

LITERATURE REVIEW ON SCHOOL-TO-WORK TRANSITION



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Preliminary Literature Review Summary

Our efforts have been directed toward discovering and reviewing documents of empirical research relevant to the topic of transition from school to adult life (e.g., work, postsecondary education, etc.) with particular emphasis on practices directed toward positive outcomes for students with disabilities, other special needs, or who are otherwise at-risk. We placed a particular focus on obtaining materials published between 1990 and 1997. Our efforts thus far have uncovered much to become excited about, as well some identifiable problems.

Some of our most encouraging findings are that a number of programs across the country appear to have incorporated many approaches included in the NTA Transition Practices Framework. Thus, many programs were identified that sought partnerships between schools and community businesses and agencies, ostensibly for the purposes of organizing and arranging structured work experiences for students and obtaining supportive services such as those that might be provided by local departments of rehabilitation. There were also many instances where programs stressed individualized student planning, made attempts at facilitating student and family involvement in the planning and career development process, and focused on the development of important skills identified as being important elements for successful transition: daily living skills (e.g. learning how to manage money, buying, and preparing meals); personal and social skills (e.g., achieving socially responsible behavior, pursuing educational goals, self-advocacy, self-determination); and occupational skills (e.g., learning about and exploring opportunities; seeking, securing, and maintaining employment). Many programs also

utilized assessment of student functioning and needs to assist in planning and provided a number of support services such as counseling, coaching, etc. There were also many programs that took a long-term approach focused on a gradual building of skills over the school years.

Along with the good news, there is also some discouraging news. First, the vast majority of the documents that were screened turned out to be more of a descriptive or prescriptive nature rather than empirical evaluations. And, although we were able to identify a number of programs that engaged in follow-up or program evaluations of one sort or another, a number of these evaluations were poorly designed and controlled, utilized instruments of questionable reliability and validity, often provided only limited explanations of interventions, and very often focused only on a limited range of outcomes. True experimental studies with control groups and specified independent and dependent variables were rare. More often we found quasi-experimental designs, surveys, and program evaluations; many of these lacking in a discussion of the implications of their research findings or recommending future research. In summary, we would recommend caution to those implementing school-to-work systems and programs in using published information—there are many more recommendations based on opinions as compared to those based on structured evaluation or research.

Method of Review

Criteria for Selecting Documents for Review

Empirical research data for this study were identified and selected for inclusion through use of a two-stage process.

- In Stage 1, search-term descriptors were generated for the purpose of obtaining papers and documents relevant to the topic of transition from school-to-adult life (e.g., work, postsecondary school, etc.). To obtain potentially relevant articles and papers, the staff did educational data bank computer searches and screened already available documents for references and citations. Keywords for this search included, among others, such descriptors as *transition, best practices, success, employment, empirical, disabilities, education, vocational rehabilitation, school-to-work, and transitional programs*. Through this process, a list of references and citations for documents were generated. Attempts to obtain copies of the relevant papers were inaugurated by searching for the journals and copying articles when available, obtaining microfiche and printing copies, making requests through the University of Illinois Interlibrary loan office, or contacting authors with a request for the document of interest. We also searched the worldwide web for leads. Finally, many of the bibliographies associated with acquired papers, in turn, also generated additional leads for relevant documents. Through Stage 1 of the search process, we identified 106 candidate documents.

- In Stage 2, we conducted a more careful and rigorous screening of the candidate documents. We selected documents for inclusion in the review if they met the following criteria:
 - The first criterion was that the study focused on or included students with special needs, students with disabilities, or students who were at-risk in some other manner.
 - The second criterion included the requirement that the documents were of topics related to transition practices. For example, relevant topics of practices might include papers on school-to-work, technical education programs, vocational education, career plan development, transition planning strategies, support services, teachers' perspectives, business apprenticeships, job shadowing, etc. We also considered papers on staff development (e.g., in-service training, background training, business apprenticeships, shadowing) or papers that considered how transition practices were incorporated into already existing programs.
 - The final criterion was that the documents were research-oriented. That is, we chose to limit our search to documents in which researchers defined dependent and independent variables, clearly indicated the outcomes of an intervention of some type, and provided some type of commentary on the implications of the findings for future practice.

Documents that did not meet all three criteria were excluded from further consideration. This process resulted in 20 studies judged adequate for further review.

The documents represented a variety of methodologies: survey (4), program evaluation (5), experimental (1), quasi-experimental (5), cost-benefit analysis (1), follow-up (1), statistical analysis (1), interview (1), and observational descriptive (1).

Candidate Documents for Literature Review

Author(s)	Type	Selected for Review
Alabama State Dept. of Education (1994)	Program Description	No
Allen, D., & Lowe, K. (1995)	Case Study	No
Ascher, C. (1994)	Philosophical/Theoretical	No
Aune, E. (1991)	Program Evaluation	Yes
Beard, J., Bull, K., & Montgomery, D. (1991)	Survey	No
Benz, M.R., et al (1995)	Program Evaluation	Yes
Benz, Yovanoff, & Doran (1997)	Pre/Post Transition Survey	Yes
Berg, D.R. et al. (1985)	Needs Assessment/Evaluation	No
Blackorby & Wagner (1996)	Outcome Follow-Up	Yes
Boesel, D., Rahn, M., & Deich, S. (1994)	Program Description/Literature Review	No
Bragg, D.D. et al. (1994)	Theoretical/Philosophical	No
Browning, P., Brown, et al. (1991)	Bibliography	No
Case, E.J. (1989)	Program Evaluation	Yes
Choy, S.P. (1994)	Program Description	No
Choy, S.P., Alt, M.N., & Henke, R.R. (1994)	Program Description	No
Clarke, D.C. (1992)	Program Description/Case Study	No
Cole, A., et al. (1993)	Literature Review	No
Danzberger & Bodinger-deUriarte (1996)	www.Guide/Case Study	No
Darrow, M.A., and Clark, G.M. (1992)	Methodology	No
Delaware Dept. of Public Instruction (1991)	Philosophical	No
Development Associates, Inc. (1988)	Guide	No
Drake University (1996)	Program Description	No
Durlak, C.M., et al. (1994)	Quasi-Experiment	Yes
Education Resources Group, Inc. (1991)	Proposal/Guide	No
Education Resources Group, Inc. (1991)	Literature Review	No
Elksinin, L.K., & Elksinin, N. (1989)	Theoretical	No
Elson, D.E., Oliver, J.D., et al. (1992)	Guide	No
Evaluation & Training Institute (1991)	Program Descriptions	No
Everson, J.M. (1995)	Guide	No
Ferguson, D., et al. (1994)	Teacher In-Service Program	No
Freedman, M., & Baker, Rachel (1995)	Theoretical/Literature Review/Guide	No
Fuchs, Fuchs, & Fernstrom (1992)	Mainstreaming	No
Garber, McInerney & Velu (1994)	Cost-Benefit Analysis	Yes
Goldbaum, R.I., et al. (1994)	Survey	No
Goldberger, S., et al. (1994)	Guide	No
Goldstein, M.T. (1993)	Qualitative Case Study	No
Goodson, I.F. (1990)	Theoretical/Philosophical	No
Gugerty, J. (1994)	Observation/Description	Yes
Hargreaves, A., et al (1993), Vol. 1	Theoretical	No
Hargreaves, A., et al. (1993), Vol. 3	Best Practices	No
Harhoff, D., & Kane, T.J. (1994)	Program Description	No
Heal & Rusch (1995)	Predictor of Factors/NTLS	Yes
Hernandez-Gantes et al. (1996)	www. Case Studies	No
Hoachlander, G. (1994)	Model Program Description	No
Idaho State Council on Dev. Disabilities (1991)	Survey on Transition Practices	Yes
Karcz, S.A. (1996)	Experiment	Yes

