charman, Yirmiya, & Zelazo, 2001; Greenspan & Wieder, 1999; Koegel et al. 2001; Rogers, 1998; Strain & Schwartz, 2001; Symon 2001; Wolery, 2000). Koegel et al. (1999) trained adults who regularly interacted with six young children with autism to teach children a series of self-initiation skills designed to promote interactions in their daily lives. The results indicated that three of the six children in the study had good pragmatics on postintervention measures while three had poor pragmatic use of language. The three children with good outcomes had significantly higher levels of self-initiations at intake than the children with poor outcomes. Researchers concluded that self-initiations may represent a pivotal skill that should be taught to children with autism who do not initiate social interactions when they enter intervention programs.

Milieu intervention strategies are commonly used to teach pivotal skills to children with autism who have difficulty generalizing learning to novel settings. In milieu interventions, children learn in the context of the daily settings where skills are needed. Yoder and colleagues conducted a number of studies to measure effects of prelinquistic milieu teaching on communication of young children with developmental delays (Yoder, Kaiser, Goldstein et al., 1995; Yoder & Warren, 1998). In the recent study by Yoder and Warren (2002), 39 children less than 24 months old with developmental delays of unknown etiologies were randomly assigned with their primary caregivers to two comparison groups. Children who participated with parents trained in prelinguistic milieu teaching increased the frequency of initiating comments, requesting, and lexical density. Preschool programs specifically designed for inclusion of children with autism provide further evidence for effectiveness of milieu intervention strategies. In the Walden Toddler Program, children are provided with multiple repetitions of learning trials by careful structuring of daily activities and objects to teach children to respond appropriately to naturally occurring stimuli (McGee et al., 1999). For children with

autism, learning pivotal skills during naturally occurring interactions, helps children gain mastery and better generalize learning to natural settings.

Theory of Mind

The final critical program component for autism intervention is that children with autism should participate in social interactions that help them learn social-cognitive skills related to concepts about others' minds (Burack et al. 2001; Greenspan, 2001; Klinger & Renner, 2000). The theory of mind hypothesis identifies a failure in children with autism to understand that other persons do not share the same relationship to, or thoughts about, objects and events in their environment (Garfield, et al. 2001). This deficit, in theory, significantly influences children's social and cognitive functioning. There is sufficient empirical evidence in the literature to include theory of mind as an important program goal, especially for older children with autism (Frith & Happe, 1999; Skuse, 2003; Tager-Flusberg, 1992; Tomasello, 1995).

Some studies provide evidence that children with autism may understand precursor behaviors that may facilitate learning the more complex aspects of theory of mind thinking. Carpenter, Pennington, and Rogers (2001) tested the responses of preschoolers with autism to others' unfulfilled intentions. The authors found that children with autism were not significantly different from a control group of children in understanding of others' intentions. They concluded that deficits in understanding intentions might not be as severe as deficits in completing traditional theory of mind tests for children with autism.

Nadel, Croue, Mattlinger, Canet, Hudelot, LeCuyer, and Martini (2002) conducted a study to measure whether low functioning children with autism would form social expectancies for an adult interacting with them during still face paradigm conditions. The authors found that children moved closer to the adult and touched the adult more frequently after the conditions in which the adult first remained still before repeatedly imitating the child. The authors interpreted children's increases in social behaviors as evidence that children could integrate previous social experiences with a current situation to form a social expectancy for an interactive partner. Charlop-Christy and Daneshvar (2003) showed three boys with autism video models for perspective-taking tasks. The children with autism improved understanding about another person's mental states after watching the videotape on perspective taking. In these studies, children with autism showed potential for understanding some aspects about others' thinking. Researchers interpreted children's behaviors as distinguishing others' thoughts from their own. To fully understand the theory of mind concepts, however, children with autism are likely to need specific adult scaffolding and multiple opportunities before they gain the higher levels of social-cognitive functioning.

Discussion

A literature review about autism intervention across theory and practice approaches results in two major conclusions. First, professionals should achieve proficiency in multiple theories and interventions for children with autism. Evidence does not support a single theory base or one intervention approach for all children with autism. Until children can be matched with appropriate interventions, trials of different approaches may be necessary in order to identify a best intervention for an individual child. Second, once effective and efficient interventions are established in programs, regular availability of expert supervision or consultation is needed to maintain the quality of interventions. As research efforts continue to elaborate on intervention characteristics that address the needs of children with autism, experts will be needed to interpret results and implement appropriate modified or new program components.

