

The Nature and Use of Individualized Learning Plans as a Promising Career Intervention Strategy

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Abstract

Individualized learning plans (ILPs) are being implemented in high schools throughout the United States as strategic planning tools that help students align course plans with career aspirations and often include the development of postsecondary plans. Initial indications are that ILPs may be an important method for helping students achieve both college and career readiness. Parents, teachers, and students indicate that ILPs result in students selecting more rigorous courses, better teacher–student relationships, and positive parent–school relations. This article describes the emergence and nature of ILPs, promising practice strategies as well as challenges associated with gaining whole school buy-in, and the potential for career and vocational research.

Keywords

career aspirations/goals/choices, career/vocational education/guidance, career programming/interventions, career exploration/preparation

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In order to become more engaged in learning and prepared to make a successful postsecondary transitions, over 20 states have mandated that all high school students are required to develop an individualized learning plan (ILP). According to the Education Commission of the States report (2007), ILPs essentially consist of plans that students generate to align high school courses with career aspirations while some states require students to develop postsecondary action plans, and/or use the ILP to identify avenues for early graduation. To successfully engage students in actively designing their ILPs, career development opportunities are assumed to be necessary, and therefore, ILPs can be considered as a (a) portfolio document that is created and updated annually and (b) process that helps students engage in the self-exploration of one's career interests, skills and values, career exploration to identify career aspirations, and career planning and management opportunities to identify postsecondary education and training opportunities and develop employment seeking skills. This article describes the nature of ILPs, identifies promising practices and challenges associated with implementing ILPs, and outlines opportunities for career and vocational research.

The Emergence and Nature of ILPs

The impetus for establishing ILPs emerged from a combination of Individuals with Disabilities Education Act (2006) legislation that called on the need to focus on transition readiness as a critical outcome of secondary education for students with disabilities (Johnson, 2005) as well as school reform efforts that began in the 1990s. Establishing transition readiness skills is imperative with regard to being able to successfully enter and complete college (Goldrick-Rab, Carter, & Wagner, 2007; Milsom & Dietz, 2009) or directly enter the world of work and maintain employability (Blustein, 2006; Partnership for 21st Century Skills, 2009; Resnick & Wirt, 1996; States' Career Clusters, 2010). Prescriptions for school reform such as the National Association of Secondary School Principals' (NASSP) Breaking Ranks report (2004) argued for personalization of learning experiences in which teachers should use a variety of instructional strategies that accommodate individual learning styles, and advocated that every student have a "Personal Plan for Progress," which is a direct precursor to what is now referred to as the ILP. Subsequently, the NASSP's Breaking Ranks in the Middle (2006) report proposed similar guidelines that included an individualized plan for students to develop their academic, personal, and social skills.

Similar recommendations for personalized planning emerged in reports from diverse stakeholders, both inside and outside the secondary education sector, which subsequently led to over 20 states adopting ILP policies and programs (Education Commission of the States, 2007). Examination of state education agency websites and interviews with key state administrators found that at minimum, ILPs involve a student's articulation of courses leading to graduation requirements (Phelps, Durham, & Wills, in press). Further, some states use ILPs to align course planning

following career exploration activities that result in self-defined career goals. While state policies vary to some degree on their language, in general, ILPs can be defined as a personalized planning strategy that supports college and career readiness by assisting students in selecting courses that align to self-defined career goals, a process that facilitates career development and career exploration activities, and a portfolio document that organizes these course plans and career development activities as well as serves as a repository of record for personal accomplishments and workforce readiness skills.

