Article

The Use of Vocational Assessments: What Do Students Have to Say?

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Abstract: *Youths with disabilities are at risk of failing to complete high school and face considerable uncertainty as they attempt to transition toward a productive adulthood. One potential tool to help more of these youths to stay in school and provide them with information as to suitable post-school careers is the use of vocational assessments. This study examined the impact and perceived utility of a one-shot vocational assessment process. Pre- and post-process data as to participants' perceived status on indices of career decision making and career ambitions suggest the process had little or no impact. Participants did report enjoying the process and identified what they perceived as the best and worst parts. Furthermore, findings relative to various background features suggested participants had limited knowledge relating to the Individual Educational Program (IEP) and transition planning.*

Introduction

Many authors have sought to explain the failure to complete high school. Historically, most theories have focused on some aspect of changing the student in some way as the key to keeping youth in school. Accordingly, the responding interventions emphasized trying to "fix" the student, generally targeting such areas as student achievement or behavior. More recently, some researchers have turned toward changing the process of schooling in some way. The most influential theory comes from the work of Finn (1989). He conceptualizes school dropout as an evolving process whereby students gradually move toward increased levels of disengagement from the school environment, while failing to identify with or participate in the process of schooling. Various school, family, and individual features and experiences contribute to this gradual process of withdrawal from school (Griffen, 2002). Other theories support Finn's disengagement idea, best illustrated by the work of Christenson and her colleagues (Anderson & Christenson, 2006; Christenson, Sinclair, Lehr, & Godber, 2001), by specifically targeting interventions and tools that engage students in the schooling process and learning.

Another aspect of engagement and school completion involves the issue of what motivates youth to be in school. The suggestion here is that one can better engage students in learning and school given an understanding of their motivations. Earlier research has shown four primary motivations youth report for coming to school (and accordingly staying), with the most influential one entailing some aspect of perceiving that being in school is preparing them for a productive adulthood (Kortering, Konold, & Glutting, 1998; Kortering & Konold, 2005). This productive adulthood entails their perception that what they are doing in school is getting them ready for a suitable career, college or training, immediate employment after graduating, and a better or more productive life. The "productive adulthood'"motivation is twice as influential as the second most influential motivation—involving a desire to socialize with peers in school and five times more influential than the remaining motivations (i.e., engaging in extracurricular activities like sports or clubs or pleasing an adult in some way).

Given the school completion issue confronting youth with disabilities, the need for interventions that help more youth with disabilities to engage in and eventually complete high school becomes readily apparent. With this goal in mind, our secondary programs must appeal to youth in some way. In other words, students need to perceive what we ask them to do as relevant to their current or future lives, a sort of face validity if you will. One promising intervention involves the strategic use of vocational assessments. Such assessments focus on vocational and career issues, while being part of a broader construct of transition assessment which encompasses additional areas including independent living, recreation and leisure, and health. Vocational assessments, as described in more detail elsewhere (Clark, Patton, & Moulton, 2000; Kortering, Sitlington, & Braziel, in press; LeConte, 2006; Osborne & Zunker, 2006; Rojewski, 2002), help youth to better understand their own skills and weaknesses, while making a link between staying in high school and a productive post-school career in a job that matches their interests and abilities. The information from vocational assessments also helps teachers to better understand their students by providing insight into their preferences, limitations, and nonacademic abilities (Kortering, et al., in press; Osborn & Zunker, 2006). This insight should

be central to the development of any student's Individual Educational Program (IEP) and eventual transition planning. Furthermore, the new Indicator 13 mandates that all students age 16 and up participate in an age appropriate transition assessment to provide the basis for IEPs with appropriate postsecondary goals, services, and activities.

This study examines the perceived utility and impact of a classroom-based vocational assessment protocol with 29 students judged to be at risk of failing to complete school. This study also establishes information on relevant background information. Key study questions were as follows:

- Do participants enjoy or learn from participating in a vocational assessment process?
- Does the process impact various indices representing career decision making or career ambitions?
- Do participants have realistic career ambitions, while understanding the constructs of IEP and transition planning?