Kohler, P.D. (1993)	Literature Review	No
Kohler, P.D. (1994)	Quasi-Experimental	Yes
Kohler, P.D. et al (1993)	Literature Review/Theory	No
Kohler, P.D., and Rusch, F.R. (1996)	Literature Review/Theory	No
Kohler, P.D., DeStefano et al. (1994)	Literature Review/Theory	No
Kopp, H., Kazis, R., & Churchill, A. (1995)	Executive Summary	No
Kopp, H., Kazis, R., & Churchill, A. (1995)	Evaluation	No
Langone, J. et al. (1992)	Survey - Qualitative	No
McCabe, P.P., & Smergut, P.C. (1994)	Program Description	No
McElroy, M., & Gilmer, D. (1993)	Annotated Bibliography	No
Miller, Corbey, & Springis-Doss (1994)	Pre-Post Conference Survey	Yes
Mississippi State Dept. of Education (1994)	Program Description	No
Moore, M.T., & Waldman, Z. (1994)	Program Description	No
Morgan, D. & Hecht, J. (1990)	Program Evaluation	Yes
Morningstar, Turnbull & Turnbull (1995)	Qualitative Focus Groups	No
Nietupski, J.A., & Chappelle, S.A. (Eds.) (1993) (and multiple other authors)	Descriptive Report	No
Orr, M.T. (1995)	Prescriptive/Theoretical	No
Ottenbourg, S. (1990)	Prescriptive Guide	No
Perry, L.J., et al. (1994)	Best Practices	No
Peters, J.M., et al. (1987)	Program Evaluation	Yes
Posthill, S.M., & Roffman, A.J. (1991)	Quasi-Experiment	Yes
Reetz, Wheeler, & Aplan (1990)	Survey	Yes
Reisner, E.R., et al. (1994)	Program Description/Case Study	No
Repetto, J.B., et al. (1997)	Delphi Approach	No
Research and Training Institute (1995)	Quasi-Experiment	Yes
Retish, P. (1994)	Editorial Introduction	No
Riley, R.W. (1996)	Descriptive	No
Rily, Robinson & Bither (1996)	www. Case Study	No
Rojewski, J.W. (1994)	Literature Review	No
Rossi, R.J., et al. (1995)	Descriptive Program Evaluation	No
Rusch, F.R., & Millar, D.M. (1996)	Literature Review	No
Samberg, L., et al. (1994)	Program Description/Best Practices	No
Sands, D.J., Adams, L., & Stout, D.M. (1995)	Survey of Beliefs	No
Schloss, P.J., Alper, S., & Green, C. (1994)	Exemplary Practices	No
Schmitt, S. (1990)	Program Description	No
Silington, Frank & Carson (1994)	Pre/Post Transition Interview	Yes
South Dakota State Dept. of Education (1994)	Program Description	No
Southwest Educational Development Lab (1989)	Guide/Manual	No
Texas Education Agency (1993)	Post School Long Study	No
Tilson, G.P., et al. (1994)	Descriptive Report	No
Tindall, L.W. (1991)	Literature Review	No
Torres, M., & Askins, W. (1990)	Evaluation	No
U.S. General Accounting Office (1995)	Review/Best Practices	No
Walberg, H.J., & Niemiec, R.P. (1993)	Theoretical/Methods	No
Wang, M.C., & Zollers, N.J. (1990)	Theoretical	No
Wehmeyer & Schwartz (1997)	Follow-Up on Self-Determination	Yes
Wehmeyer, M., & Lawrence, M. (1995)	Field Test/Quasi-Experimental	Yes
Weinbaum, S., & Wirmusky, F. (1994)	Theoretical/Best Practices	No
Witte, J.C., & Kalleberg, A.L. (1994)	Program Description	No
Ysseldyke, J.E., et al. (1993)	Model/Theoretical	No

Findings and Synthesis

The purpose of this report was to summarize the literature with a particular focus on those studies which have attempted to empirically validate practices or concepts germane to the topic of transition from school to adult life (e.g., work, postsecondary education, etc.). As indicated, the data for this study were identified and selected for inclusion through use of a two-stage process. This first stage of the process generated 106 candidate documents. In the second stage, a more rigorous screening of the candidate documents took place and resulted in 20 documents selected for further review.

In undertaking this review, we took as an organizing heuristic a framework comprised of five categories of practices that had been developed at the National Transition Alliance (Kohler, 1996). These categories address practices related to (a) **Student-Focused Planning and Development**; (b) **Career Pathways and Contextual Learning**; (c) **Family Involvement**; (d) **Business, Labor, and Community Resources**; and (e) **Structures and Policies**. Various elements of each of these categories were identified or recommended in the literature as being of importance for successful student transition. In our summary of the findings, we present each framework and consider areas of strength and weakness across the studies in relationship to the framework. Finally, we present a synthesis and offer recommendations both for modifications of approaches based on these findings and for future research directions.

Student-Focused Planning and Development

Of the 20 studies examined in-depth, 12 of these addressed practices related to **Student-Focused Planning and Development** (Kohler, 1996). This category of practices pertains to the planning and development of educational programs for

individual students with an emphasis placed upon life skills development, student assessment and accommodations, and pro-active planning to facilitate the achievement of a successful school-to-adult life transition. A number of elements or subcategories of practices have been suggested to comprise the concept of **Student-Focused Planning and Development**. The heuristic utilized in this review delineates six: **Life Skills Instruction, Individual Education and Career Plan Development, Student Participation, Planning Strategies, Assessment, and Support Services**. The studies reviewed which focus on this broad category of practices are diverse, but the results are not always easily interpretable. In addition, few investigations established strong relationships between interventions and outcomes. Rather, most investigators tested or gathered data using some outcome measure or approach which treated the various, individual skill interventions as a global composite or “package.” As such, the extent to which particular practices contributed to an outcome was difficult or impossible to ascertain. Also, in some cases the relationships between variables were examined with correlational rather than causal designs. Many of the studies we examined gauged the effectiveness of the training, or intervention in terms of an employment outcome or the plan to enroll, or enrollment and retention in a postsecondary program of study. Others considered the extent to which individual skill groupings had been learned, perceptions as to whether they had been learned, or whether they could be demonstrated. Many of the studies simply asked the respondents to indicate whether they had thought the intervention programs were worthwhile and whether the student had learned anything. Some of the studies also included pre and post assessment, while others used only a single measurement in time (usually shortly after the intervention).

