

Transition Planning/Coordinating Interventions for Youth with Disabilities:

A Systematic Review

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Purpose

This practice-based systematic review summarizes the scientifically-based research studies that have been produced in the past two decades from three distinct perspectives: (a) transition planning/coordinating interventions, (b) transition or transition-related outcomes, and (c) samples of secondary-aged youth with disabilities. By *scientifically-based research studies* we mean reports of research studies that meet recently enacted federal research standards (Education Sciences Reform Act of 2002) for which are stated in the Act as follows:

The term “scientifically-based research standards” means research standards that – (i) apply rigorous, systematic, and objective methodology to obtain reliable and valid knowledge relevant to education activities and programs; and (ii) present findings and make claims that are appropriate to and supported by the methods that have been employed (p. 4).

These scientifically-based research studies can be reports of research employing group-based designs, single-participant designs, or qualitative designs, but they must report adequate evidence of attention to the validity and reliability standards for the particular design used and consistent with commonly accepted methodological canons for well-implemented research.

By *transition planning/coordinating interventions* we mean these original research studies must have reported on the effects of implementing a transition programming intervention that, according to the most recent (2004) amendments to the Individuals with Disabilities Education Act (IDEA), was designed to: “facilitate the child’s movement from school to post-school activities.” (Johnson, 2005, p. 60). These interventions could have been drawn from any of the five intervention constructs identified by Kohler and Field (2003), with three important exceptions. A separate review of life skills interventions (Alwell & Cobb, 2006) has already been produced and reviews of self-determination curricula and vocational/employment training curricula and processes are also being completed separately. More information about the specific intervention constructs included in this review is provided in the method section.

By *transition or transition-related outcomes* we mean studies that measured outcomes associated with commonly-held conceptions of transition such as employment, participation in post-secondary education, maintaining a home, and/or experiencing satisfactory personal and social relationships (Halpern, 1994).

Finally, by *samples of secondary-aged youth with disabilities* we mean studies whose samples were either youth with disabilities or were, in part, youth with disabilities and outcome measures for those youth with disabilities were reported separately. These youth must have been enrolled in secondary school environments or, if in non-graded residential or day treatment facilities, the studies must have reported the ages of those youth with disabilities as ages 13-22 inclusive.

Conceptual Framework

The conceptual framework we used to guide our philosophical orientation to this systematic review is grounded in the ecological model of social functioning to help answer “what works” questions for preventing dropout for youth with disabilities. An ecological framework provided the necessary conceptual structure to guide the scope, the methodology, and the development of this research synthesis. The question of “what works” can be translated by the classical ecological question posed by Wachs (1987): “Under what environments (situations, programs and settings) have what kinds of persons (the diverse characteristics of all youth with disabilities) changed in what kinds of behaviors (school and therapeutic persistence, violent behavior)?”

This ecological framework focuses on the transactional relationship among persons, environments and behaviors and was first introduced in Karl Lewin (1936). Since Lewin’s work, the application of the ecological framework has impacted much of the theoretical and implementation strategies associated with a wide range of human services and education. The ecological approach to understanding human behavior is well documented in the field of psychology (Barker, 1968; Moos, 1976; Bandura, 1979; Wicker, 1979).

Background

Beginning with the appointment of Madeleine Will as Assistant Secretary of the Office of Special Education and Rehabilitative Services (OSERS) in 1984, and followed shortly thereafter by her the much-heralded “Bridges ...” publication (Will, 1985), P. L. 94-142’s promise of “free and appropriate public education” began for the first time to extend deeply into secondary education. In the latter half of the 1980’s new initiatives in the Office of Secondary Education Programs (OSEP) within OSERS were implemented such as the secondary and transition demonstration programs and the systems change grants in supported employment – serving to catalyze the field with a flurry of research and demonstration activities in the area of transition. This energy of the 1980’s was ratcheted up significantly by OSEP in the 1990’s by broadening out the focus of transition into demonstration initiatives in post-secondary education, multi-district outreach, dropout-prevention, and self-determination (i.e. CFDA # 84.078, 84.128, 84.158, 84.023, 84.086, and 84.324 funding competitions).
f any external funding.