Study Methods

The study methods include a description of the school setting, student participants, instrumentation, and vocational assessment protocol and process. The study took place in two comprehensive high schools in the spring of 2003.

Setting

Two rural and adjacent county school districts (Districts A and B) in a southeastern state were the settings for this study. Census data from 2000 showed population densities for the two settings ranked 25th and 36th among the state's 100 counties. The high school completion rates were 67% and 72%, respectively. The Census data also showed unemployment rates of 5.6 and 3.9 (national average of 4.6) and rates of children living in poverty of 18.6% and 16.1% (national average of 19.9%) The per capita personal income was $22,505 and $24,378 (state average of $27,308). The per-pupil expenditures, including child nutrition, for the 2001/02 school year were $6,102 and $7,091, while the state average was $6,695 (North Carolina Department of Public Instruction, 2004).

The overall school populations from which participants came from was 80% and 96% Caucasian, respectively, and had respective enrollments of about 2,100 and 1,400 students. School A's minority population was 12% African American, 6% Asian, and 2% Hispanic, non-Latino; School B's largest minority population was also African American (2%). School A had 21% of their population receiving free or reduced lunch, while School B had just over 26%. Both schools have a reputation of focusing on preparing students for college. For illustration, in 2000 the state published statewide data that showed that School B ranked 4th out of 301 state high schools on the Scholastic Achievement Test and School A was just above the state average.

Student Participants

Participating students represented standard-diploma track students who were judged by one of their teachers as being at risk of not completing high school, had a nonacademic block course (physical education, arts or crafts, or elective) so that they could be accessed without affecting their performance on the state's high stakes tests (End of Course Exams), and were willing to participate. The researchers asked by way of a note to and follow-up conversations with 15 general education educators who routinely taught classes that had students with disabilities and six special educators who were case managers for students on the standard track. We asked these 21 teachers to nominate students they felt were at risk of dropping out. While leaving the decision as to who to nominate to teachers, we encouraged nominating students receiving special education services given our background in special education. The final student participant sample included 29 students (Table 1), with 18 identified as Specific Learning Disabled (LD), five as Behavior/Emotionally Handicapped (BD), three as Attention Deficit Disorder (under Section 504 of the Rehabilitation Act), and two as having a mild Intellectual Disability (ID). One participating student was not in special education.

Participating students and their teachers were familiar with the authors due to our ongoing work at their high school. This feature, we suspect, helped participants to feel comfortable with the process and enhanced their willingness to participate.

Instrumentation

The process included the use of two formal instruments. Our ongoing work with youth, including providing vocational assessments to well over 500 youth and young adults using more than 30 individual vocational assessment instruments, has led us to the use of two instruments that we deem most appropriate for an initial vocational assessment in a school setting. The interest inventory was the Self-Directed Search Form R (SDS-R; Holland, 1996). The SDS-R is appropriate for high school students who aspire toward careers that generally entail some level of college education (Holland, Powell, & Fritzche, 1994). The assessment provides self-reported scores in terms of preferred activities (6 scales, 11 like or dislike items each); competencies (6 scales, 11 yes or no items each); occupations (6 scales, 14 yes or no items each), and self-estimated abilities (2 sets of scales with 6 items each). The results include an 8-14 page report that links one's dominant profile (a reflection of one's three highest scores) to matching job titles, postsecondary majors, and leisure/recreational activities. The SDS-R is a well-reviewed instrument that has proven to be one of the most popular among service providers and researchers, while being conceptually easy to understand (Ciechalski, 2004). It also provides, by way of the Holland typology codes (Realistic, Investigative, Social, Artistic, Enterprising, and Conventional), a direct way to obtain information on over 12,000 jobs from the Department of Labor's Web site and related publications (e.g., Electronic O*NET's Dictionary of Occupational Titles).