To date, there is little research evaluating the effectiveness of ILPs. One investigation sought to evaluate whether parents, teachers, and students perceive ILPs as an important activity by conducting 53 focus groups using 15 schools in four states that mandate ILPs (Budge, Solberg, Phelps, Haakenson, & Durham, 2010). The results indicated that all three groups perceived engaging in ILPs as highly valuable and contributing to (a) selection of more rigorous coursework, (b) improved relational connections between teachers and students, parents and the school, and parents and their children, (c) access to a wider range of career exploration activities, (d) more clarity regarding their postsecondary college and training opportunities, and (e) increased academic motivation, goal-setting, and career search competence. Teachers indicated that engaging in ILPs allowed them to become a mentor to students, with serving in that role with the same student throughout the 4 years of high school. In the United States, the challenge to produce high school graduates who are both college and career ready (Achieve, 2008; ACT Discover, 2006) has been adopted by a majority of states in response to the need to more effectively prepare students to make successful postsecondary transitions (Achieve, 2010). If the perceptions of these focus group participants can be substantiated in subsequent research, then engaging in ILPs may serve as a “bridge” between school efforts to graduate students who are both college and career ready (Wills, Solberg, & Osman, 2010). It could be hypothesized that engaging in ILPs results in the (a) development and documentation of career goals, (b) awareness of the relevance of specific high school courses to those career goals, (c) selection of more rigorous high school courses, (d) identification of postsecondary college and training programs needed to enter those careers, and (e) career planning and management activities related to securing employment. If successful, students who engage in ILPs should begin engaging in self-initiated learning by managing and selecting courses and other educational and learning opportunities that support their ability to successfully realize their future aspirations.

Access to electronic ILPs and online career information systems. As indicated, ILPs operate as a portfolio that is expected to be reviewed and updated throughout high school. Portfolios have become a popular method for helping students document their learning experiences and have been written into a number of federal initiatives (e.g., School-to-Work Opportunities Act of 1994, 1994; Smaller Learning Communities from the U.S. Department of Education, 2001). Research indicates that use of

portfolios accompanied by teacher's feedback has been associated with students being engaged in more deep reflection of the learned material (Segers, Gijbels, & Thurlings, 2008). One problem with using written portfolios is that they become cumbersome, difficult to store, and less accessible to students when students are not in school or the specific class that is coordinating the portfolios. Moreover, within states that have mandated ILPs, written portfolios make it nearly impossible to evaluate whether schools have successfully implemented ILPs due to the sheer amount of paper that would need to be processed. Fortunately, ILPs are now available as an electronic portfolio feature that is incorporated within a number of commercially available online career information systems (e.g., ACT, 2010, Bridges, 2009; Career Cruising, 2009; CareerLocker, 2009; Kuder, 2009; Oregon Career Information Systems, 2009).

Parent, teachers, and students remarked on the importance of having access to electronic ILPs as an integrated feature of an online career information system (i.e., computer-assisted career guidance systems [CACGs], information and communication technologies [ICT], career web-portals). Most often referred to in the United States as CACGS, online career information systems continue to grow in popularity (Niles & Bowsbey, 2005) due in large part to the quality of information that is available (Gore, Bobek, Robbins, & Shayne, 2006). The quality of information available to career information systems is largely the result of previous federal legislation that created the National Occupational Information Coordinating Committee and State Occupational Coordinating Committees. While no longer in existence, these committees were instrumental in establishing systems for making quality labor market information and resources available (Wills & Mack, 2009). One government resource that emerged from these efforts is O*NET (2010) which continues to provide important occupational classification models and crosswalks between assessment results and occupations that are often used in commercially available systems. Ethical guidelines for the design and use of career information systems has been established by the Association of Computer-based Systems for Career Information (ACSCI; retrieved 2010) and systems that are in compliance with these standards generally have an ACSCI logo displayed on their website. Compliance standards include use of validated assessments and crosswalks between assessment information and occupations, and security of personal data.