Andrew Halpern (1994) published a comprehensive and frequently cited definition of secondary transition for youth with disabilities that was adopted by the Council for Exceptional Children’s (CEC) Division of Career Development and Transition (DCDT) and provided important

theoretical and practical background for the transition language that appeared in the amendments to the IDEA in 1997 and 2004:

Transition refers to a change in status from behaving primarily as a student to assuming emergent adult roles in the community. These roles include employment, participating in post-secondary education, maintaining a home, becoming appropriately involved in the community, and experiencing satisfactory personal and social relationships. The process of enhancing transition involves the participation and coordination of school programs, adult service agencies, and natural supports within the community. The foundations of transition should be laid during the elementary and middle school years, guided by the broad concept of career development. Transition planning should begin no later than age 14, and students should be encouraged, to the full extent of their capabilities, to assume a maximum amount of responsibility for such planning (p. 116).

Embedded in this definition of transition are a set of commonly accepted outcome domains for a successful transition – “employment, participation in postsecondary education, maintaining a home, becoming appropriately involved in the community, and experiencing satisfactory personal and social relationships” (p. 116). This definition assisted this review with identifying transition outcome domains for inclusionary criteria for transition-related studies, but was too broad for clarifying intervention constructs.

At about the same time, Paula Kohler was developing a similar taxonomy of transition intervention services under the auspices of the TRI (Kohler, 1996; Kohler, 1998). This taxonomy of research-based services posits five substantive sets of school-related services to be delivered in secondary settings to enhance the transition of youth with disabilities to post-school environments: student-focused planning, student development, interagency and interdisciplinary planning, family involvement, and program structure.

Student-focused planning appears to be the centerpiece of this array of transition services. It has been researched extensively across a variety of disability types and perspectives (e.g., deFur, 2003; Hosp, Griller-Clark, & Rutherford, 2001; Martin, Greene, & Borland, 2004; Martin, Marshall, & Sale, 2004; Martin, Van Dycke, Christensen, Greene, Gardner, & Lovett, 2006; Martin, Van Dycke, Greene, Gardner, Christensen, Woods, & Lovett, 2006; Myers & Eisenman, 2005; Nelson, 2005; Powers, Gil-Kashiwabara, Greenen, Powers, Balandran, & Palmer, 2005; Steere & Cavaiuolo, 2002). Consistent with self-efficacy theory, the direction of this research and development has been to encourage students with disabilities to take a more active role in their own IEP development.

The practices associated with student development “...emphasize life, employment, and occupational skill development through school-based and work-based learning experiences. They also include student assessment and accommodations...” (Kohler, 2003, p. 177). Again, the most recent emphasis around student development has been in the area of curriculum and instruction to teach self-determination and work skills (e.g., Carter & Lunsford, 2005; Houchins, 2001; Repetto, 2003; Sitlington & Neubert, 2004; Thoma, Nathanson, Baker, & Tamura, 2002), and on transition assessment systems and processes (e.g., Neubert, 2003; Sax & Thoma, 2002).

Early in the transition services movement interagency and interdisciplinary planning largely meant planning between special and vocational or general educators in school (interdisciplinary planning), and planning with vocational rehabilitation or other adult services agencies for post-school services (interagency planning). While these two forms of planning are still espoused in contemporary transition literature (Johnson, 2004; Kohler, 2003; Mellard & Lancaster, 2003; Savage, 2005), more and more sources of interagency and multi-agency planning are now appearing in literature including planning with postsecondary educational institutions (Eckes & Ochoa, 2005; Skinner & Lindstrom, 2003), with hospitals for students with multiple disabilities (Borgioli & Kennedy, 2003), and between correctional facilities, schools, and communities (Unruh & Bullis, 2005).

Family involvement is the last of the four direct services that schools can orchestrate in their transition service delivery programs. This area of service coordination is discussed extensively in conjunction with the literature on student-focused planning. Additionally, Kohler (1998) suggests three levels of family involvement in school transition services: (1) participation and roles, (2) empowerment, and (3) training.

While these prior domains of services involve direct services to students with disabilities, the fifth, *program structure*, relates more to assuring high-quality educational contexts in which these services are provided such as a culturally and ethnically sensitive environment, a school-wide philosophy of inclusion and high expectations, a clear articulation of mission and values, and dedication of adequate resources to ensure high quality services and highly qualified staff to deliver them (see Kohler & Field, 2003 for a more recent discussion of this taxonomy). This developmental work provided us with our initial intervention domains for a “transition-related study.”

What Does this Review Add to the Literature?