The personality or preference test was the Student Style Questionnaire (SSQ) (Oakland, Glutting, & Horton, 1996). The SSQ is based, in theory, on the popular Meyers-Briggs Type Indicator (MBTI). The assessment includes 69 forced-choice items requiring a "yes" or "no" response with a resulting profile along the following four sets of styles: extroverted vs. introverted, practical vs. imaginative, thinking v. feeling, and organized vs. flexible. In an independent review, Rounds and McKenna (2004) found it an adequately developed tool that has the same limitations as the MBTI, namely a reliance on inferences about typology and structural assumptions underlying the various personality types. An inherent advantage of the SSQ is

Table 1

Background Features (N = 29)

Feature or Characteristic	Number (%)
In Special Education SLD BD ADD Mild ID Non Special Ed	28 (97%) 18 (62%) 5 (17%) 3 (10%) 3 (10%) 1 (3%)
Grade 9th 10th 11th	15 (52%) 11 (38%) 3 (10%)
Age 15 16 17	19 (66%) 8 (28%) 2 (7%)
School A B	17 (59%) 12 (41%)
Male	20 (69%)
White	23 (79%)
Plans to go to college	26 (90%)
Participants who identified 2 career ambitions Ambitions requiring college	 27*(93%) 13 (24%) required 4 or more years of college 4 (7%) required 2 or more years
Knew what an IEP was? Yes	11 (38%)
Actual responses	For English, I get extended time on tests; to improve my vocabulary; Read aloud and extended time; helps people like me to have advantages to do better in school: learning plan to help you: for people who need extra help; it helps people with tests and things like more time: a student's education and college plan; to wing off it.
Know what transition planning is? Yes	0

*One identified one ambition and one unable to identify any.

that many high school teachers will be familiar, on a practical and conceptual level, with the MBTI given that it is the most widely used personality test today.

The pre- and post-process surveys were informal in nature. We constructed the survey questions after reviewing other measures of career decision-making readiness (e.g., *Career Thoughts Inventory*, *Career Decision Scale*), consulting with three high school special education teachers and finally complying with the University Institutional Review Board. The former helped provide questions that would yield useful for information individual case managers and teachers, while the latter ensured that we asked appropriate questions in a nonintrusive manner.

Vocational Assessment Process

We designed the vocational assessment process so that it could be used in most any high school or related service setting, including the use of paper/pencil assessments, assessments with a Level A qualification requirement, and assessments that are readily accessible. The process was as follows. Twelve of the 21 teachers nominated 40 students who they deemed at risk of dropping out and felt would benefit from assistance with identifying appropriate post-school goals. We then identified students who were available by having a nonacademic class which reduced the number to 32 potential participants. Next, we mapped out student availability by instructional block periods (periods one through four) and targeted two to four students to work with for the respective periods over a two-day period. Once identified, we obtained prior approval from their nonacademic instructor the week before we planned to retrieve participants and asked the students for their written consent to participate. If the instructor was reluctant to allow the student to participate, we did not retrieve the student (this was the case for two potential student participants). All of the remaining individual students were willing to participate and most expressed excitement over "getting out of a class." The actual process involved retrieving the participants in groups of two to four and bringing them to a separate office for assessment purposes. We explained the process to participants, asked them if they had any questions (and when they did we answered them), and, again, allowed them an opportunity to not participate. One potential participant, after hearing more about the process, declined to participate.

Once in the office and after an introduction to the process, each student received a packet that included a pre-process survey that provided baseline data, background survey, an interest inventory (SDS-R), and personality or preference test (SSQ). Participants took the initial pre-process survey, then the background survey and interest inventory (SDS-R), and finally the personality or preference test (SSQ). The authors were on hand to answer questions and help with the process. After the session, participants completed the post-process survey.

Testing results were done on-site as participants completed the survey and then the instruments, the SDS-R results were orally interpreted by the lead author with a follow-up computer-generated report ranging from 10 to 15 pages. The same was done for the SSQ which included two four-page printouts of their results (narrative and graph). One report was for students, the other for their case manager. The authors reviewed the results with individual students and in small groups. At the conclusion, participants were encouraged to ask questions about the results and the process in general. The entire process took 55 minutes to 70 minutes per small group (testing, interpretation, and questions and answers). If the participants wanted, we kept them for the remainder of the period and participated in their group discussions, generally focusing on each other's results and how they felt about what the results said about their peers. An interesting side was that students often debated each other on their results, with peers often pointing out the accuracy of the test results for another student versus what that student thought.