Positive changes in autism intervention are evident in the literature describing programs for children with autism. Families and professionals are beginning to function as teams to determine and implement appropriate services for individual children. Professionals are providing consultation and supervision services that extend program strategies beyond school hours and into children's homes. School systems are intensifying efforts to provide effective services to larger numbers of children with autism. Pertinent topics in the autism literature represent ongoing discussion and empirical study about how to effectively and efficiently a) match individuals with appropriate interventions based on clusters of characteristics, b) provide pre-service and in-service training for teachers about theory and implementation of programs, c) offer multiple options within systems to ensure that parent-professional teams have adequate choices for individualizing instruction; and d) give children sufficient and supported opportunities to participate in communication and social interactions that are reinforcing.

Many of the challenges faced by program planners remain in a field where children's characteristics and needs vary greatly from typically developing children. Necessary components for adequate autism intervention programs become more clearly defined through ongoing research and clinical evidence. Few professionals and parents question the need for well-trained staff, empirically supported application of learning theories, and cooperative team efforts in educating children with autism effectively. The consensus among professionals, however, provides a direction for program planning rather than definitive answers. Further investigations can be expected to elaborate on current knowledge as more and better programs become implemented.

References

Abelson, A. G. (1999). Respite care needs of parents of children with development disabilities. *Focus on Autism and Other Developmental Disabilities, 14* (2), 96-100, 109.

American Psychiatric Association, (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Anderson, S. R., & Romanczyk, R. G. (1999). Early intervention for young children with autism: Continuum-based behavioral models. *Journal of the Association for Persons with Severe Handicaps, 24* (3), 162-173.

Anderson, S. R., Taras, M., & Cannon, B. D. (1996). Teaching new skills to young children with autism. In C. Maurice, G. Green, & S. Luce (Eds.), *Behavioral intervention for young children with autism: A manual for parents and professionals* (pp. 181-194). Austin, TX: PRO-ED.

Blischak, D. M. & Schlosser, R. W. (2003). Use of technology to support independent spelling by students with autism. *Topics in Language Disorders, 23* (4), 293-304.

Bondy, A. S. (1996). What parents can expect from public school programs. In C.Maurice, G. Green, & S. C. Luce. *Behavioral intervention for young children with autism. A manual for parents and professionals (*pp. 323-330). Austin, TX:PRO-ED.

Bondy, A. S., & Frost, L. A. (1994). The picture exchange communication system. *Focus on Autistic Behavior, 9,* 1-19.

Brown, G., & Bambera, L. M. (1999). Introduction to the special series on interventions for young children with autism: An evolving integrated knowledge base. *Journal of the Association for Persons with Severe Handicaps, 24* (3), 131-132.

Bryan, L. C., & Gast, D. L. (2000). Teaching on-task and on-schedule behaviors to high-functioning children with autism via picture activity schedules. *Journal of Autism & Developmental Disorders, 30* (6), 553-567.

Burack, J. A., Charman, T., Yirmiya, N., & Zelazo, P. R. (Eds.) (2001). Development and autism: Messages from developmental psychopathology. *The development of autism: Perspectives from theory and research (pp. 107-123).* Mahwah, NJ:Lawrence Erlbaum Associates, Publishers.

Campbell, J. M. (2003). Efficacy of behavioral interventions for reducing problem behavior in persons with autism: A quantitative synthesis of single-subject research. *Research in Developmental Disabilities, 24*, 120-138.

Campbell, M., Schopler, D., Cueva, J. E., & Hallin, A. (1996). Treatment of autistic disorder. *Journal of American Academy of Child and Adolescent Psychiatry, 35* (2) 134-143.

Carpenter, M., Pennington, B. F., & Rogers, S. J. (2002). Interrelations among social-cognitive skills in young children with autism. *Journal of Autism and Developmental Disorders, 32* (2), 91-106.

Charlop-Christy, M. H., & Daneshvar, S. (2003). Using video modeling to teach perspective taking to children with autism. *Journal of Positive Behavior Interventions, 5* 12-21.

Charlop-Christy, M. H., Le, L., & Freeman, K. A. (2000). A comparison of video modeling with in vivo modeling for teaching children with autism. *Journal of Autism and Developmental Disorders, 30* (2), 537-552.

Charman, T. (2002). The prevalence of autism spectrum disorders: Recent evidence and future challenges. *European Child & Adolescent Psychiatry, 11,* 249-256.

Cohen, S. (1999). Zeroing in on autism in young children *Journal of the Association for Persons with Severe Handicaps, 24* (3), 209-212.

Conderman, G. & Katsiyannis, A. (1996). State practices in serving individuals with Autism. *Focus on Autism and Other Developmental Disabilities, 11,* 29-36.

Council for Exceptional Children, Division of Early Childhood, (2000). Natural environments and inclusion. In S. Sandall & M. Ostrosky (Eds.), *Young Exceptional Children. [Monograph Series No. 2]* Longmont, CO: Sopris West.