All 11 studies that addressed the category of **Student-focused Planning and Development** described the provision of some level of **Life Skills Instruction** to students. For example, seven studies identified, referred to, or implied practices pertaining to student social skills training (cf., Aune, 1991, Benz et al., 1997, Kohler, 1994; Morgan & Hecht, 1990; National Center for Disability Services, 1994; Posthill & Roffman, 1991; Wehmeyer & Lawrence, 1995), although the definition of which skills might be included in such training differed somewhat between studies. Results from these studies generally suggested some evidence of the effectiveness of this training although it became difficult to assess this in all cases. For example, as part of a study examining a program aimed at assisting students in the transition from high school to postsecondary programs, Aune (1991) examined the impact of social skills training and found students were able to identify their interpersonal problems. However, there was no specific mention of the skills they might have utilized to deal with these problems. In the Benz et al. (1997) study, these researchers found that high social skills were predictive of employment and that those students who reported having no need for continued instruction in such social content areas were 1.5 times more likely to be engaged in productive activities.

In addition to social skills training, six studies also referred to student self-awareness and self-advocacy training (Aune, 1991; Durlak et al., 1994; Kohler, 1994; National Center for Disability Services, 1994; Posthill & Roffman, 1991; Wehmeyer & Lawrence, 1995) and these interventions generally referred to insuring students had a good understanding of their disability, their strengths and weaknesses, and how to identify and request needed assistance. Some of these studies were demonstration

projects and several considered, at some level, the effect this training had on outcomes such as eventual employment or enrollment and retention in postsecondary programs. As an example, Aune (1991) found that a large majority of the students who completed the program expressed an increased knowledge of learning disability services offered at postsecondary schools, were able to list the accommodations they would require and how to request them, and were able to identify themselves as having a learning disability. Unfortunately, her results also indicated that a sizable proportion of the students were uncomfortable approaching others to ask for accommodations. In addition, at least one fourth of them were also unable or unwilling to recognize themselves as having a learning disability. In the demonstration project conducted by the National Center for Disability Services (1994), the extent to which students may have improved in their ability to self-advocate was not determined as the student-completed pre-intervention measure was rated at a ceiling level and did not evidence a significant change at post-intervention. Despite this, the same assessment instrument, completed by teachers, suggested that there was a significant positive change in student skill level in this area.

Six studies referred to student participation in independent living skills training (c.f., Benz et al., 1997; Case, 1989; Kohler, 1994; Morgan & Hecht, 1990; Posthill & Roffman, 1991; Wehmeyer & Lawrence, 1995) with these practices referring to a gamut of skills that ranged from how to budget, pay bills, and ask for directions to using public transportation, shopping, and doing laundry. However, in the Benz et al. (1997) study, these researchers found that these high responsibility skills and problem solving skills were not predictive of employment. Another example comes from the college-based transition program studied by Posthill and Roffman (1991). In their investigation of the

three-year Threshold program, these researchers found that 75% of their sample were living independently and that 25% were living at home with their parents. Furthermore, the study found that 84% had lived in the same apartment for at least a year, 44% had lived in an apartment for at least two years, and 32% had done so for three years. A majority of the graduates of this program perceived themselves to be quite independent and capable of performing a majority of the skills they had been taught.

Self-determination skills training or the relationship between self-determination and some other variable was considered in five studies (Durlak et al., 1994; Miller et al., 1994; National Center for Disability Services, 1994; Wehmeyer & Lawrence, 1995; Wehmeyer & Schwartz, 1997). The time spent for self-determination instruction varied greatly across the studies. In some cases, instruction occurred over a period of time (e.g., 36 training sessions in the Wehmeyer and Lawrence [1995] project). In other cases the instructional period was much shorter (e.g., a one-day conference that included a presentation on self-determination and its importance in the Miller et al., [1994] study). In the Wehmeyer and Lawrence (1995) study, assessment before and after the skills training suggested only limited empirical support for the program intervention. That is, a significant increase in self-efficacy/outcome expectancy for educational planning and locus of control was found only for the female students in this study and not for the males. In 1997, Wehmeyer and Schwartz did not conduct an intervention study but instead conducted a correlational study to examine the relationship between level of self-determination, locus of control, and various outcomes including employment, hours of work per week, salary, living arrangements, etc. They found no relationship between high and low self-determination and where the students lived (most lived in their parent's

home), although a larger number of students with high self-determination indicated they preferred independent living. The high self-determination group was more likely to be employed but a more complex set of variables predicted level of salary. In a study which examined the pre-post perceptions resulting from attending a one-day conference that included discussion of self-determination, Miller et al. (1994) found that 90% of the teachers thought their students had benefited from participation. The students' perceptions were not solicited.

Two studies included leisure skills training (c.f., Case, 1989; Wehmeyer & Lawrence, 1995), and one study addressed learning strategies skills training (see Aune, 1991). Case (1989) surveyed the impact of a program designed to help students secure paid employment and function successfully within the community; a module for leisure skills training was included in this program. Unfortunately, no specific mention was made of the impact of this intervention component in terms of outcome. This was also the case with respect to the intervention evaluated by Wehmeyer and Lawrence (1995). The study by Aune (1991), although including a learning strategies instruction component, obtained no objective measurement of the utilization of these skills other than a student response to a questionnaire indicating they were using such strategies.

In the area of **Individual Education and Career Plan Development**, four studies made reference to, or implied that the personal needs of the student were taken into account in processes of transition planning (Aune, 1991; Benz et al., 1997; Gugerty, 1994; Morgan & Hecht, 1990). Furthermore, three studies (Aune, 1991; Morgan & Hecht, 1990; Wehmeyer & Lawrence, 1995) communicated that specific student goals were established as a result of the student's choices. One study each indicated that the

student's educational program corresponded to specified goals (see Morgan & Hecht, 1990), that individual educational or training goals and objectives had been specified for each student (see Aune, 1991), that students were taught decision-making and goal-setting (see National Center for Disabilities Services, 1994), and that student progress or attainment of goals would be scheduled for annual review (see Morgan & Hecht, 1990). Of these studies, only one appears to have attempted to empirically demonstrate a relationship between specific interventions and outcomes. In the study conducted by Benz et al., (1997), these researchers enlisted a regression model to examine whether access to career planning and guidance, career awareness training, assigned work-based experience, and student/parent agreement about student's work and schooling goals would predict competitive employment and/or productive engagement. Whether or not the personal needs of the student were addressed in the planning were also implied as a predictor. The results of this study suggested that two or more work experiences during school were related to competitive employment and that career awareness was not predictive of competitive employment (although it was found to be predictive of productive engagement). No mention was made of the access to career planning and guidance as a potent predictor variable, nor was agreement between the student and his or her parent on work goals found to be a viable predictor. The remainder of the studies did not explicitly address in empirical fashion how the incorporated practices lead to or are related to specific outcomes. Instead, it is implied that the effects of these interventions are responsible for outcomes.