This review adds to this burgeoning theoretical and empirical literature base in the area of transition in two important ways. First, this review includes only studies that combine the use of a transition-related treatment and measurement of one or more transition-related outcomes exclusively (or in large part) for secondary aged youth with identified disabilities, and the effects of the treatment must have been measured and reported in such a way that an effect size could be calculated (at least for those studies using quantitative research designs). Neither of the research syntheses by Phelps and Wermuth (1992), Phelps and Hanley-Maxwell (1997), Kohler (1996) or Kohler (1998) cited above nor more recent reviews (e.g., Baltodano, Mathur, & Rutherford, 2005; Mull & Sitlington, 2003) constrained their work to this narrower focus on measured effects. Indeed, all of these reviews were almost exclusively narrative in format and neither individual study effect sizes nor statistical meta-analyses were calculated.

Second, we also required every study included in this review to meet minimum standards of internal and external validity (see Table 1 for an example of the standards and focusing questions used to assess the studies that used group designs, qualitative designs, and single participant designs). These standards and focusing questions were adapted from early design work completed by meta-analysts and systematic review experts at both the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) at the University of London, and at

the What Works Clearinghouse (WWC) in the U. S. Department's Institute of Educational Sciences (see their respective websites at <http://eppi.ioe.ac.uk/EPPIWeb/home.aspx> and <http://www.whatworks.ed.gov/>). Hence, our review would be considered evidence-based and systematic (Cook, Mulrow, & Haynes, 1997). The reviews mentioned earlier, and are almost exclusively narrative reviews with little or no attempts to screen studies with weak designs out of the review, and no attempts to calculate effect sizes.

Despite a growing recognition of the importance of transition programming, and a growing number of schools with ever greater levels of sophistication in transition programming, a number of challenges still exist to bring outcomes for youth with disabilities to levels commensurate with their typical peers (Johnson, Stodden, Emanuel, Luecking, & Mack, 2002). It would appear that the next generation of research on transition should focus on increased levels of theoretical and empirical sophistication in implementing and sustaining transition programming models (see Benz, Lindstrom, Unruh, & Waintrup, 2004 for an excellent example of such research), and on continued examinations of the evidence base of existing research on effective models. Such is the focus of this systematic review.

Search Strategy

Information on sources and search terms used in this review can be found in the full document located at http://www.nsttac.org/?FileName=what_works.

Results

Three types of results were described. First, descriptive results were provided in the areas of Participants, Research Designs, Outcomes, Characteristics of Transition Planning/Coordinating Interventions, Settings and Treatment Fidelity, Effect Size Calculations for Statistical Meta-Analysis and Qualitative Meta-Synthesis were described. Second, quantitative analysis of the three multi-group, student focused planning studies produced a non-significant Q-statistic, and a very large and statistically significant average effect size ($g = 1.47$; $z = 5.1$; $p < .001$) and the analysis of the six one-group pretest/posttest, student development studies, although producing a large and statistically significant average effect size ($g = .94$; $z = 10.3$; $p < .001$). And third, the following themes emerged from the qualitative metasynthesis:

- Transition more of a promise than a reality
- Uneven transition expertise and low levels of parent/student involvement
- Influence of families and extended families on career choices and job acquisition
- Restrictive views held on post-school outcomes for youth with disabilities
- Lack of cognitive clarity and systematic instruction in the special education curricula
- Lack of respect and understanding by some teachers

See Tables 1-3 for summary of some of the findings.

What Can We Take Away From This Review?

First, student focused planning appears to hold great promise on important outcomes for students (or their parents) who are shaping their skills to participate in their own planning for their future after school. The average effect size across these three studies was $g = 1.47$ in favor of the treatment group – a very large and important mean difference. Additionally, these three multi-group studies that centered on student focused planning were all exceptionally high quality in design.

These positive findings are in stark contrast with the themes we observed across the qualitative studies that considered student-focused planning and give pause to “what might have been” for the participants had they and their parents participated in the kinds of interventions reported in those branded intervention studies reviewed above. For students in high schools that do not have the kinds of transition programs documented above, a variety of implications may be drawn from this evidence base. For example, these studies suggest that effective transition planning must include efforts to make students feel heard and valued at IEP meetings; our metasynthesis suggests that one way to increase the likelihood of this happening is to include peer advocates, friends, and mentors as active participants. Additionally, participants across several studies noted that adding transition planning to jam-packed annual IEP meetings was sorely inadequate; therefore our research supports the notion that more time be given to transition planning beyond annual review meetings. Further research might clarify various methods for achieving this.

With respect to student development, the average effect size across these three studies was $g = .67$ in favor of the treatment groups – a moderately important effect, suggesting that students with disabilities can gain important insights about their vocational interests given focused training.