Courchesne, E., Karns, C. M., David, H. R., Ziccardi, R., Carper, R. A., Tigue, Z. D. et al. (2001). Unusual brain growth patterns in early life in patients with autistic disorder: An MRI study. *Neurology, 57*, 245-254.

Donnellan, A. M. (1999). Invented knowledge and autism. Highlighting our strengths and expanding the conversation. *Journal of the Association for Persons with Severe Handicaps, 24* (3), 230-236.

Donnelly, J.A., Bovee, J-P. Donnelly, S. J., Donnelly, L. K., Donnelly, J. R., Donnelly, M. F. et al. (2000). A family account of autism: Life with Jean-Paul. *Focus on Autism and Other Developmental Disabilities, 15* (4), 196-202.

Drew, A., Baird, G., Baron-Cohen, S., Cox, A., Slonims, V., Wheelwright, S., Swettenham, J., Berry, B., & Charman, T. (2002). A pilot randomized control trial of a parent training intervention for pre-school children with autism: Preliminary findings and methodological challenges. *European Child & Adolescent Psychiatry, 11,* 266-272.

Dunham, P., & Dunham, F. (1990). Effects of mother-infant social interactions on infants' subsequent contingency task performance. *Child Development, 61,* 785-793.

Dunham, P., & Dunham, F. (1995). Developmental antecedents of taxonomic and thematic strategies at 3 years of age. *Developmental Psychology, 31* (3), 483-493.

Dunlap, G. (1999). Consensus, engagement, and family involvement for young children with autism. *Journal of the Association for Persons with Severe Handicaps, 24*(3), 222-225.

Dunlap, G., Kern, L., & Worcester, J. (2001). ABA and academic instruction. *Focus on Autism & Other Developmental Disabilities, 16* (2), 129-137.

Feinberg, E., & Beyer, J. (1998). Creating public policy in a climate of clinical indeterminancy: Lovaas as the case example du jour. *Infants and Young Children, 10* (3), 54-66.

Feinberg, E., & Vacca, J. (2000). The drama and trauma of creating policies on autism: Critical Issues to consider in the new millennium. *Focus on Autism and Other Developmental Disabilities, 15* (3), 130-137.

Folstein, S. E., (1999). Autism. *International Review of Psychiatry, 11* (4), 269-278.

Frith, U., & Happe, F. (1999). Theory of mind and self-consciousness: What is it like to be autistic? *Mind & Language, 14,* 1-22.

Garfield, J. L., Peterson, C., & Perry, T. (2001). Social cognition, language acquisition and the development of the theory of mind. *Mind & Language, 16I* (5), 494-541.

Greenspan, S. I. (2001). The affect diathesis hypothesis: The role of emotions in the core deficit in autism and in the development of intelligence and social skills. *Interdisciplinary Council on Developmental and Learning Disorders' Clinical Practice Guidelines: Redefining the Standards of Care for Infants, Children, and Families with Special Needs (pp. 1-45).* Bethesda, MD: Interdisciplinary Council on Developmental and Learning Disorders.

Greenspan, S. I., & Wieder, S. (1997). Developmental patterns and outcomes in infants and children with disorders in relating and communication: A chart review of 200 cases of children with autistic spectrum disorders. *The Journal of Developmental and Learning Disorders, 1,* 87-141.

Greenspan, S. I. & Wieder, S. (1999). A functional developmental approach to autism spectrum disorders. *Journal of the Association for Persons with Severe, Handicaps, 24* (3), 147-161.