Another of the elements thought by many to play an important role in student transition is **Student Participation** in the IEP and transition planning process — practice

mandated by the 1990 IDEA amendments. Our review revealed that five studies referred to the planning process as either “student-centered” or that student involvement in decision making formed an integral component of the process (Aune, 1991; Gugerty, 1994; Kohler, 1994; Morgan & Hecht, 1990; Wehmeyer & Lawrence, 1995). Indeed, two studies made specific reference to the facilitation of self-determination within the planning process (Aune, 1991; Wehmeyer & Lawrence, 1995), and one study specified student involvement in decisions about transition-related outcomes (Wehmeyer & Lawrence, 1995).

Career counseling services were also explicitly provided to students in four studies (Aune, 1991; Benz et. al., 1997; Kohler, 1994; Morgan & Hecht, 1990), and documentation of student interests and preferences were obtained in at least two of these studies (Kohler, 1994; Morgan & Hecht, 1990). In one study, students were taught to self-direct their instruction (Wehmeyer & Lawrence, 1995). Results from these studies again reflect more of an implied contribution from the package of intervention practices than a direct test of the effect of these practices. This was the case in all but the study conducted by Benz et al. (1997). In their program, career counseling was not mentioned as explicitly predictive of outcome although career awareness (presumably at least partially facilitated through counseling) was not predictive of competitive employment but was predictive of productive engagement.

Another element of the **Student-Focused Planning and Development** category, **Planning Strategies** can include anything from inclusion of the student, family members, school personnel, and participation of outside agency personnel on the planning team to adequate meeting time and/or the identification of a team leader for this planning team.

Our review indicated three programs in which the planning team included or attempted to include the student, family members, a counselor, school personnel, agency personnel, and/or community representatives (c.f., Aune, 199; Benz, Lindstrom, & Halpern, 1995; Morgan & Hecht, 1990). Moreover, these same three studies also included the use of assessment information as the basis for planning (c.f., Aune, 1991; Benz et. al., 1995; Morgan & Hecht, 1990). In the Wehmeyer and Lawrence (1995) study, students were allowed to identify whom they wanted to involve in the planning process. In the Morgan and Hecht (1990) study, specific reference was made to school-to-work and transition-focused planning beginning no later than age 14 and that referral to community service providers occurred prior to the student's exit from high school. Finally, one study referred to the planning process as comprehensive and well designed to achieve transition outcomes (see Gugerty, 1994). The studies, like many of the others already cited, present results that by implication refer to the impact of the interventions on outcomes.

The practice of **Assessment** can take many forms and be subject to many uses. In the studies we reviewed, the majority of assessments were conducted with students to examine vocational variables such as student interests, skills, values, and achievement (c.f., Aune, 1991; Kohler, 1994; Morgan & Hecht, 1990; Peters et al., 1987), and/or learning needs (Wehmeyer & Lawrence, 1995). Unfortunately, while these practices are explicitly mentioned or referred to in the documents, a direct test of their effectiveness on transition outcomes is not made. Rather, as has been seen before, it is implied that their role in the intervention “package” constitutes their viability. In contrast, however, one study (Benz et. al., 1995) incorporated assessment rather uniquely — to ascertain the highest priority needs of the local community. While this study did not examine the

impact of this approach on students per se, it did present data suggesting that such assessment served stakeholders in selecting goals believed to be relevant to the particular constituency.

Support Services round out the framework category of **Student-Focused Planning and Development**. In six studies, such support services were either directly stated or implied as playing a role in interventions. The descriptions of these services ranged from relatively detailed to vague. Although only two studies (Aune, 1991 and Morgan and Hecht, 1990) made explicit mention of assessing the need for support services or accommodations, the other studies simply stated the presence of the services. Specific types of support services varied widely and included the following: (a) post-graduation counseling and/or academic support (c.f., Aune, 1991; Benz et al., 1997; Morgan & Hecht, 1990), (b) the use of adult mentors (see National Center for Disability Services, 1994); (c) emotional counseling (see Posthill & Roffman, 1991); (d) use of visiting independent living skills counselors (see Posthill & Roffman, 1991); (e) vocational advisors who help with job searches and provide supervision (see Posthill & Roffman, 1991); (f) provision of “weekly real world seminars” (see Posthill & Roffman, 1991); (g) instruction of students on how to identify and secure community resources (see Wehmeyer & Lawrence, 1995); and (h) Youth Reentry Specialists who carried out many of the above noted services and more (see Karcz, 1996). Other services may have also been offered within these interventions but were not explicitly described.

Interestingly, of those studies that considered support services, a number of them also considered the extent to which support services had been used by the students. For example, Posthill and Roffman (1991) asked students what forms of support services they

used. The results suggested that the most important form of support for these students were their family, followed by individual psychotherapy and consultations with their advisor. Unfortunately, these researchers did not investigate the extent to which these forms of support either predicted or otherwise contributed to particular outcomes.

Another study (Morgan & Hecht, 1990) also considered forms of support for students upon exit from school. The results from this study indicated that 32% of the sample of students were receiving services from the Department of Rehabilitation Services and 62% sought assistance from their parents. Again, however, no effort was made to detect the contribution of such support on student status at the time the data were collected. In one study (Karcz, 1996), the efforts of a mentor in the form of a Youth Reentry Specialist acted in a host of support roles. This specialist gathered information on available vocational programs and opportunities for youth; acquired authorization to enroll youth in such programs; acted as support for the youth and parents; provided technical assistance to parole officers, parents, students, and directors of special education programs; secured funding; investigated program options; and assisted in the research effort of the study. In another study, an important feature of the intervention was to yield to the student the option to choose his or her coach (see Wehmeyer & Lawrence, 1995). In this last case, an intervention to facilitate self-determination, such choices would appear consistent with the purposes of the authors.