A primary concern captured by our metasynthesis was the perceived lack of efficacy of special education curricula noted by numerous participants. This finding suggests that students with identified special needs would benefit from less time spent on homework catch up and more on cognitive and meta-cognitive strategy instruction (i.e., learning how to learn), as well as from attention paid to development of students’ interests and talents.

These studies also indicate that vocational training include work experiences in real jobs, particularly work experiences that focus on socialization with co-workers, and access to adult role models and mentors in meaningful work roles (Chadsey-Rusch, 1990). Further, they add support for a focus on career planning and development that encompasses and builds on specific job skills. Both the studies with participants with identified mild/moderate disabilities and those with more severe disabilities suggest that having a job is not enough – without extensive and seamless transition supports, for example, students with moderate and severe disabilities can lose jobs as quickly as 2-3 months after graduation (Gallivan-Fenlon, 1994). As suggested by Morningstar et al. (1995) and Morningstar (1997) students may benefit from learning explicit career planning and development skills that continue after high school. Additionally, given the evidence of family influence on career aspirations, values, and day-to-day support and practical living arrangements in the studies here with students with mild disabilities, the need for family involvement in effective transition planning is substantiated. A number of these studies have explicit suggestions for increasing family roles in transition planning, and in career development (e.g., Morningstar et al., 1995; Morningstar, 1997).

A related concern was the documented poor treatment of many students with disabilities particularly those with LD and ABI, by a variety of teachers and peers. Certainly general education teachers must be educated about the real struggles faced by students with disabilities, especially students with LD and ABI. Inclusive (or supported) education (c.f. Halvorsen & Neary, 2001; Lipsky & Gartner, 1997) offers one possibility for a solution to this challenge, through collaboration and teaming between general and special educators in the delivery of integrated coursework. Such a model of service delivery affords the opportunity for general educators to develop sensitivity and skill in working with students experiencing specific disabilities; it also holds promise for educating the student population at large, which might assist in curbing teasing through the provision of explicit social supports for students with disabilities.

These student-focused planning and student development issues underscore the critical need for Kohler's notion of *transition-focused* education for youth with disabilities. All aspects of curricula must be integrated in a focus on the acquisition of academic and non-academic skills useful throughout life, development of authentic social networks and supports, and career preparation through systematic and meaningful instruction.

Finally, from a positive perspective, we were surprised and encouraged by the number of "branded" interventions focusing on student-focused planning and student development. The 31 studies in this review included no fewer than eight student-focused planning packages, and two comprehensive transition planning and coordinating packages. Developed and field-tested through small pilot studies largely in the late 1990's and early 2000's, it is clearly time to scale up larger studies of some of the most promising of these packages and carefully assess moderator and mediator effects associated with these interventions. There need not be a lot of these scale-up studies; a few well-designed cluster randomized trials would go a long way in clarifying implementation processes and differential effects of these interventions coupled with qualitative studies that could document the lived experiences and transition outcomes for participants working with these comprehensive transition interventions. We caution researchers of these interventions, however, to build direct estimates of transition outcomes into their designs if at all possible. We make this recommendation because the outcomes contained in the studies in this review (Izzo et al, 2000 notwithstanding) were exclusively school-based process measures that functioned as proxies of later success in the transition process. Clearly we need longer-term studies empirically connecting the viability of the assumption, for example, that greater participation in transition planning in school serves as a valid and reliable proxy of greater independence in life when out of school.

Less encouraging was the relative absence of well-designed studies of comprehensive transition models. We know that such comprehensive models have been developed and described; it is now time to move from descriptions to empirical validation of these models. We are not naïve as to the difficulties in conducting evidence-based research on these models; it is expensive and takes several years of focused work. Nonetheless a mixture of a few cluster randomized trials coupled with, perhaps, some carefully developed theory-based evaluations would move our knowledge base exponentially forward in service to our secondary-aged youth with disabilities. We have ample information about how such studies should be conducted (Crane, 1998; Weiss, 2002); they now need to be designed, funded, and implemented.

Our final comments have to do with *program structure and interagency collaboration*. Many of the studies in our review highlight the need for flexibility in creating and providing individualized supports to youth with disabilities, rather than simply fitting them into existing service continuum options. For example, some even indicate the need for funding to go directly to individuals with disabilities (not programs) as young adults; this is most salient in the McColl et al. (1999) study, as money was a major concern for all three participants – a major barrier to their successful independent living. “Insurance would pay for a more expensive residential treatment facility for these young men, but it would not pay for them to live adequately in the community” (p. 317).