Gresham, F. M., Beebe-Frankenberger, M. E., & MacMillan, D. L. (1999). A selective review of treatments for children with autism: Description and methodological considerations. *School Psychology Review, 28* (4), 559-576.
Gresham, F. M., & MacMillan, D. L. (1998). Early intervention project: Can its claims be substantiated and its effects replicated? *Journal of Autism and Developmental Disorders, 28* , 5-13.
Heflin, L. J., & Alberto, P. A. (2001). Establishing a behavioral context for learning for students with autism. *Focus on Autism and Other Developmental Disabilities,16* (2), 93-101.
Kimball, J. W., Kinney, E. M., Taylor, B. A., & Stromer, R. (2003). Lights, camera, action! Using engaging computer-cued activity schedules. *Teaching Exceptional Children, 36,* 40-45.
Kinney, E. M., Vedora, J., & Stromer, R. (2003). Computer-presented video models to teach generative spelling to a child with an autism spectrum disorder. *Journal of Positive Behavior Interventions, 5,* 22-29.
Klinger, L. G., & Renner, P. (2000). Performance-based measures in autism: Implications for diagnosis, early detection, and identification of cognitive profiles. *Journal of Clinical Child Psychology, 29* (4), 479-492.
Koegel, L. K. (1995). Communication and language intervention. In L. K. Koegel & R. L. Koegel (Eds.)*Teaching children with autism*(4th ed., pp.17-32).Baltimore:Paul H. Brookes Publishing Co.
Koegel, L. K., Koegel, R. L., Frea, W., & Green-Hopkins, I. (2003). Priming as a method of coordinating educational services for students with autism. *Language Speech, and Hearing Services in Schools, 34,* 228-235
Koegel, L. K., Koegel, R. L., Harrower, J. K. & Carter, C. M. (1999). Pivotal response intervention I: Overview of approach. *The Journal of the Association for Persons with Severe Handicaps, 24,* 174-185.
Koegel, R. L., Koegel, L. K., & McNerney, E. K. (2001). Pivotal areas in intervention for autism. *Journal of Clinical Child Psychology, 30, 19-32.*
Koegel, L. K., Koegel, R. L., Shoshan, Y., & McNerney, E. K. (1999). Pivotal response intervention II: Preliminary long-term outcome data. *The Journal of the Association for Persons with Severe Handicaps, 24,* 186-198.
Kohler, F. W. (1999). Examining the services received by young children with autism and their families: A survey of parent responses. Focus on autism and other developmental disabilities, 14 (3), 150-158.
Lamers, K. & Hall, L. J. (2003). The response of children with autism to preferred prosody during instruction. *Focus on Autism & Other Developmental Disabilities, 18* (2), 93-103.
Lord, C., Risi, S., Lambrecht, L., Cook, E. H., Leventhal, B. L., DiLavore, P. C. et al.(2000). The autism diagnostic observation schedule-generic: A standard measure of social and communication deficits associated with the spectrum of autism. *Journal of Autism and Developmental Disorders, 30 (3), 205-223.*
Lovaas, O. I. (1987). Behavioral treatment and normal educational and intellectual functioning in young autistic children. *Journal of Clinical and Consulting Psychology, 55,* 3-9.

Lovaas, I. O. (2003). *Teaching individuals with developmental delays: Basic intervention techniques.* Austin, TX: PRO-ED.
Luiselli, J. K., Wolongevicz, J., Egan, P., Amirault, D., Sciaraffa, N., & Treml, T. (1999). The family support program: Description of a preventive, community-based behavioral intervention for children with pervasive developmental disorders. *Child and Family Behavior Therapy, 21,* 1-18.
Mahoney, G., & Perales, F. (2003). Using relationship-focused intervention to enhance the social-emotional functioning of young children with autism spectrum disorders. *Topics in Early Childhood Special Education, 23* (2), 77-90.
Maurice, C. (1993). *Let me hear your voice: A family's triumph over autism.* New York: Ballantine Books.
Maurice, C., Green, G., & Luce, S. C. (Eds.) (1996). *Behavioral intervention for young children with autism.* Austin, TX: PRO-ED.
Marshall, J. K. & Mirenda, P. (2002). Parent-professionals collaboration for positive behavior support in the home. *Focus on Autism & Other Developmental Disabilities, 17* (4), 216-228.
McCathren, R. B. (2000). Teacher-implemented prelinguistic communicative intervention. *Focus on Autism and Other Developmental Disabilities, 15, 21-29.*
McEachin, J. J., Smith, T., & Lovaas, O. I. (1993). Long-term outcome for children with autism who received early intensive behavioral treatment. *American Journal on Mental Retardation, 97* (4), 359-372.
McGee, G. G., Morrier, M. J., & Daly, T. (1999). An incidental teaching approach to early intervention for toddlers with autism. *Journal of the Association for Persons with Severe Handicaps, 24* (3), 133-146.
Mesibov, G. B., Adams, L. W., & Klinger, L. G. (1997). *Autism: Understanding the disorder.* New York: Plenum Press.
Mirenda, P. (2001). Autism, augmentative communication, and assistive technology: What do we really know? *Focus on autism and other developmental disabilities, 16* (3), 141-162.
Moes, D. R., & Frea, W. D. (2002). Contextualized behavioral support in early intervention for children with autism and their families. *Journal of Autism and Developmental Disorders, 32 (*6), 519-533.
Nadel, J., Croue, S., Mattlinger, M-J., Canet, P., Hudelot, C., Lecuyer, C., & Martini, M. (2000). Do children with autism have expectancies about the social behavior of unfamiliar people? *Autism: The International Journal of Research and Practice, 4* (2), 133-145.
National Research Council (2001). *Educating children with autism.* Committee on Educational Interventions for Children with Autism, Catherine Lord and James P. McGee, eds. Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.
New York State Department of Health, Early Intervention Program (1999). *Clinical Practice Guideline: The Guideline Technical Report: Autism/ PervasiveDevelopmental Disorders: Assessment and Intervention for Young Children (Age 0-3 years).* Albany, NY: Health Education Services Publication No. 4215.
Norton, P. & Drew, C. (1994). Autism and potential family stressors. *The American Journal of Family Therapy, 22* (1), 67-76.