Career Pathways and Contextual Learning

Of those studies we reviewed, seven were identified that incorporated practices which can be summarized under the framework category of **Career Pathways and**

Contextual Learning. This category of practices focuses upon school-based and work-based curricula and activities pertaining specifically to career exploration and development. Here, employment skills instruction and occupation-specific vocational curricula can be delivered in both school-based and work-based settings. Furthermore, individual learning plans link school and work experiences to develop work-related behaviors, and both general and specific skill outcomes. The elements of this category that appear to capture these activities have been labeled **Employment Skills Instruction, Career and Vocational Curricula, Community-Based Learning, and Structured Work Experience.**

In what has been comprehensively referred to as **Employment Skills Instruction**, five studies indicated or implied that they trained students in general work-related behaviors and skills (c.f., Benz, et. al., 1997; Case, 1989; Kohler, 1994; Morgan & Hecht, 1990; Posthill & Roffman, 1991). Four studies mentioned specifically that they included job-seeking skills training in their interventions (c.f., Benz, et. al., 1997; Case, 1989; National Center for Disabilities Services, 1994; Posthill & Roffman, 1991). Of these studies, two also included occupation-specific vocational skills training (see Kohler, 1994; Posthill & Roffman, 1991) and one study provided training to the students in selecting colleges, completing applications, and identifying other postsecondary options (see Aune, 1991). Of the five studies that reported or implied the inclusion of training in work-related behaviors and skills, two of these obtained direct measure of the impact of this training. Thus, in her evaluation of the BEST program curriculum, Kohler (1994) found a significant increase in these skills at post-testing although students in some schools demonstrated greater proficiency than did students in other schools. She did not

assess job-seeking skills. Additionally, Posthill and Roffman (1991) obtained ratings of employers which indicated they had ranked the program graduates' work-related behaviors and skills as excellent. These graduates also indicated that they had received very good preparation in work habits through their participation in this program. Again, no mention was made of job-seeking skills or the impact of such training in the results section of these papers. On the other hand, the evaluations of the programs executed by Case (1989) and Benz et al. (1997) did not specifically take work-related behaviors and skills into account in measuring outcomes. In surveys filled out by students, employers, parents, school personnel, and service providers, Case (1989) found these respondents believed the students had developed the skills generally required to maintain employment, but they did not mention specifically work-related behavior or job-seeking skills in the results section. Using a regression approach, Benz et al (1997) did not find that work-related behaviors and skills were predictive of eventual employment, but did find the training in job search skills was predictive of employment.

Although the National Center for Disability Services' (1994) study was concerned with the impact of a "self-determination" training program, this study also included a module for job-seeking skills training. Unfortunately, no direct outcome assessment of this module was reported. They assessed problem-solving abilities, however students did not perceive any significant increase in these skills at post-testing (most likely attributable to the students' already ceiling level assessment of their abilities at pre-testing). Of interest here is that the teachers of these students did perceive the students had benefited from participation in the program, although there was no explicit mention of the contribution of the job-seeking skills training. In the study by Morgan and Hecht

(1990), only a baseline measure was achieved for student status; although the researchers indicated they would investigate training in work-related behaviors and skills, no baseline index of this set of skills was published.

Altogether different, the study by Aune (1991) was concerned with the impact of an intervention on transitioning students from high school to postsecondary programs. Her intervention included instruction in college selection and the application process. The results suggested the students felt that at the time of assessment they had greater knowledge about postsecondary programs, options, and the LD services offered at postsecondary institutions. There was no indication of the role such instruction played in the acceptance rate of her students into postsecondary programs.

In addition to the employment skills instruction mentioned above, specific **Career and Vocational Curricula** providing career awareness and exploration training were indicated in three studies (c.f., Benz, et al., 1997; Morgan & Hecht, 1990; National Center for Disability Services, 1994), and curricula which included both school-based and work-based or worksite experience components, and/or community-based structured work experiences were either specified or implied in five studies (c.f., Benz et al., 1997; Kohler, 1994; Morgan & Hecht, 1990; National Center for Disability Services, 1994; Posthill & Roffman, 1991). Those studies which indicated curricula providing career awareness and exploration usually did so in the context of a vocational training module. Only one study did an independent and direct assessment of the contribution of career awareness training and exploration to post-school outcomes. In the context of their study on the influence of school-to-work programs on outcomes, Benz et al. (1997) found, via regression analysis, that career awareness was not predictive of competitive employment

for graduates but was predictive of productive engagement. All of the other studies mentioned did not specifically look at the impact of such training on outcomes, but rather treated individual interventions as a composite and considered some overall conceptual outcome variable(s). This approach was similarly used by those programs that included or implied the inclusion of job or field placement services, supervised field placement, a work study program, or paid work experience as part of their intervention. Again, except for the study by Benz et. al., (1997) no independent or direct test of these work experience strategies on post-school employment was undertaken. Benz et al. (1997) found that two or more work experiences were predictive of employment. The other authors investigated effectiveness primarily in terms of short-term outcomes, such as the development of specific skills.

Family Involvement

The framework category of **Family Involvement** includes practices such as those associated with parent and family involvement in planning and delivering education and transition services, as well as practices that facilitate such involvement. Family focused training increases parents' knowledge and skills related to advocacy, planning, support, and legal issues. Family empowerment practices facilitate family participation in planning, assessment, training, mentoring, and support roles.

Of the 19 studies reviewed, five of these addressed **Family Involvement**. Of these, two studies actually evaluated interventions which included features of family participation (see Morgan & Hecht, 1990; National Center for Disability Services, 1994). Of the others, one used a qualitative approach (i.e., focus group) to study the impact of family on student visions of the future, the transition process, and student self-

determination (Morningstar et al., 1995). Another (Case, 1989) sought parental input regarding the relevant questions that should be asked as part of an evaluation of interventions, and one study (Benz et al., 1995) considered the participation of the various stakeholders groups, including parents, and how this participation might be facilitated. In somewhat greater detail, the intervention described by Morgan and Hecht (1990) included such practices as providing school-to-work and transition information to families, encouraging family attendance and participation at planning meetings, and having family members evaluate the student's transition program. In addition, school-to-work and transition information was provided to parents and family members prior to the student reaching age 14.

In contrast to the study conducted by Morgan and Hecht (1990), the intervention conducted by the National Center for Disability Services (1994) included practices in which family members were trained as mentors to promote their child's self-determination and thus these parents directly participated in service delivery. Unfortunately, none of these studies provides direct evidence of the impact of family involvement practices on transition outcomes. Thus, the report by Benz et al. (1995) indicated that parental involvement was not adequate across stakeholder groups but could be facilitated if parents were given a "menu of options" of goals and could play a role in selecting those goals they believed to be most relevant. Also, the report by Morgan and Hecht (1990), which detailed the beginning stage of the proposed multiple year West End SELPA project and intervention, did not look at the influence of family variables on outcome. This first report served as a baseline for the authors. Although future reports

were promised, a search of the ERIC database produced no succeeding accounts of the project's findings.

The study conducted by the National Center for Disability Services (1994) did produce outcome variables relating to student self-determination. However, despite a family involvement component in the overall intervention, no specific test of its influence on the development of self-determination skills was assessed. Instead, we see the intervention as a composite of practices argued to have influenced student outcome. Finally, the qualitative study conducted by Morningstar et al. (1995) focused on the solicitation of the perspectives of students on family involvement. This study indicated that parents/family were viewed as part of a natural support network. Although this study affords some insight into the role family members may play on each of the three variables studied (i.e., student visions of the future, the transition process, and self-determination), that influence, at best, appears to be informal.