Results

The results include a comparison of pre-process and post-process responses and related findings relative to key questions. The related findings established some general information on participants, while the pre/post measures provided insight as to the impact of the vocational assessment process. The final section established information about how participants felt about the process in terms of perceived utility and what they liked the best and least.

Participants' Career Ambitions and Understanding of IEP and Transition Planning

Table 1 shows that nearly all of the participating students expressed a desire to go to college and all but two identified two career ambitions they deemed appropriate. While nearly all participants expressed plans for attending college, only a third of the career ambitions required some level of college education based upon the job titles and educational requirements (see Electronic O*NET's Dictionary of Occupational Titles). Eleven students indicated they knew what an IEP was with the resulting answers suggesting that some had some knowledge, but no one really conveyed a full understanding. Not a single student indicated knowing what transition planning was.

Impact on Career Decision Making or Reported Career Ambitions

Using a Likert-like scale, Table 2 displays the pre- and post-process results. Across the five items, none of the differences emerged as statistically significant. With a cautionary note about limited statistical power and duration of the process, the results suggest that vocational assessment process, as delivered, proved ineffective in changing student perceptions on various indices relating to career decision making. As further evidence for the lack of impact, only two students indicated a change in their career ambitions as a result of their participation in the process.

Participants' Perception of the Process

Table 3 shows that half of the participants deemed the SSQ their favorite part of the process and a third felt it was the SDS-R. Nearly all of the participants reported that they had learned something from the process with two thirds indicating that they had actually enjoyed participating. Nearly all of the participants recommended the vocational assessment process for their friends.

In terms of what participants liked best and least about the vocational assessment process, most participants provided a response

Table 2

Pre/Post Process Results

Indices	Pre	Post	
	M (SD)	*M (SD)*	*t-value*
I know what these jobs require in terms of skills.	3.55 (1.53)	3.86 (1.46)	-.850
I understand my interests and abilities.	3.62 (1.32)	3.97 (1.12)	-1.260
I know how to get an appropriate job after leaving school.	3.93 (0.92)	3.76 (1.30)	.571
I have the work habits and attitudes for keeping an appropriate job.	3.90 (0.86)	4.00 (1.17)	-.399
I have the knowledge and skills needed for the jobs that I am interested in.	.03 (1.21)	3.66 (1.42)	.983

Note: 1 = Strongly Disagree; 2 = Slightly Disagree; 3 = Unsure; 4 = Slightly Agree; 5 = Strongly Agree; After further conversation with the lead author the two participants who could not identify two jobs were able to come up with two career ambitions for the purpose of this survey.

Table 3

Participant Feedback on Process

Question: Answer	*n* (%)
Favorite Part of the Process:	
SSQ	15 (52%)
SDS-R	9 (31%)
Background Survey	4 (14%)
All of it	1 (3%)
Did you learn something from the process? Yes	25 (86%)
Did you enjoy participating? Yes	20 (69%)
Would you recommend it for your friends? Yes	26 (90%)

(see Table 4). For the best part, nearly half related to "learning about themselves" in some way, while a few related to some aspect of learning about suitable careers. Some participants provided general comments that were not categorized, while a couple did not respond. For what they liked least, the majority identified some aspect of the testing process or an individual test or pointed to general comments that were not categorized. A minority of participants indicated "nothing" or did not provide a response.

In summary, the results suggest that the vocational assessment process failed to impact the indices representing career-decision making readiness and actual career ambitions. Other findings suggest that participants, despite years of services in special education, were unable to articulate a full understanding of the IEP and were unfamiliar with the emerging concept of transition planning. Participants appeared to enjoy the process overall and offered insight into what they deemed as the best and worst aspects of the process.