Access to online career information systems are internationally recognized as fundamental to providing lifelong career guidance services. The Organization for Economic Cooperation and Development (OECD) has argued that such access is critical to supporting the economic interests of knowledge-based societies (OECD, 2004). OECD consists of over 30 member countries, including the United States. In the 2004 report, OECD argued that schools must focus career readiness efforts on helping individuals become actively involved in their own career management. In the United States, this emphasis on career management skills has been characterized as career navigation skills (Choitz, Soares, & Pleasants, 2010). As a complement to school career guidance efforts, career information systems are recognized as

supporting (a) self-exploration by providing access to career assessments, (b) career exploration by providing access to career and labor market information, and postsecondary education opportunities (Gore et al., 2006), and (c) career planning and management by providing access to resources to create and send resumes and cover letters and links to employment opportunities. Engaging in ILPs, therefore, is predicated on having access to robust career information systems that should offer the opportunity for engaging and storing the results of self-exploration, career exploration, and career planning and management activities.

Emerging Opportunities and Challenges for Engaging in ILPs

Focus group discussions with parents, teachers, and students also revealed a number of promising school practices and challenges related to engaging in ILPs (Budge et al., 2010). Promising practices included the use of student-led parent-teacher conferences, dedication of a course or time for regularly engaging in ILP activities, and conducting career exploration activities using the States' Career Clusters model (2010). The challenges identified by parents, teachers, and students included the need to gain school-wide ILP participation by teachers and the need for an ILP curriculum that offered a wider range of activities.

Using ILPs to conduct student-led parent-teacher conferences. An interesting use of ILPs involves student-led parent-teacher conferences in which students present their career and life goals and describe the educational plans they feel will help them accomplish those goals. One school reported that the excitement generated from the ILP focused student-led parent-teacher conferences that parents began talking with other parents who began calling the school to schedule their ILP review and consultation appointment (Johnson, Luken, Mierow, & Schopf, 2009). In many communities, scheduling these meetings during the school day often poses problems for working parents. However, after hearing about the heightened interest in the ILPs, the leading local employers took the initiative to coordinate early release time for parents to attend the ILP meetings. As parents are becoming aware that ILPs are being used, school officials are finding that many parents sit down with their children to discuss their ILPs at home prior to the conference. Teachers from the focus groups also reported that student-led parent-teacher conferences resulted in a dramatic increase in parent participation; many reporting 100% parent participation (Budge et al., 2010).

Dedicating time to conduct ILPs. Budge et al. (2010) also report that students and teachers felt that spending two to three sessions per week on ILPs was a promising implementation strategy. Teachers reported that by having dedicated time devoted to ILPs, they were able to establish a better mentoring relationship with students and students reported that they preferred to maintain this mentoring relationship throughout their secondary education. Some of the strategies for dedicating time

included conducting ILP lessons within advisory periods, a home room period, study halls, or even rearranging the weekly schedule to accommodate ILP activities were described. Other possibilities include incorporating ILPS in freshman transitions courses, health classes, or in classes designed to support low performing students.

States' career clusters. A recent development in career and vocational education has been to group careers into a subset of industry areas that are referred to as "career clusters" (States' Career Clusters, 2010). According to Ruffing (2006), the impetus for the creation of career clusters began as the result reauthorizations of the Carl D. Perkins Career and Technical Education Act (2006) emphasizing college and career readiness outcomes. The reauthorizations recognize that to be employable within a knowledge-based economy that (a) students receiving career and technical education courses must be proficient academically and (b) students who were not receiving career and technical education courses must develop career and workforce readiness skills. During this same period, the Secretary's Commission on Achieving Necessary Skills (SCANS; Resnick & Wirt, 1996) recognized that strong academic foundations such as literacy and numeracy skills were essential workforce readiness skills.

The career clusters model emerged from national efforts coordinated by National Association of State Directors for Career Technical Education Consortium (NASDCTEC), which continues to lead this effort. Occupations are grouped into the following 16 clusters: Agriculture and Natural Resources, Architecture and Construction, Arts/Audio Video Technology and Communications, Business and Administration, Education and Training, Finance, Government and Public Administration, Health Sciences, Hospitality and Tourism, Human Services, Information Technology, Law and Public Safety, Manufacturing, Retail/Wholesales and Services, Scientific Research and Engineering, Transportation/Distribution and Logistics. Within each career cluster, a number of career pathways have been identified (79 in total) and perhaps the most important resource to emerge from this work are "programs of study" associated with each career pathway. Each program of study describes the secondary and postsecondary academic courses (9th grade through 16th grade) and industry-specific skills needed to successfully enter the range of occupations identified within the pathway.