Business, Labor, and Community Resources

Business and Community Resource practices focus on facilitating participation by businesses, labor unions, community service agencies, government organizations, and other community resources in all aspects of school-to-work systems. Interagency agreements, an interagency coordinating body, established methods of communication, and clearly articulated roles promote active involvement of various community organizations in curriculum and program development. Furthermore, community organizations validate skill standards and worker competencies and provide classroom resources and training sites for both students and educators. Student and teacher mentoring by members of community organizations is an important role that links

education and work. These three practices are organized into elements that constitute this framework category: **Involvement Strategies, Community Participant Roles, and Assessment of Community Needs.**

It is often difficult to disentangle the practice elements stated above, especially involvement strategies and community participant roles. Of the 19 studies reviewed, only three intervention descriptions specifically indicated formal collaborative agreements between schools, service agencies, employers, and/or other stakeholders (see Morgan & Hecht, 1990; National Center for Disability Services, 1994; Posthill & Roffman, 1991). For example, in a study whose primary focus was the development of self-determination skills, principals from the National Center for Disability Services recruited adult mentors with disabilities from the community and advocacy agencies, contacted employers for their ideas on matching the content of the curriculum with the needs of business, and in the context of “Career Days” had community employers come to the schools and make presentations to students regarding their business and personnel needs. In addition to these activities, the National Center for Disability Services also incorporated into their program the opportunity to solicit ongoing feedback from consumers, business persons, and others involved with the project for the purpose of sustaining and improving the content and implementation of the curriculum. However, sufficient detail regarding how the recruitment of the stakeholders was realized was not provided. Furthermore, like most of the other studies we reviewed in this domain, no explicit examination was made of the impact of these collaborative activities on the overall outcome of the project.

Other intervention or study descriptions were less explicit regarding the formality of their work relationships, involvement strategies, or attempts to assign community

participant roles. For example, four studies (c.f., Benz et al., 1995; Karcz, 1996; Kohler, 1994; Miller et al., 1994) indicated either a school-business partnership, an “interagency agreement and collaboration,” or an interagency coordinating body that included consumers, parents, educators, community service providers, and employers. At least two programs specifically arranged for meetings among stakeholders such as students, family members, school personnel, and businesses in an effort to specifically foster communication (see Benz et al., 1995; Peters et al., 1987). In the former case, stakeholder teams were established with the implicit purpose of working collaboratively to determine relevant and desirable goals for the local community. The outcome of this was the selection of goals believed to be of highest priority and relevance to the stakeholders. In the latter study, a lead STW agency was identified. One intervention simply designated a STW transition contact person for all service providers (see Aune, 1991), although the specific detail of his/her liaison work was not described. In four studies, the community agency or business role was to provide training sites for students (Benz et al., 1995; Case, 1989; Kohler, 1994; Morgan & Hecht, 1990). None of these studies, however, explicitly assessed the contribution to outcome made by business and community collaborations, although one might argue that without such collaboration, particular interventions or experiences associated with improved student skills or outcomes might not be possible.

The assessment of community needs was explicitly pursued in the study by Benz et al. (1995). Using an assessment instrument apparently designed specifically for the program, these researchers solicited the perceptions of various stakeholder teams for the purpose of establishing the highest priority needs of the local community. The result of

this attempt was an establishment of these needs across the various study sites. Such attempts at getting feedback on community needs were less formally pursued (or at least less formally described) in other studies (e.g., Miller, Corbey, & Springer-Doss, 1994).

Structures and Policies

The framework category **Structures and Policies** refers to **Partnership Structures, Program Philosophies, Program Policies, Strategic Planning, Program Evaluation, Resource Allocation, and Human Resource Development**, and how these various elements facilitate transition from school to adult life. These program practices or features relate to the efficient and effective delivery of school to work and transition services.

Four studies indicated some form of specific attention to the structure of partnerships (Benz et al., 1995; Gugerty, 1994; Morgn & Hecht, 1990; Peters et al., 1987). For example, the intervention described by Benz et al. (1995) utilized a school-family-community partnership and collaborative program planning and development. Peters et al. (1987) also enlisted collaborative program planning and development, as well as making efforts to reduce system barriers to collaboration. Similarly, Morgan and Hecht (1990) and Peters et al. (1987) incorporated into their interventions the coordinated and shared delivery of STW and transition-related services between partners. Peters et al. (1987) included employer involvement, collaborative uses of assessment data, and collaborative development and implementation of transition plans for each student. Gugerty (1994), in describing the approaches used by two year colleges to serve students with both learning and cognitive disabilities, indicated that these programs possessed organizational structures which reflected attention to planning and detail. Of the group of

studies considered here, the study by Benz et al. (1995) was most specifically concerned with **Partnership Structure**. These researchers focused specifically on team building which included students, parents, school personnel, adult services personnel, and relevant stakeholders in the community. Importantly, they also considered the outcomes resulting from the team efforts that included a list of high priority goals.

Program Philosophy refers to a program's mission, paradigm, values, and beliefs. In Aune's (1991) study of transition from high school to postsecondary programs, providing student programming in integrated settings was described as a value. The studies conducted by Case (1989), Kohler (1994), and the National Center for Disability Services (1994) also described programs in which it was considered important that education should be provided in least restrictive environments. Five studies reflected the value that program planning should be outcome-based (c.f., Aune, 1991; Case, 1989; Kohler, 1994; Morgan & Hecht, 1990; Posthill & Roffman, 1991), and three of these studies also emphasized that curricula should be community-referenced (Case, 1989; Kohler, 1994; Posthill & Roffman, 1991). Only one study in our review articulated the importance of a longitudinal approach to STW and transition that included grades K-16 (Morgan & Hecht, 1990). Although this concept may have been embraced by other programs, it was not explicitly mentioned. Gugerty (1994) emphasized how the two year colleges he studied placed exceptional value on problem solving and persistence, team effort, flexibility and adaptability in providing programming to students in transition. Another philosophy expressed by one approach was the importance of disseminating curriculum and research findings at local, state, and national levels (National Center for Disability Services, 1994). Program Policy is related to the philosophy underlying a

program, and at least one view holds that administrative support is essential to STW and transition programs (Gugerty, 1994). Although articulating these values, there have been no attempts as far as we could ascertain to understand how they relate to the realization of specific outcomes.

Human Resource Development also frequently forms part of the policies of transition approaches. In the studies reviewed, two studies emphasized the practices of transition-focused technical assistance, preservice training focusing on STW and transition practices, and ongoing transdisciplinary staff development through inservice activities (National Center for Disability Services, 1994; Peters et al., 1987). One study indicated the importance of “assigning qualified staff” (Gugerty, 1994).