Olley, J. G. (1999). Curriculum for students with autism. *School psychology review, 28*(4),595-608.
Oren, T., & Ogletree, B. T. (2000). Program evaluation in classrooms for students with autism: Student outcomes and program processes. *Focus on Autism and Other Developmental Disabilities, 15* (3), 170-175.
Osterling, J. A., Dawson, G., & Munson, J. A. (2002). Early recognition of 1-year-old infants with autism spectrum disorder versus mental retardation. *Development and Psychopathology, 14 239-251.*
Ozonoff, S., & Cathcart, K. (1998). Effectiveness of a home program intervention for young children with autism. *Journal of Autism and Developmental Disorders, 28,* 25-32.
Peeters, T., & Gillberg, C. (Eds.) (1999). *Autism: Medical and educational aspects,* (2nd ed.) London: Whurr Publishers.
Pfeiffer, S. L., & Nelson, D. D. (1992). The cutting edge in services for people with autism. *Journal of Autism and Developmental Disorders, 22,* 95-105.
Pierce, K. & Schreibman, L. (1995). Increasing complex social behaviors in children with autism: Effects of peer-implemented pivotal response training. *Journal of Applied Behavior Analysis, 28* (3), 285-295.
Robertson, K., Chamberlain, B., & Kasari, C. (2003). General education teachers' relationships with included students with autism. *Journal of Autism and Developmental Disorders, 33* (2), 123-130.
Rogers, S. J. (1998). Empirically supported comprehensive treatments for young Children with autism. *Journal of Clinical Child Psychology, 27* (6), 168-179.
Roper, N., & Dunst, C. J. (2003). Communication interventions in natural learning environments: Guidelines for practice. *Infants and Young Children, 16* (3), 215-226.
Ross, D. E., & Greer, R. D. (2003). Generalized imitation and the mand: Inducing first instances of speech in young children with autism. *Research in Developmental Disabilities, 24, 58-74.*
Sanders, J. L., & Morgan, S. B. (1997). Family stress and adjustment as perceived by parents of children with autism or Down syndrome: Implications for intervention. *Child and Family Behavior Therapy, 19* (4), 15-32.
Saxon, T. F., Colombo, J., Robinson, E. L., & Frick, J. E. (2000). Dyadic interaction profiles in infancy and preschool intelligence. *Journal of School Psychology, 38*, 9-25.
Scheuermannm, B., Webber, J., Boutot, E. A., & Goodwin, M. (2003). Problems with personnel preparation in autism spectrum disorders. *Focus on Autism & Other Developmental Disabilities, 18* (3), 197-207.
Schwartz, I. S., Boulware, G. L., McBride, B. J., & Sandall, S. R. (2001). Functional Assessment strategies for young children with autism. *Focus on Autism and Other Developmental Disabilities, 16* (4), 223-229.
Sheinkopf, S. J., & Siegel, B. (1998). Home-based behavioral treatment of young children with autism. *Journal of Autism and Developmental Disorders, 28*, 15-23.
Siller, M. & Sigman, M. (2002). The behaviors of parents of children with autism predict the subsequent development of their children's communication. *Journal of Autism and Developmental Disorders, 32* (2), 77-89.
Simpson, R. L. (1995). Children and youth with autism in an age of reform: A perspective on current issues. *Behavioral Disorders, 21*, 7-20.