Using the States' Career Clusters model to engage in ILPs ensures that students are receiving information about the skills, activities, and educational pathways needed to progress toward their career goals. The program of study is an especially important resource because the majority of youth is graduating from high school with strong motivation to pursue career goals but is not clear about what postsecondary avenues they should pursue to be able to enter the career or awareness of whether they have prepared adequately to enter those postsecondary pathways (Schneider & Stevenson, 1999). For example, in a qualitative study of career decision-making patterns, over 50% of the high school students who identified a career goal were unable

to describe the content of the career nor the educational pathways needed to enter the career (Solberg, Gresham, Phelps, & Budge, 2010).

Challenges to implementing ILPs. Two challenges that the focus groups identified included having: (a) school buy-in for engaging in ILPs and (b) access to an ILP curriculum. Parents, teachers, and students felt that gaining more buy-in from teachers was important because the conversations about ILPs among parents and peers yielded a clear indication that the quality of the ILP experiences was predicated by whether a teacher was excited and interested in ILPs (Budge et al., 2010).

In order to address the challenges often associated with organizational change, Knoster (1995) outlines five areas of resistance to change that should be addressed in order to gain buy-in. Applied in this context, these areas include the need to (a) achieve a common understanding of why ILPs are important, (b) offer professional development opportunities to acquire the skills needed to engage in ILPs, (c) provide incentives for engaging in ILPs, (d) allocate enough resources such as time and administrative coordination, and (e) establish an implementation and evaluation plan that clearly identified roles, responsibilities, and timelines.

Establishing a common understanding for the importance of ILPs could be achieved by helping schools become aware of how ILPs support the development of college and career readiness outcomes for all students. College readiness will continue to be assessed using standardized tests and therefore a rationale and evidence for how ILPs will improve test scores needs to be provided. One rationale is that ILPs help students perceive the relevance of their course work to their future career and life goals. For students with a history of low academic performance, experimental studies have demonstrated that low performing students who receive access to relevance-focused interventions improve their grades and interest in the courses (Hulleman & Harackiewicz, 2009). ILPs can support college readiness efforts by helping students create a transition plan that includes their intentions to participate in specific postsecondary education and training opportunities that support their career goals. For career readiness, it is important career goals emerge from an awareness of interests, skills, and values and that students graduate from high school with the career planning and management skills necessary to locate and secure employment.

Teachers also need access to learning how to engage in ILPs. The need for professional development can be met by providing training to use online career information systems (Bobek et al., 2005). Bobek et al. (2005) describe a four-session training model that helps career educators learn how to effectively evaluate and use a career information system. One important caveat is that teachers also need to understand that they do not need to become experts in career development in order to serve in a mentoring role because labor market information, educational pathways, and information on using career assessments are incorporated into the systems. And it is assumed that consistent with the American School Counseling Association National Model (ASCA, 2003), school counselors will provide consultation support in order to ensure that assessment information and other career development

questions are addressed properly. The goal is to have teachers become engaged in ILPs which, if they do effectively support student engagement, should lead to a stronger appreciation for providing career services as well as more interest learning more about career development.

Offering incentives can be a challenge as schools continue to lose financial support and are expected to demonstrate increased annual test scores. One strategy is to help teachers realize the intrinsic value of engaging in ILPs. The value for teachers is that ILPs help students perceive the relevance of their coursework to achieving career and life goals. As a result of perceived relevance, students are expected to become more engaged in learning (Hulleman & Harackiewicz, 2009) and engaged students are better learners because they use a mastery approach to “learning how to learn” new course material rather than being overly concerned with grade performance (Hulleman, Durik, Schweigert, & Harackiewicz, 2008). Students who reported being more engaged in ILPs also reported that they were more active in setting goals and seeking learning opportunities to help them realize those goals (Solberg, Gresham, Phelps, Durham, & Haakenson, 2010). While financial incentives may not be available, teachers reported that engaging in ILPs improved their relational connections with students and that students were selecting more rigorous courses (Budge et al., 2010).