In sum, the 31 studies in this review highlight both promising practices and relative gaps in educational practice despite our empirical and theoretical knowledge. It seems our greatest need is in applying what we know – informing and supporting practitioners and families in a uniform fashion so that implementation of effective transition practices for youth with disabilities might become more commonplace.

References

The list of references used in this review can be found in the full document located at http://www.nsttac.org/?FileName=what_works

Table 1

Sample and Participant Characteristics

Study	Sample Size	Attrition Rate	Participant Characteristics		
			Handicapping Conditions	Average Age or Grade Level	Percent Male
Allen et. al, 2001	3	Not stated	MR	16.75	67%
Backhouse & Rodger, 1999	7	Not stated	ABI	14 -19	Not stated
Black, 1995	36	31%	Mild MR	Grades 7-9	Not stated
Black, 1996	44	17%	ED/BD LD, MR	Grades 9- 12	70%
Burns et. al, 1996	148	12%	ED	13.3	53%
Chadsey-Rusch, 1990	10	Not stated	Severe MR	18.4	70%
Coker, 1994	56	19%	LD and MR	17.7	75%
Collet-Klingenberg, 1998	6	Not stated	LD	Grades 9- 12	Not stated
Devlieger & Trach 1999	6	Not stated	Mild MR	21.5	50%
Farley & Johnson, 1999	38	Not stated	Varied	17.2	59%
Farley et. al, 1999	21	0%	Varied	16.6	65%
Flannery et. al, 2000	10	0%	Varied	19-21	30%
Friedland, 1999	22	Not stated	Mild MR	14-22	Not stated

Table 1(continued)

Sample and Participant Characteristics

Study	Sample Size	Attrition Rate	Participant Characteristics		
			Handicapping Conditions	Average Age or Grade Level	Percent Male
Gallivan-Fenlon, 1994	11	Not stated	Mod-Sev MR	20.72	45%
Hua, 2002	1	Not applicable	LD/gifted	Grade 11	100%
Izzo et. al, 2000	76	21% (exp group)	LD & MR	Not stated	64%
Kohler, 1994	58	37%	MR, LD, & ED	Grades 11-12	62%
Lehmann et. al, 1999	7	Not stated	Mod-Sev MR	14-21	66%
Mathews & Fawcett, 1984	3	0%	LD	18-19	67%
McColl et. al, 1999	3	Not stated	TBI	19-24	100%
McConnell, 1999	19	5%	Visually impaired/blind	16.7	50%
Miner & Bates, 1997	22	0%	MR	9-12	55%
Morningstar et. al, 1995	40	Not stated	LD; MR ED/BD	13-19	Not stated
Morningstar, 1997	71	Not stated	Varied	14-21	Not stated
Olson, 1986	1	Not stated	CP	19	0%

Table 1(continued)

Sample and Participant Characteristics

Study	Sample Size	Attrition Rate	Participant Characteristics		
			Handicapping Conditions	Average Age or Grade Level	Percent Male
Powers et. al, 1999	12	Not stated	Varied	16.67	Not stated
Powers et. al, 2001	43	0%	Varied	15.5	70%
Reis et. al, 1997	12	Not stated	Varied	19-25	75%
Roessler & Foshee, 1996	23	0%	Varied	16.6	65%
Taylor-Ritzler et. al, 2001	29	29%	Varied	17.0	Not stated
Van Reusen & Bos, 1994	21	0%	LD	16.4	52%

Table 2

Research Designs, Intervention Components, and Outcomes Measured for All Studies

Study	Research Designs	Intervention Components	Outcome(s)
Allen et. al, 2001	Multiple baseline across subjects	Self-Directed IEP Instruction	Student participation in transition planning
Backhouse & Rodger, 1999	Qualitative	Transition process from high school to employment	Perceptions of overall process
Black, 1995	One-group pretest/posttest	Work awareness curriculum	Knowledge of vocational social skills
Black, 1996	One-group pretest/posttest	Work awareness instruction	Knowledge of work awareness skills
Burns et. al, 1996	Pretest/posttest control group	Case manager-led treatment team	Retention in program
Chadsey-Rusch, 1990	Qualitative	Social interactions	Social competence
Coker, 1995	One-group pretest/posttest	Transition programming as a part of Community Transition Center Project	Vocational decision-making
Collet-Klingenberg, 1998	Qualitative	School-sponsored transition program	Perceptions of the most successful components of program
Devlieger & Trach, 1999	Qualitative	Mediation	Post-school employment outcomes
Farley & Johnson, 1999	Pretest/posttest control group	Career exploration and job seeking program	Vocational self-awareness
Farley et. al, 1999	Posttest only control group	Career assessment and planning program	Vocational self-awareness