Aspects of **Strategic Planning** were infrequently discussed in the studies we reviewed. Morgan and Hecht (1990) indicated that planning specifically connected state economic and workforce development activities (presumably these were the support relationships such as that with the Department of Rehabilitation Services), and Benz et al. (1995) discussed the use of activities and timelines for accomplishing objectives and outcomes. Interestingly, how limited resources might be allocated was not addressed by any of the reviewed studies.

Finally, two of the studies we reviewed advocated the importance of **Program Evaluation** for increasing program effectiveness and improvement (Benz et. al., 1995; Morgan & Hecht, 1990). A third study invoked program evaluation to assess the effectiveness of all interventions on development of self-determination behavior and to identify factors associated with postsecondary outcomes (see National Center for Disability Services, 1994).

SUMMARY

The research reviewed here is broadly concerned with attempts to empirically support interventions or practices that relate to the transition from school-to-work, the transition from secondary education to postsecondary education, and/or the transition from school to adult life. The authors of these investigations have demonstrated a wealth of creativity in the form of conceptualizing factors that may be related to positive transition outcomes and the development of ideas for interventions. Many incorporated into their interventions such practices as skill instruction, working in partnerships, opportunities for practicing skills in real-world contexts, obtaining performance data through assessment, obtaining feedback, and facilitating the participation of relevant stakeholders including the students themselves. Our primary question, however, is whether there is empirical support for the practices and interventions cited in this literature. From this group of studies, the empirical evidence for the effectiveness of individual practices is somewhat difficult to ascertain. We can say that there is some evidence to support various practices, but also that no body of evidence exists that unequivocally confirms any particular approach to transition, nor is there any strong evidence to support individual practices. At most, we can say there is guarded support for some practices and that some approaches remain indeterminate.

There are a number of deficiencies in this group of studies that serve to compromise the generalizability of results. Most notable were the lack of details given about specific interventions and practices, and the fact that few investigations directly tested the contribution made by specific practices. Instead, most investigations tested or gathered data using some outcome measure or approach which treated the various,

individual interventions as a global composite or “program package.” Essentially, we end up without clear, concise, and comprehensive instructions on how to conduct interventions. Even if specific programs and interventions were found to be influential, it would be difficult to implement these programs and interventions because of the lack of detail regarding replicability. As such, the extent to which particular practices are viable becomes difficult to assess. Specific and in-depth documentation of the details of the interventions would allow others to replicate activities. In addition, detailed instructions regarding implementation would allow for replication of the research, which is essential if we are to garner evidence in support of practices.

A second problem related to the majority of the studies was that there were no direct tests of the impact of these specific interventions on any particular outcome; instead, many consisted of research designs that looked for correlational relationships between dependent and independent variables. As a consequence, it becomes difficult, if not impossible to ascertain the effectiveness of particular practices on specific transition outcomes.

We also found a number of other problems associated with the studies. These included (a) studies and/or programs often focused only on higher functioning students, (b) disproportionate losses of subjects during the course of the interventions (e.g., absent information on retention rates and drop-out rates), (c) lack of implementation of sound and rigorous evaluation methods, (d) lack of random sampling, (e) lack of baseline data, and (f) the frequent absence and/or use of objective measurement instruments (as well as measures with demonstrated sensitivity to the construct of interest and suitable reliability and validity data). Other problems included the absence of control/comparison groups,

lack of operational definitions of independent and/or dependent variables, missing descriptive information concerning participants, and differences in curriculum and data collection protocols depending on the site in multiple-site studies. Many of these problem areas should be addressed in the future so that the effectiveness of interventions can be demonstrated.

Historically, transition program evaluation studies have concerned themselves with identifying short-term effects and have not provided us details about specific effective ways of implementing educational experiences that are associated with long-term outcomes. The evaluations (i.e., studies) we reviewed were primarily focused on short-term outcomes such as the learning, or immediate effect of instruction, of specific skills, behaviors, knowledge, awareness, etc. Although this information is valuable, we also need program follow-up investigations that examine the maintenance of such instructional components and practices and their long-term impact. Thus, evaluations need to be extended over longer periods of time to help illuminate the effects of practices once students have left school and been out for various extents of time. We believe such follow-up studies are critical in providing us with substantive evidence to either recommend or advise against specific practices or programs.

Again, we commend these authors on their efforts to conduct transition-related intervention research. We remind readers that we initially identified over 100 documents, but found that only 20 of them met our criteria that they be (a) focused on students with disabilities or other students considered at risk, (b) related to transition, and (c) research oriented. Similar to Kohler's (1993) previous efforts to conduct a similar review, we learned once again that transition-related empirical research is limited; literature that

proposes untested theories or models is much more abundant. It appears that the difficulty and complexity of conducting transition-related research and evaluation continue to serve as a barrier to the development of new knowledge about effective transition-related interventions.

A secondary purpose of the review was to validate and extend the NTA Transition Practices Framework as an organizing heuristic of effective transition-related practices. Importantly, the model appeared to hold up as a useful framework for investigating transition, and specifically, school-to-work practices. The practices reviewed in the literature paralleled, in general, the practices in the Framework. Thus, the Framework appears to capture, in essence, those practices purposed to make a difference for students. On the other hand, we did not identify new practices to extend the framework, nor, as previously mentioned, did we identify in general, good sound descriptions of effective strategies for implementing the somewhat generic practices that comprise the framework.

In spite of the flurry of activity in the six years since Kohler's 1993 review, we still have limited information available in regard to specific, effective interventions. Either we're not doing a good job evaluating our interventions and model programs, or we're not doing a good job disseminating information about what works. In either case, we owe it to the field and to individuals with disabilities to improve on both. As leaders, researchers, and policy makers, we must develop and facilitate sound program evaluations. As practitioners and consumers, we must commit to participate in data collection and analysis. We know from the Framework, which is built upon previous research, that certain "generic" practices, such as paid work experience and specific student skills, are related to improved student outcomes. In the meantime, however,

we're still not sure if one way of implementing the practices is any better than any other way, nor do we know if the whole package leads to specific outcomes or if particular aspects of the package are more important than others.

In light of these shortcomings, we propose two activities: (a) more research on transition-related interventions that includes an analysis of post-school outcomes, and (b) more rigorous evaluation of model programs. As a leader in the transition initiative, the Office of Special Education Programs (OSEP) can facilitate activity in both of these areas. Since 1984, OSEP has funded over 400 transition-related model programs. In fact, many of the transition services in place today have been initiated or influenced by the OSEP-funded programs. In contrast, OSEP has funded few specific transition-focused research studies. One of these, the National Longitudinal Transition Study provided much of our current information about the relationship between post-school outcomes and secondary education experiences. An important next step would be to fund and conduct such studies from a variety of state or local contexts that could include more specific descriptions of students' educational experiences. Then such studies might better inform us as to the effects of specific interventions on students' post-school lives.