Resource allocation is important for providing the planning time needed to design and implement a school-wide ILP implementation. Because resource allocation is generally the responsibility of school administration, a rationale for how ILPs will improve schools needs to be provided in way that gains their buy-in as well. Administrators will value the strong relational base that parents have reported to occur as a result of engaging in ILPs (Budge et al., 2010) as well as their ability to showcase to the larger community how well their graduates have established a future plan of action that incorporates clear career goals and intentions to enter specific postsecondary college and training programs.

Allocation of time is critical to designing a plan for the implementation of ILPs. To support shared governance for schools to reform and promote teacher leadership development, many schools are using a professional learning community model (Vescio, Ross, & Adams, 2008). A professional learning community is generally a subset of educators and an administrator who meet regularly to design and structure the implementation of the reform strategy. With respect to ILPs, a professional learning community model can consist of representative teachers, school counselors and administrators who would meet to design a plan for implementing ILPs. The Center on Education and Work (CEW) has designed a project management system to facilitate the professional learning community activities by helping them identify SMART goals, innovative ILP strategies, professional development strategies, communication plans, and an evaluation plan (Solberg, 2008). For each ILP strategy, the project management system directs the team to identify tasks, timelines, and the individuals’ responsibilities. The agendas for subsequent meetings involve reviewing the implementation schedule to review, update, and plan for each task.

Schools often need outside support in the form of technical assistance to support reform efforts, and helping schools buy-in to ILPs is no different. ILPs provide a great opportunity for both career practitioners and applied vocational and career development researchers who are interested in working with schools. The technical assistance model used by the CEW, for example, advocates for creating a research-based innovation partnership between the university and schools (CEW, 2010). The four areas of this research-based innovation partnership include using research to establish data-based decision making in framing the challenges and needs of a specific school, using the project management system to identify innovative strategies to address those challenges and to implement the innovative strategies, and evaluation of the outcomes. Schools receive individualized data reports that they share with teachers and other key stakeholders (e.g., school board members, parents, community leaders) to explain the rationale for using ILPs. Using this approach, CEW has been able to demonstrate that if schools design learning environments that incorporate five career and workforce development areas (i.e., *Guideposts for Success*, National Collaborative on Workforce and Disability for Youth, 2007) and engaging in ILPs, their students will be more likely to report better college and career readiness as indicated by reporting higher career search self-efficacy, more engagement in goal setting, higher motivation to attending school, stronger academic self-efficacy, higher grades, better stress and health management, and career decision-making readiness (Solberg, Gresham, Phelps, Durham, & Haakenson, 2010). Based on this information as well as learning about the promising practices described above, schools are able to design and implement a robust strategy for school ILP engagement. Once implemented, schools can use the ILP related data from the career information system as an excellent resource to evaluate the impact of their innovation strategies (Gore et al., 2006). There is no doubt that funding is needed to provide this type of technical assistance and considerations include state-level resources from Perkins funding to local educational agencies as well as federal sources that support interventions such as the Institute for Educational Sciences and National Science Foundation.