Simpson, R. L. (2001). ABA and students with autism spectrum disorders: Issues and considerations for effective practice. *Focus on Autism and Other Developmental Disabilities, 16* (2), 68-71.
Skuse, D. (2003). Fear recognition and the neural basis of social cognition. *Child and Adolescent Mental Health, 8* (2), 50-60.
Smith, T. (2001). Discrete trial training in the treatment of autism. *Focus on Autism and Other Developmental Disabilities, 16* (2), 86-92.
Smith, T. & Lovaas, I. O. (1997). The UCLA Autism Project: A reply to Gresham and MacMillan. *Behavioral Disorders, 22* (4). 202-218.
Smith, T. & Lovaas, I. O. (1998). Intensive and early behavioral intervention with autism. The UCLA Young Autism Project. *Infants and Young Children, 10* (3), 67-78.
Stone, W. L., Coonrod, E. E., & Ousley, O. Y. (2000). Brief report: Screening tool for autism in two-year-olds (STAT): Development and preliminary data. *Journal of autism and developmental disorders, 30* (6), 607-612.
Stowe, M. J., & Turnbull, H. R. (2001). Legal considerations of inclusion for infants and toddlers and for preschool-age children. *Early Childhood Inclusion: Focuson Change* (pp. 69-100). Baltimore: Paul H. Brookes Publishing Co.
Strain, P. S., & Schwartz, I. (2001). ABA and the development of meaningful social relations for young children with autism. *Focus on Autism and Other Developmental Disabilities, 16* (2), 120-128.
Symon, J. B. (2001). Parent education for autism: Issues in providing services at a distance. *Journal of Positive Behavior Interventions, 3* (3) 160-175.
Tager-Flusberg, H. (1992). Autistic children's talk about psychological states: Deficits in the early acquisition of a theory of mind. *Child Development, 63*, 161-172.
Tomasello, M. (1995). Joint attention as social cognition. In P. J. Dunham & C. Moore (Eds.), *Joint attention: Its origins and role in development.* (pp. 103-130). Hillsdale, NJ: Lawrence Erlbaum Associates.
Wert, B. Y., & Neisworth, J. T. (2002). Effects of video self-modeling on spontaneous requesting in children with autism. *Journal of Positive Behavior Interventions, 5*, 30-34.
Williamson, M. (1996). Funding the behavioral program in behavioral intervention for young children with autism. In C. Maurice, G. Luce, & S. C. Luce (Eds.) *Behavioral intervention for young children with autism: A manual for parents and professionals* (pp. 267-278). Austin, TX: PRO-ED.
Whittaker, C. A., & Reynolds, J. (2000). Hand signaling in dyadic proximal communication: Social strengths of children with autism who do not speak. *Child Language Teaching and Therapy*, 43-57.
Wolery, M. (2000). Commentary: The environment as a source of variability: Implications for research with individuals who have autism. *Journal of Autism and Developmental Disorders, 30* (5), 379-381.
Woods, J. J., & Wetherby, A. M. (2003). Early identification of and intervention for infants and toddlers who are at risk for autism spectrum disorder. *Language, Speech, and Hearing Services in Schools, 34* 180-193.
Yeargin-Allsopp, M., Rice, C., Karapurkar, T., Doernberg, N., Boyles, C., & Murphy, C. (2003). Prevalence of autism in a US metropolitan areas. *Journal of theAmerican Medical Association, 289*, 49-55.

Yoder, P. J., Kaiser, A. P., Goldstein, H., Alpert, C., Mousetis, L., Kaczmarek, L., & Fischer, R. (1995). An exploratory comparison of milieu teaching and responsive interaction in classroom applications. *Journal of Early Intervention,19* (3), 218-242.
Yoder, P. J., & Warren, S. F. (1998). Maternal responsivity predicts the prelinguistic communication intervention that facilitates generalized intentional communication. *Journal of Speech, Language, and Hearing Research, 41,* 1207-1219.
Yoder, P. J., & Warren, S. F. (2002). Effects of prelinguistic milieu teaching and parent responsivity education on dyads involving children with intellectual disabilities. *Journal of Speech, Language, & Hearing Research, 45,* 1158-1174.
Zercher, C., Hunt, P. Schuler, A., & Webster, J. (2001). Increasing joint attention play and language through peer supported play. *Autism, 5* (4), 374-398.

The Editors of JAASEP wish to thank Dr. Marg Csapo, Editor of the *International Journal of Special Education* for reprinting permissions from 2005 Volume 20, no.1.

PROACTIVE APPROACHES FOR IMPROVING STUDENT OUTCOMES FOR AT-RISK STUDENTS

Dr. Conn Thomas
West Texas A&M University
Division of Education

Dr. Richard Blackbourn
Mississippi State University
College of Education

Dr. J.M. Blackbourn
University of Mississippi
School of Education

Bobby Papason
University of Mississippi
North Mississippi Educational Consortium

J. Larry Tyler
University of Mississippi
School of Education

Pat Britt
DeSoto County
Mississippi Schools

Frankie Keels Williams
Clemson University
School of Education

ABSTRACT

This article outlines innovative approaches to reducing dropouts and enhancing the rate of school success among students labeled "At-Risk". The article emphasizes the need for fundamental change in educational philosophy and operational frameworks as the basis for meaningful change. Significant aspects of the processes used to improve student outcomes are provided.

Introduction

The principles of continuous improvement are currently impacting all areas of society. Business, government, and educational organizations are all applying these principles to improve the delivery of services to their customers (Payne and Blackbourn,1992). Lynch and Kordis (1988) emphasize the need to search constantly for the next stage in an ongoing sequence of continuous improvement. These modifications often involve change that is revolutionary, innovative, and involves fundamental modifications (Blackbourn, Papasan, Vinson, & Blackbourn, 2000; Kuhn, 1962; 1976; 1990). In essence, improving service delivery is not a final goal or destination, but merely a step in a continuing journey.