With respect to program evaluation, OSEP can also influence activity in this area. An evaluation plan has always comprised an important part of the project proposed rating scheme, yet time and again, evaluation reports from model projects fail to provide reliable data on program outcomes (e.g., Rusch, Kohler, & Hughes, 1992; Rusch, Kohler, & Rubin, 1994). In general, the reports tend to focus on outputs. With the passage of the Government Performance and Results Act of 1993, the federal government mandated that funding recipients illustrate the outcomes of their activities. To do so will require

that they understand the differences between their outputs and outcomes, and strategies for measuring them. To facilitate such, OSEP may need to continue providing technical assistance and or closer supervision with regards to evaluation tasks.

The field must also be diligent with respect to transition-focused research and evaluation. Again, researchers and practitioners each play an important role. We cannot continue to spend the precious few years we have with our students providing instruction that is either ineffective or marginally effective in terms of productive post-school lives.

The simplest way to approach these issues is by asking questions about what we are doing; some of these questions focus on our outputs and some on our outcomes. Once we begin asking questions, we can collect and measure information that helps provide answers. With respect to the NTA Transition Practices Framework, Kohler (1999) posed the following questions to stimulate reflection on the extent to which the practices are implemented at the local level. We offer them and encourage their use as an initial step from which we may subsequently address effectiveness of the practices.

Student-Focused Planning and Development

- To what extent do students and parents actively participate in their IEP development? Do students have the knowledge and skills to participate actively? How are students' interests, needs, and preferences determined and documented? To what extent do students' IEPs include student-identified goals and objectives? How many IEP goals are student-initiated?
- To what extent and how is academic, cognitive, and/or adaptive behavior assessment information used in developing educational goals and objectives and to determine related service needs? To what extent and how is information gathered through career awareness and exploration activities linked to a student's IEP? To what extent is assessment information reflected in students' IEPs and/or career plans?
- To what extent are the goals and objectives identified in IEPs (including "transition services") implemented and evaluated?

What assessment information is collected and used in students' IEP development? How is this information compiled and used in planning students' educational program and services? Are student portfolios used to collect and organize information? What information do they include?

- What curricula or strategies are utilized to teach students skills related to social interactions, self-determination, independent living? How effective are these curricula? How are student skills measured?
- What strategies are used to insure that students, parents, and agency personnel actively participate in IEP meetings? How is participation measured and what are the findings?
- To what extent and how are the responsibilities assigned through the IEP process reviewed? To what extent do identified services go undelivered? What procedures are used to address discrepancies between services promised and services provided?

Career Pathways and Contextual Learning

- How and to what extent are students with disabilities included in school-to-work activities and systems developed through the School-to-Work Opportunities State Implementation Grant?
- How and to what extent are students with disabilities included in career awareness and development activities at the elementary level? How and to what extent are special education teachers involved in career development and awareness activities at the elementary level?
- To what extent do students enroll in and complete occupational-specific programs? What specific services do students receive that support their access and participation in occupational programs? What services do they need but do not receive?
- To what extent have students with disabilities achieved the competency standards outlined in the state plan for vocational and technical education? How and to what extent have students with disabilities been assessed with respect to the Perkins' plan competencies? What are the findings provided by those assessments?
- To what extent do students with disabilities participate in paid work experiences during high school? In which occupational areas are they employed?
- Are students recruited and to what extent do they participate in vocational student organizations and other co-curricular and extracurricular activities?

Business, Labor, and Community Resources

- How and to what extent do various disciplines (e.g., vocational and special education) and service agencies (e.g., educational and rehabilitation) coordinate, collect, and share assessment information?
- To what extent do local communities have a local coordinating council that addresses community-level service issues?
- How many schools have up-to-date collaborative agreements with their local rehabilitation agency? To what extent do rehabilitation counselors meet with students in schools? To what extent do rehabilitation counselors actively participate in IEP meetings? How many students are receiving rehabilitation services? What services are they receiving? What services do they need but are not receiving? How many and what services are projected for the future?
- How are businesses and labor unions recruited and/or involved in identifying standards, developing curricula, participating in career awareness and exploration, providing work-based education, and providing professional development for teachers?

Family Involvement

- To what extent and how are parents and/or families of students with disabilities included in professional development activities and program planning, implementation, and evaluation? In what roles do family members participate in providing transition-related education and services? What strategies are used to recruit and/or involve family members?
- How satisfied are parents and family members with their involvement in professional development activities and program planning, implementation, and evaluation? How do parents and families perceive the effectiveness of transition-focused education and services for their children?
- To what extent are training opportunities provided for parents and family members? How effective are these activities in increasing parents' knowledge and skills? Do these activities positively impact the extent to which parents and/or family members are involved in transition-related education and service delivery?

Program Structures and Policies

- Are and how are students' post-school outcomes measured? What indicators have been identified/are being used to measure students' post-school outcomes? What outcomes do students achieve with respect to employment, independent living, social and recreation, and community participation?

- What incentives and/or disincentives are used to hold schools accountable for students' post-school outcomes? To what extent and how are student outcomes considered in the monitoring and/or quality assurance processes?
- What data are collected and reported that indicate the extent to which students with disabilities are included in school to work activities and systems developed through the School-to-Work Opportunities State Implementation Grant?
- To what extent and how do interagency coordinating bodies conduct strategic planning for collaborative service delivery and funding? To what extent and how are student outcome data and other program evaluation information used in strategic planning?
- To what extent and how are specific transition-related teacher competencies included in the licensure and certification standards (e.g., ability to teach self-determination, strategies for facilitating active student involvement in IEP planning, understanding of rehabilitation and other adult services systems and ability to work collaboratively with rehabilitation counselors and adult agency personnel)? Are these competencies addressed in teacher and/or administrator assessments and mentor programs? Do practicing and beginning teachers—academic, special, and vocational—possess these competencies?
- To what extent is a *transition-perspective of education* reflected in state and local vision statements? What are local schools' expectations for their students with disabilities?
- How are “transition services” perceived at the local level (i.e., narrowly defined or broadly interpreted)? What barriers impede the adoption of a broad transition perspective? How are state transition and school-to-work initiatives perceived and implemented at the local level (e.g., separate, competing, parallel, integrated)?
- Are local resources adequate to meet the education and transition service needs of all their students?
- Do current data collection systems at local and state levels satisfy data information needs? To what extent are data collection systems at the state level compatible (e.g., state employment services, rehabilitation, vocational and special education, other adult and children's services)? To what extent are the data combined and used to address service and funding issues? To what extent and how are local training, resource, and other local needs assessed and communicated to the state level?
- To what extent and how are a variety of students with disabilities (as well as ethnicities and genders) portrayed and/or included in all resource and dissemination materials generated at the local and state levels (on covers, in brochures and

instructional materials, in professional development materials)? To what extent and how are individuals with disabilities included in decision-making roles?

- What is the intended legacy of projects supported through special, time-limited funding? How will achievement of the legacy be determined? How will transition-related education and services be approached and facilitated after the special funding ends?

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