Access to ILP curriculum. A second and related challenge to implementing ILPs that was identified by students and teachers (Budge et al., 2010) is the need for an ILP curriculum that offers a range of self-exploration, career exploration, and career planning and management activities. A recent guide on how to design ILP curriculum at the high school level was recently created (Wills, Solberg, & Osman, 2010). The guide provides information on a range of publicly available curriculum and resources that schools can use to design grade level activities. One strategy that is outlined in the guide is to design ILP curriculum in a manner that aligns with the common core standards for language arts and mathematics. The common core standards are being advocated by the National Governors Association (2010) and the Council of Chief State School Officers as a way of helping ensure that all students graduate with the highest college and career readiness skills needed to compete in a

knowledge-based economy. States are able to voluntarily prescribe to these standards as well as the interest and response, thus far, indicate that they are being readily adopted. For language arts, ILP curriculum can be designed in such a way as to require students to produce writing samples that incorporate the high school learning objectives related to developing written arguments, preparing informative and explanatory text, and writing narratives about real or fictional individuals. For mathematics, ILP curriculum can be designed to require students to apply mathematics and statistics when making career and life decisions. Math-related information found in online career information systems, for example, include labor market information regarding job outlook and salaries as well as costs of attending college.

Ideas for Establishing an ILP Research Agenda

While the focus group results indicate that ILPs were perceived by parents, educators, and students as having the intended outcome of creating a more personalized education environment, facilitating better and more rigorous course planning, and engaging in a wide range of career exploration activities (Budge et al., 2010), this should only be considered a promising result and an indication that ILPs are an especially ripe area for career and vocational research. With respect to research, Gore et al. (2006) have demonstrated the tremendous potential of career information systems to evaluate career intervention efforts, such as engaging in ILPs. Dividing the career development process into three phases—self-exploration, career exploration, and career planning and management—it is possible to use online career information systems to evaluate the extent to which engagement in these phases individually and collectively relate to better test scores, completing more rigorous courses, and postsecondary education planning.

An important research question involves whether experimental designs can verify that ILPs as a career service delivery system results in the range of outcomes that were expressed by the focus group participants. Future research should consider confirming these perceptions among the participants that access to quality ILP practices result in: (a) selecting more rigorous course work, (b) stronger relational connections with parents/guardians, teachers, and peers, (c) graduating from high school; (d) being more motivated to attend school, (e) engaging in more goal-setting strategies, (f) becoming more competent in the career search process, (g) increasing their career and occupational aspirations, (h) increasing their postsecondary training and college aspirations, and (i) in being more likely to enter and complete postsecondary training and college programs. Research could also test experimentally whether student-led parent-teacher conferences improve parent-school relations, parent involvement rates, and the quality of the student's postsecondary transition plans. With respect to teacher outcomes, future research could investigate more precisely whether engaging in ILPs result in their feeling more connected to students, general satisfaction with teaching, and aspirations for at-risk students and students with disabilities. Finally, research studies could also identify effective strategies for

gaining teacher buy-in, evaluate the effectiveness of ILP curricula, and evaluate whether engaging in ILPs at early grade levels (i.e., middle and elementary school) result in better school transition outcomes (e.g., attendance, grades, test scores).

Summary and Conclusions

In the United States, ILPs are showing promise as being a potentially powerful career development model that helps prepare high school students with both college and career readiness skills. ILPs support college readiness by helping students become aware of how their current courses are relevant to self-defined career goals. Parents, teachers, and students report that engaging in ILPs results in students selecting more rigorous courses. ILPs support career readiness by helping students identify career goals based on self-exploration of their interests, skills, and values and supporting their development career planning and management skills. In sum, there is indication that ILPs increase the relevance of coursework, positive relationships between teachers and students, and between parents and the school. While initial indications are that ILPs could be a promising career development strategy and engages whole school participation, it needs validation studies to be conducted by career and vocational researchers.

Authors' Note

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References

- Achieve. (2008). *Making college and career readiness the mission for high schools: A guide for state policymakers*. Retrieved from <http://www.achieve.org/files/MakingCollegeandCareerReadinessTheMissionforHighSchool.pdf>
- Achieve. (2010). *Closing the expectations gap*. Retrieved November 24, 2010, from <http://www.achieve.org/files/AchieveClosingtheExpectationsGap2010.pdf>