Fundamental change in operational procedures is the key element in significant improvement (Blackbourn, Papasan, Vinson, & Blackbourn, 2000; Skirtic, 1991; Synge, 1990). Much of the reason for the lack of meaningful change has to do with the standards and framework upon which the improvements are based. Using experience which is not current as a guide for problem solving is analogous to driving a car while only looking in the rearview mirror (Deming, 1987). Knowing how problems were dealt with in the past

may not be helpful in solving current problems, especially if one's vision is not futuristic or forward reaching. One must "look down the road" to anticipate future obstacles, difficulties, or problems (Blackbourn, 1999).

Guidelines and standards which focus on customer satisfaction, reduction of waste, and continuous improvement would foster fundamental change in educational organizations through enhancing the understanding of the requirements of quality, excellence, a sharing of information on successful quality strategies and benefits of implementing a quality process, and the awareness of quality as the vital element in our ultimate ability to compete on a global scale (United States Department of Commerce, 1993).

This manuscript outlines two approaches for improving outcomes for students at risk for academic failure. Both take a systemic approach to the problem (Synge, 1990) in that they focus on how specific circumstances (some rooted in an individual's distant past) create a reality of failure for many students and how short term "fixes" may, over the long term, exacerbate the problem.

Promotion/Retention

The promotion/retention decision is one of the most significant in the educational experience of students at risk for academic failure. Many students are retained based upon a standardized set of guidelines which relate to their academic performance, age in comparison to their peers, classroom behavior, or teacher perceptions and pay little attention to those critical factors rooted in the experiences of the retention year.

An informal review process that focuses on the comprehensive records of students, who had been previously retained, is the starting point of a successful promotion/retention process. The students should be divided into two groups according to current academic functioning (i.e. successful or unsuccessful). In addition, staff members must document: (a) the reason for consideration of retention, (b) nature of the decision (retained or promoted), and (c) outcome of the decision (was it helpful). Examination of these factors allow staff members to develop a profile (i.e. "What each type of student looks like.") of those students who were helped by the decision made for them and those that weren't helped by the retention decision.

Results of such a process can identify those aspects of the retention/promotion decision that relate most directly to eventual student success. These can include, but not be limited to:

1. Teacher Beliefs -Those students who were most likely to be helped by the promotion/retention decision would reflect a belief by the teacher that they could be successful with appropriate intervention.
2. Comprehensive Planning - If a teacher had a clear plan or idea to address a child's specific deficiencies, then that student would be significantly more likely to benefit from the promotion/ retention decision.
3. Parental Support -- Parental support of the promotion/retention decision and the on-going intervention prescribed for their child was a critical factor in the eventual success

of the student. In addition, support available for the child in non-school environments was critical.

Much of the time student retention is based upon factors such as poor attendance, lack of reading skills, and/or lack of math skills. Questions concerning whether or not to retain a student are rarely framed as "Would retention improve attendance?" or "Would retention improve reading?" Review and examination from a systemic perspective not only identifies the features that relate to a successful outcome from the promotion/retention decision, but also a focus on the question: "Will the student be helped by retention/promotion?" The guiding principle and the only valid basis for retaining or promoting a student is the welfare of that student.

Developmental "Hot Spots"

Havighurst (1953), Havighurst and Neugarten (1962), and Havighurst and Taba (1949) described the nature of developmental tasks imbedded within the structure of schools. Mastery of academic developmental tasks at any grade level form the foundation of success at subsequent grade levels. Certain grade levels possess more tasks to be mastered than others. These grade levels become areas within a school organization where instruction is challenging, behavior management is difficult, and student failure is more frequent. Such areas are "hot spots," areas of critical concern where large numbers of students struggle to master skills critical to their future success.

A systematic examination of students who have dropped out over a ten year period, using the statistical process control technique (Hamby & Blackbourn, 1999), and plotting: (a) the number of dropouts annually, (b) the statistical upper control limit, and (c) the statistical lower control limit, can be used to identify such "hot spots." Through this process, the staff is able to determine if the number of dropouts annually are due to a systemic problem rather than due to a special cause.

An in-depth examination of the records of student dropouts can reveal a further feature of their school experience. For example, two "hot spots" might be identified as areas of concern for school staff. Areas of concern at 3rd grade (a minor "hot spot) and 7th grade (the major "hot spot") might be identified. Through an examination of the records of individual students who dropped out of a school district's programs, one might find that approximately 50% of those students who eventually dropped out of school were retained or experienced significant academic difficulty in 3rd grade and 90% of those students who eventually dropped out of school failed or experienced significant academic difficulty in 7th grade.

Based upon the information available, the administration and faculty at the elementary middle school levels can develop and implement several strategies to enhance student success and reduce the dropout rate district-wide. These might include:

1. Grade Level Teams (Middle School)-The use of teams at the 7th grade level could allow enhanced communication between faculty concerning students experiencing

difficulty and foster the implementation of a curricular approach integrated across content areas.