Table 2(continued)

Research Designs, Intervention Components, and Outcomes Measured for All Studies

Study	Research Designs	Intervention Components	Outcome(s)
Flannery et. al, 2000	One-group pretest/posttest	Person-centered planning program	Student participation in transition planning
Friedland, 1999	Qualitative	Transition ITEP process	Multiple outcomes associated with ITEP
Gallivan-Fenlon, 1994	Qualitative	Experiences of transition	Perceptions of the outcomes of transition
Hua, 2002	Qualitative	Experiences in school	Career self-efficacy
Izzo et. al, 2000	Posttest only control group	Extended transition services after graduation	Wages
Kohler, 1994	One-group pretest/posttest	Vocational training and transition planning program	Proficiency in work-related behaviors
Lehmann et al, 1999	Qualitative	Involvement in transition-related activities	Perceptions of barriers to involvement
Mathews & Fawcett, 1984	Multiple baseline across subjects	Employment application instruction	Job application skills
McColl et. al, 1999	Qualitative	Move to lower levels of supervision	Perceived factors that made the transition to lower levels of supervision successful
McConnell, 1999	Pretest/posttest control group	Instruction in career planning	Career decision-making
Miner & Bates, 1997	Randomized matched pairs	Person-centered transition planning process	Parent participation in transition planning meetings

Table 2(continued)

Design Features, Intervention Characteristics, and Outcomes Measured for All Studies

Study	Research Designs	Intervention Components	Outcome(s)
Morningstar et. al, 1995	Qualitative	Family involvement in transition planning	Vision of the future and self-determined status
Morningstar, 1997	Qualitative	Career development and employment preparation activities	Perceptions of success in career development and employment
Olson, 1986	Qualitative	School experiences	Perceptions of success in transition
Powers et al, 1999	Qualitative	Student involvement in transition planning	Perceptions of factors that would promote involvement
Powers et al, 2001	Pretest/posttest control group	Transition planning intervention model	Student involvement in transition planning
Reis et al, 1997	Qualitative	High school experiences	Perceptions of successful strategies for transition
Roessler & Foshee, 1996	One-group pretest/posttest	Career education instruction	Vocational decision-making
Taylor-Ritzler et al, 2001	One-group pretest/posttest	Help-recruiting skills curriculum	Help-recruiting behaviors
Van Reusen & Bos, 1994	Posttest only control group	IEP participation strategy (IPARS)	Student participation in IEP process

Table 3

Intervention Constructs Aligned with Kohler and Field (2003) Taxonomy

Study	Taxonomy of Intervention Constructs				
	Student-Focused Planning	Student Development	Collaborative Service Delivery	Family Involvement	Program Structure
Allen et al. 2001	X				
Backhouse & Rodger, 1999					X
Black, 1995		X			
Black, 1996		X			
Burns et al. 1996			X		
Chadsey-Rusch, 1990					X
Coker, 1994		X			
Collet-Klingenberg, 1998		X	X		
Devlieger & Trach 1999	X		X		
Farley & Johnson, 1999		X			
Farley et al. 1999		X			
Flannery et al. 2000	X				
Friedland, 1999	X				
Gallivan-Fenlon, 1994					X
Hua, 2002	X	X	X		
Izzo et al. 2000		X	X		
Kohler, 1994		X			
Lehmann et al. 1999	X	X			
Mathews & Fawcett, 1984		X			

Table 3

Intervention Constructs Aligned with Kohler and Field (2003) Taxonomy (continued)

Study	Taxonomy of Intervention Constructs				
	Student-Focused Planning	Student Development	Collaborative Service Delivery	Family Involvement	Program Structure
McColl et al. 1999		X		X	
McConnell, 1999		X		X	
Miner & Bates, 1997	X				
Morningstar et al. 1995				X	
Morningstar, 1997				X	
Olson, 1986	X	X	X	X	X
Powers et al. 1999	X				
Powers et al. 2001	X				
Reis et al. 1997	X				
Roessler & Foshee, 1996		X			
Taylor-Ritzler et al. 2001	X	X	X		
Van Reusen & Bos, 1994	X				