- ACT. (2006). *Ready for college and ready for work: Same or different?* Retrieved from <http://www.act.org/research/policymakers/pdf/ReadinessBrief.pdf>
- ACT Discover. (2010). Retrieved November 20, 2010, from <http://actapps.act.org/eDISCOVER/>
- American School Counselor Association. (2003). *The ASCA national model: A framework for school counseling programs*. Alexandria, VA: Author.
- Association of Computer-based Systems for Career Information. (2010). Retrieved November 20, 2010, from <http://www.acsci.org/>
- Blustein, D. (2006). *The psychology of working: A new perspective for career development, counseling and public policy*. Mahwah, NJ: Lawrence Erlbaum.
- Bobek, B. L., Robbins, S. B., Gore, P. A., Jr., Harris-Bowlsbey, J., Lapan, R. T., Dahir, C. A., & Jepsen, D. A. (2005). Training counselors to use computer-assisted career guidance systems more effectively: A model curriculum. *Career Development Quarterly*, 53, 363–371.
- Bridges. (2009). Retrieved July 18, 2011, from access.bridges.com/
- Budge, S. L., Solberg, V. S., Phelps, L. A., Haakenson, K. & Durham, J. (April, 2010). *Promising practices for implementing individualized learning plans: Perspectives of teachers, parents, and students*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, CO.
- Career Cruising, Inc. (2009). Retrieved April 7, 2009, from <http://www.careercruising.com/>
- CareerLocker. (2009). Retrieved April 7, 2009, from <http://cew.wisc.edu/wiscareers/Default.aspx>
- Carl D. Perkins Career and Technical Education Act of 2006, Public Law 109-270. Retrieved April 7, 2009, from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_bills&docid=f:s250enr.txt.pdf
- Center on Education and Work. (2010). *CEW action framework*. Retrieved December 9, 2010, from www.ceb.wisc.edu
- Choitz, V., Soares, L., & Pleasants, R. (2010). *A new national approach to career navigation for working learners*. Washington, DC: Center for American Progress. Retrieved December 9, 2010, from http://www.americanprogress.org/issues/2010/03/career_navigation_learners.html
- Education Commission of the States. (2007, February). *State notes: Additional high school graduation requirements and options*. Retrieved January 10, 2008, from <http://mb2.ecs.org/reports/Report.aspx?id=740>
- Goldrick-Rab, S., Carter, D., & Wagner, R. W. (2007). What higher education has to say about the transition to college. *Teachers College Record*, 109, 2444–2481.
- Gore, P., Bobek, B., Robbins, S., & Shayne, L. (2006). Computer-based career exploration: Usage patterns and a typology of users. *Journal of Career Assessment*, 14, 421–436. doi: 10.1177/1069072706288939
- Hulleman, C. S., Durik, A. M., Schweigert, S. A., & Harackiewicz, J. M. (2008). Task values, achievement goals, and interest: An integrative analysis. *Journal of Educational Psychology*, 100, 398–416.
- Hulleman, C. S., & Harackiewicz, J. M. (2009). Promoting interest and performance in high school science classes. *Science*, 326, 1410–1412.