Discussion

Various limitations are of concern in this study. First, the two distinct high school settings may not represent all high schools. The racial distribution, in comparison to national census data, at one high school is 88% White, while one high school has an unusually high (6%) rate of first and second generation Asian students (National Research Council, 2002). A second limitation is the dependence on participants reporting of their perceptions. We assumed that participants were honest in reporting their perceptions, but can not prove this. A third limitation is the grouping of all students with disabilities

Table 4

What Did You Like Best/Least About the Vocational Assessments?

What did you like best?
I Learned About Myself (14 or 48%)
I learned something about myself; Important beliefs and social factors; Tells you more about yourself; Reading about myself; I liked when it explained about myself; Learning about student styles; The results were helpful, my graph about myself; Writing and reading results, learned something[1]; Found out things I needed to know
Provided Career Options for Me (6 or 21%)
Gave me career choices; The part about finding a job that I might like; List of jobs that follow my career path; Helped me with my future; Finding careers that I possibly might do; It showed me what I wanted to do
Miscellaneous (7 or 24%)
None of it; Nothing; They were too easy; Got out of class; No class; It was very accurate; It was mildly entertaining No response (2 students)
What did you like least?
Some Aspect of or a Specific Test (10 or 35%)
Too many questions, Too long; Lots of questions; When the SSQ made you select a or b, could only pick one; Boring; The long reading; all the questions;[2] The survey was boring; They take forever; The personality test; SDS-R
Miscellaneous (8 or 28%)
I had to do it on my birthday; All of it; The job list; Not so accurate on jobs for me; Taking the time to learn what I already know; Having to sit here; Sometimes it was hard; Missing class Nothing (6 students) No response (5 students)

[1] Five students had this response.
[2] Two students had this response.

and their peers into one group. We deemed this arrangement appropriate given their related learning and behavior problems, similarity in services and classes, and lack of differentiated instruction (by disability) in the general education classroom. A related concern is that the participating students represented a small proportion of overall students with disabilities and a further subset of those deemed by a teacher as at risk of dropping out. Further information on the advantages and disadvantages of this approach is in a recent review by Sabornie, Cullinan, Osborne, and Brock (2005). A fourth limitation is that the process involved only one instructional period or 90 minutes. Vocational assessment professionals recommend that the assessment be an ongoing and more involved activity (LeConte, 2006; Neubert, 2003; Rojewski, 2002). Finally, we relied on only two vocational assessment instruments, one of which (the SDS-R) may not have been the best option for those identifying career ambitions that did not involve a college education. For these students, the Self-Directed Search Form E (Holland, 1996) may have been a better option. Finally, traditional vocational assessments, like those used in this study, can be improved when used in conjunction with nontraditional measures, including criterion referenced measures, measured abilities, consumer self-ratings, and ecological assessments (Parker & Schaller, 2003).

Practical Implications

The initial implication is that this study suggests that a vocational assessment process can be implemented in a local school setting.

Furthermore, our evidence suggests that the majority of students will enjoy the process and nearly all will perceive themselves as learning from it. Aside from professional time, the actual monetary cost of the assessments in this study is nominal. In addition, the SDS comes in other forms including Form E (for those with limited reading levels while aspiring for immediate employment after high school) and Explorer (for 7th and 8th graders or older students with little or no job history). We also recommend purchases of supplemental materials, including the *SSQ's Classroom Applications Kit* (Horton & Oakland, 1996), *The Self-Directed Search and Related Materials: A Practitioner's Guide* (Reardon & Lenz, 1998), and related resources. The SDS and SSQ are but two examples of vocational assessment tools and there are many more out there (Clark, Patton, & Moulton, 2000; Whitfield, Feller, & Wood, 2008; Timmons, Podmostko, Bremer, Lavin, & Willis, 2005).

A second practical implication stems from a better understanding of what students have to say about vocational assessment. In general, they perceive the process as helping them learn about themselves and potential careers, while generally enjoying the experience. Helping students to better understand how a high school education affects their future seems crucial to efforts to keep them in school, as does helping them to enjoy some aspect of their high school education. For the former, as Parsons (1909) first described, "If a boy takes up a line of work for which he is adapted, he will achieve far greater success than if he drifts into an industry for which he is not fitted" (p. 3). The key to finding one's suitable line of work is an understanding of themselves and suitable career options. As to the latter (enjoying school), an increasing number of youth, including those with disabilities (Kortering & Braziel, 2001), are in need of positive experiences while in high school (Csikszentmihalyi, & Larson, 1984; Cushman, 2003). The positive experience associated with participating in vocational assessments seems an ideal way to help get them engaged in learning and schooling (Finn, 1989).