2. Block Scheduling (Middle School)-When combined with the team approach, the extended planning could allow for more detailed lesson planning, consistent disciplinary practices, and extended availability to students for extra support.

3. Success Room (Middle School)-An area adjacent to the workroom for the grade level teams could be designated as a "success room." This room might be computer terminals with Internet access. Software on the computers could support both the text used in the classroom and the content presented there. Tables for group work or for student/teacher consultation could also be included in the room. Access to teachers during their planning time, resources related to academics, and space for work cooperatively all would contribute to improved academic performance.

4. Looping Teachers (Elementary School)-Several elementary teachers might be allowed to begin at the kindergarten level and remain as the teacher of that class through 2" or 3rd grade, then return to kindergarten to pick up another group. These teachers, because of the smaller class size, greater understanding of individuals student learning styles, and deeper knowledge concerning specific student deficiencies, might be able to better prepare children for a successful 3rd or 4'h grade experience.

5. Accelerated School Model (Elementary School)-This model, designed to move all at-risk students into the educational mainstream by the end of elementary school, features challenging and stimulating activities structured to facilitate academic growth (Hopfenberg, et al., 1993). The result of establishing an accelerated school at the elementary level could be a building-wide unity of purpose, a focus on all parts of the elementary school as an integrated system, site-based governance, effective communication, and improved student outcomes.

The impact of such strategies on the dropout rate would initially be indeterminable. Systemic solutions often do not have an immediate impact. Rather, the impact is often cumulative in nature and must necessarily be so to bring about significant improvement.

Summary

This perspective is radical in that it goes to the root of many problems facing schools today. The emphasis on the cause and effect problem-solving paradigm not only prevents the identification of basic causes of systemic problems, but also actually exacerbates these problems. This occurs through the application of solutions that bring about short-term relief, but no fundamental change in systemic conditions (Rader, 1998; Senge, 1990). The inability to make fundamental change in an educational system severely limits the degree to which individual learning and development can be supported and ultimately fails to adequately meet the needs of those to whom we owe our professional existence.

References

Blackbourn, J. M. (1999). According to Hobbes: A primer on psychology and leadership. Unpublished manuscript, The University of Mississippi.
Blackbourn, J. M., Papasan, B., Vinson, T. P., & Blackbourn, R. (2000). Leadership for the new millenium: Lessons from Deming, Glasser, & Graves. National Forum of Educational Administration & Supervision, 17E(4), 57-63.
Deming, W. E. (1987). Out of the crisis. Cambridge, MA: Massachusetts Institute of Technology Center for Advanced Engineering Study.
Hamby, D., & Blackbourn, J. M. (1999). Continuous improvement manual. Willow Springs, MO: Willow Springs Public Schools.
Havighurst, R. J. (1953). Developmental tasks and education. New York: Longmans-Green.
Havighurst, R. J., & Neugarten, B. J. (1962). Society and education. Boston: Allyn & Bacon.
Havighurst, R. J., & Taba, H. (1949). Adolescent character and personality. New York-Wiley.
Hopfenberg, W. S., Levin, H. M., Chase, C., Christensen, S. G., Moore, M., Soler, P., Brunner, I., Keller,B., & Rodriguez, G. (1993). The accelerated schools: A resource guide. San Francisco: Josey-Bass.
Kuhn, T. (1962). The structure of scientific revolutions. Chicago: University of Chicago Press.
Kuhn, T. (1976). Theory change as structure change: Comments on the Sneed formalism. Erkenntnis, 10, 179-199.
Kuhn, T. (1990). The road since Structure. Presidential address to the biennial meeting of the Philosophy of Science Association. East Lansing, MI: Philosophy of Science Association.
Lynch, D., & Kordis, P. L. (1988). Strategy of the dolphin. New York: William Morrow and Co., Inc.
Payne, J. S., & Blackbourn, J. M. (1992). Learning through benchmarking. Journal for Quality and Participation, 16(5), 62-65.
Rader, D. (1998). The Jasper problem: Rethinking reductionism and developing an ecology of education. Atlanta, GA: Rodopi Press.
Senge, P. M. (1990). The fifth discipline: The art and practice of the learning organization. New York: Doubleday.
Skirtic, T. (1991). Behind special education: A critical analysis of professional culture and school organization. Denver: Love.
United States Department of Commerce. (1993). Malcolm Baldrige National Quality Award criteria. Washington, DC: Author.

Published with permission by Dr. William Allan Kritsonis, Editor-in-Chief, NATIONAL FORUM JOURNALS, 17603 Bending Post Drive, Houston, Texas 77095 - www.nationalforum.com


AMERICAN ACADEMY OF
SPECIAL EDUCATION PROFESSIONALS