- Individuals with Disabilities Education Act of 2006, Public Law, 108–446. Retrieved July 18, 2011 from <http://idea.ed.gov/explore/view/p/%2Croot%2Cregs%2C>
- Johnson, B., Luken, R., Mierow, K., & Schopf, N. (2009, January). *New careers using WISCareers*. Presentation at the 2009 Careers Conference, Madison, Wisconsin.
- Johnson, D. R. (2005). Key provisions on transition: A comparison of DEA 1997 and IDEA 2004. *Career Development for Exceptional Individuals*, 28, 60–63.
- Knoster, T. (1995). Factors in managing complex change. In R. A. Villa & J. S. Thousand (Eds.), *Creating an inclusive school*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Kuder, Inc. (2009). Retrieved April 7, 2009, from <http://www.kuder.com/>
- Milson, A., & Dietz, L. (2009). Defining college readiness for students with learning disabilities: A Delphi study. *Professional School Counseling*, 12, 315–323.
- National Association of Secondary School Principals. (2004). *Breaking ranks II: Strategies for leading high school reform*. Reston, VA: Author.
- National Association of Secondary School Principals. (2006). *Breaking ranks in the middle: Strategies for leading middle school reform*. Reston, VA: Author.
- National Collaborative on Workforce and Disability for Youth. (2007). *Guideposts for success*. Washington, DC: Institute for Educational Leadership.
- National Governors Association. (2010). *Setting statewide college- and career-ready goals*. Retrieved November 21, 2010, from http://www.nga.org/Files/pdf/1008COLLEGECA-REER_READY_GOALS.PDF
- Niles, S. G., & Bowlsbey, J. H. (2005). *Career development interventions in the 21st century* (2nd ed.). Upper Saddle River, NJ: Pearson Education.
- O*NET Resource Center. (2010). Retrieved November 20, 2010, from <http://www.onetcenter.org/>
- Oregon Career Information Systems. (2009). Retrieved April 7, 2009, from <http://oregoncis.uoregon.edu/home/>
- Organisation for Economic Cooperation and Development, (2004). *Career Guidance: A Handbook for Policy Makers*. Paris, France: OECD/European Commission.
- Partnership for 21st Century Skills. (2009). Retrieved April 9, 2010, from <http://www.p21.org/index.php>
- Phelps, L. A., Durham, J., & Wills, J. (in press). Education alignment and accountability in an era of convergence: Policy insights from states with individual learning plans and policies. *Education Policy Analysis Archives*.
- Resnick, L. B., & Wirt, J. B. (1996). *Linking school and work: Roles for standards and assessments*. San Francisco, CA: Jossey-Bass.
- Ruffing, K. (2006). *The history of career clusters*. Retrieved from States' Career Clusters website: <http://www.careerclusters.org/resources/publications/TheHistoryofCareerClusters2006.pdf>
- Schneider, B., & Stevenson, D. (1999). *The ambitious generation: America's teenagers, motivated but directionless*. New Haven, CT: Yale University Press.
- School-to-Work Opportunities Act of 1994. Pub. L. No. 103-239, 108 Stat. 568 (1994).

- Segers, M., Gijbels, D., & Thurlings, M. (2008). The relationship between students' perceptions of portfolio assessment practice and their approaches to learning. *Educational Studies, 34*, 35–44.
- Solberg, V. S. (2008). *The project management system to manage school reform efforts*. Madison, WI: The Center on Education and Work, University of Wisconsin. Retrieved December 9, 2010, from <http://cew.wisc.edu/rep/technical-assistance-services.aspx#framework>
- Solberg, V. S., Gresham, S., Phelps, L. A., & Budge, S. (2010, April). *Identifying indecisive decision-making patterns and their impact on career development and workforce readiness*. Paper presented at the 2010 Annual Meeting of the American Educational Research Association, Denver, CO.
- Solberg, V. S., Gresham, S., Phelps, L. A., Durham, J., & Haakenson, K. (2010, August). Impact of exposure to quality learning experiences on career development. In V. S. H. Solberg (Symposium Chair), *Study of context in career development research with youth populations*. Paper presented at the 118th Annual Convention of the American Psychological Association, San Diego, CA.
- States' Career Clusters. (2010). Retrieved April 9, 2010, from <http://www.careerclusters.org/>
- U.S. Department of Education. (2001). *Smaller learning communities: Program description*. Washington, DC: Author. Retrieved April 8, 2010, from <http://www2.ed.gov/programs/slcp/index.html>
- Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education, 24*, 80–91.
- Wills, J., & Mack, D. (2009). *Comprehensive career planning and its role in the competitive global economy*. Washington, DC: Institute for Educational Leadership and HeiTech Services, Inc.
- Wills, J., Solberg, V. S., & Osman, D. (2010). *Promoting quality individualized learning plans: A "how to guide" focused on the high school years*. Report available from the National Collaborative on Workforce and Disability for Youth, Washington, DC.

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