Research Implications

The study findings support earlier work showing that students with disabilities often lack appropriate career ambitions or an understanding of suitable post-school options given their unique talents and limitations (Kortering & Braziel, 2000; Rojewski, 2002). Future research needs to examine the career development status and process for students with disabilities. Lindstorm and Benz (2002), as an example, examined the process of career development for young women with severe learning disabilities (SLD). Their study identified specific features affecting one's career development, including an individual's motivation and determination, family support and advocacy, career exploration activities, vocational-related training, and supportive work environments. These same features may need to be examined in the context of high school special education programs and IEPs. For instance, various features could be deployed in conjunction with pre- and post-outcome measures of career decision making or career maturity to assess their respective impact.

A second research implication relates to the feature that students did not appear to understand the IEP or transition planning. This finding, while supporting previous research with college students with SLD (Hitchings et al, 2001), is disturbing in light of the field's adoption of self-determination as a desired feature of special education programming (Eisenman, 2006) and the need for students to make informed choices about programs and post-school options(Test, Aspel, & Everson, 2006). Future research needs to further examine how best to help students learn about themselves in the context of special education services and their active participation in the IEP process.

A final research implication involves the issue of how best to facilitate a student's move toward more appropriate career ambitions. In this study, participants expressed a desire to attend college yet their career ambitions reflected jobs that did not require college. Clearly, this contradiction suggests inappropriate ambitions at some level. This finding relative to postsecondary aspirations supports earlier research that showed the vast majority of 10th graders wanting to go to college, yet over time this ambition waned significantly (Hitchings, Retish, & Horvath, 2002). The same pattern may have held for this participant sample as they moved through high school. Nonetheless, a brief exposure to a vocational assessment process, in and of itself, was not powerful enough to influence youth ambitions. This finding, again, supports the work of others who suggest that vocational assessment be an ongoing and more involved process (Neubert, 2003; Rojewski, 2002). Despite being liked by students, the process failed to have an impact on various indices of career decision making and career ambitions. Future research efforts should examine levels of career decision making or career maturity after students have been exposed to more intense and in-depth career-related experiences and activities, including vocational and technical courses, appropriate summer employment (Kortering & Braziel 2000), career-related activities (Carew, 2005), and perhaps Internet-based career activities (Harris-Bowlsbey, Dikel, & Sampson, 2002).

Finally, their understanding of themselves, specific to individual talents and limitations and interests likely to affect their transition to post-school careers, seems a major underpinning to attempts to help youth to participate in their IEP and stay in school. Martin and his colleagues (2006) provide thoughtful commentary on how best to get students to be more active in the IEP process and the importance of such an outcome. Similarly, Chamberlain, Eisenman, and McGahee-Kovac (2005) demonstrate that students and teachers perceive important benefits to getting youth engaged in self-determination activities while in school. Given the knowledge and insight, as reported by students seeing the process as helping them learn about themselves, that can be generated it seems an ideal point of reference for better preparing students to be self-determined. The key here may be to deploy vocational assessment in an ongoing and more in-depth manner (Neubert, 2003) as required under Indicator 13.

In closing, aside from helping more students with disabilities to complete high school, the most important thing we do is prepare them for the workforce of tomorrow. Krumboltz and Vidalakis (2000) articulate how vocational assessments, especially when used in conjunction with longer term interventions, can facilitate more appropriate educational and vocational programming that will keep them in school while preparing them for desirable post-school outcomes, including postsecondary education and suitable employment (Levinson & Palmer, 2005). Such assessments can also be central to making informed decisions as to one's high school educational track or program of study (Osborn & Reardon, 2006). Furthermore, vocational assessment holds promise for helping engage students in learning and perhaps enjoy at least one aspect of school.

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