

Self-Determination and Student Involvement in Transition Planning: A Multivariate Analysis

Abstract

This study examined differences in level of self-determination between groups who differed in level of student involvement in their Individualized Education Program meeting. The study involved 276 students with disabilities from 33 school districts located within 5 states. Student levels of self-determination were determined by the completion of two self-report measures of self-determination, and levels of student involvement were determined by a questionnaire designed to measure student involvement in transition planning. For purposes of analysis, students were assigned to three groups based upon their level of their cognitive ability. Multivariate analysis of data yielded statistically significant results between self-determination scores of students who exhibited high and low student involvement, showing that students who are more active in educational planning meetings are also more self-determined. Teachers and families should continue to promote self-determination to increase student involvement in IEPs and transition planning meetings for all students with disabilities.

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The 1990 Amendments to the Individuals with Disabilities Education Act in the U.S. required that students be invited to their Individualized Education Program (IEP) meeting when transition services were to be discussed (Johnson, Stodden, Emmanuel, Lueckling, & Mack, 2002). These requirements were in response to research showing that students with disabilities were not achieving the same post-school outcomes as students without disabilities (Blackorby & Wagner, 1996; Mithaug, Horiuchi, & Fanning, 1985; Wagner et al., 1991). Much of the initial research surrounding the transition mandates focused on providing models of best practice to achieve positive adult outcomes (Kohler, 1993). These promising practices included, in addition to student involvement in the transition planning process, model development pertaining to involving families in the

transition planning process (Salembier & Furney, 1994; Salembier & Furney, 1997); remaining culturally responsive to the individual needs of the student in planning (Boone, 1992; Zhang & Benz, 2006); and promoting self-determination (Field, Martin, Miller, Ward, & Wehmeyer, 1998; Wehmeyer, 1996).

Self-determination refers to action that is self-versus other-caused. To state that a person is self-determined implies that this person (e.g., the self) causes himself or herself to act in certain ways, as opposed to someone or something else 'causing' him or her to act in certain other ways. This self vs. other dichotomy is not just equivalent to saying that self-determination refers to actions caused by forces quite literally internal to the person versus forces external the person because, obviously, genes, neurotransmitters, and other determinants of human behaviour are, clearly, internal to the person. Instead, the use of the self-determination construct is linked to the capacity of humans to override other determinants or causes of their behaviour so as to act based on their own will or volition. Self-determination refers, then, to volitional actions, where volition refers to making conscious choices or the actual power to make conscious choices (Wehmeyer, 2005).

Self-determination, then, refers to self (vs. other) caused actions... it refers to people acting volitionally, based on their own will. The word volitional is defined as the act or instance of making a conscious choice or decision. Conscious is defined as intentionally conceived or done, or deliberate. Volitional behaviour, then, implies that one acts consciously... with intent. Intentional action refers to actions done deliberately and purposefully. Self-determined behaviour is volitional and intentional, not simply random and non-purposeful.

Wehmeyer and colleagues (Wehmeyer 2001, 2005; Wehmeyer, Abery, Mithaug,

& Stancliffe, 2003) proposed a functional model of self-determination, so-called because the model emphasizes that self-determination must be defined and self-determined behaviours identified by the function the behaviour serves for the individual. Accordingly, within this theoretical framework, "self-determination refers to volitional actions that enable one to act as the primary causal agent in one's life and to maintain or improve one's quality of life" (Wehmeyer, 2005, p. 17). The volitional actions defining self-determination are characterized as comprising four essential characteristics: (1) the person acted autonomously; (2) the behaviour(s) were self-regulated; (3) the person initiated and responded to the event(s) in a psychologically empowered manner; and (4) the person acted in a self-realizing manner. These four essential characteristics describe the function of the behaviour that makes it self-determined or not [see Wehmeyer et al. (2003) for greater detail].

At the heart of this definition is the notion of causal agency. The adjective 'causal' is defined as expressing or indicating cause; showing the interaction of cause and effect. The term 'agent' is a noun that means one who acts or has the authority to act or, alternatively, a force or substance that causes change. Self-determined people are causal agents in their lives. They act "with authority" to make or cause something to happen in their lives. Causal agency implies more, however, than just causing action; it implies that the individual who makes or causes things to happen in his or her life does so with an eye toward causing an effect to accomplish a specific end or to cause or create change; in other words, they act volitionally and intentionally.

Promoting student involvement in transition planning and promoting self-determination have an intuitive link. Research has shown that students who are more active in educational planning and choose their own

school activities show greater motivation and achieve goals at a higher rate (Benz, Lindstrom, & Yovanoff, 2000). Further, the focus on promoting self-determination within the transition years began with the focus on active student involvement in transition planning. The relationship between self-determination and student involvement is, likely, reciprocal: enhanced self-determination can contribute to enhanced student involvement and greater student involvement would, presumably, lead to enhanced self-determination.

Student Involvement

Prior to the IDEA amendments of 1990, relatively few studies were conducted to determine student involvement in IEP meetings. Vacc et al. (1985) completed a study of 56 IEP meetings for elementary students and concluded that students only attended two of the meetings. An earlier study by Goldstein, Strickland, Turnbull, and Curry (1980) found that no students attended their IEP meeting. Although more recent studies have shown that student attendance of IEP meetings is up from that documented by these early studies, these studies are also showing that students too often do not have a meaningful role during the meeting (Martin, Huber Marshall, & Sale, 2004; Martin et al., 2006; Thoma, Rogan, & Baker, 2001; Williams & O'Leary, 2001).

For example, when examining who speaks the most during IEP meetings, it was determined roughly half (51%) of the speaking was done by special education teachers compared with only 3% by students (Martin et al., 2006). In addition, students report lower levels of understanding the IEP process when compared to the other IEP team members (Martin et al., 2006). When students were asked about the nature of the IEP meeting, statistically significant differences were found between the answers of students who did and did not attend the meeting,

with students attending the meeting reporting better understanding of the meeting (Martin et al., 2004). The first step to improve IEP meeting participation is to teach students about the process. Students often do not participate in the IEP process because they are unaware to the importance of what occurs at the planning meeting (Thoma et al., 2001; Martin et al., 2006).

Student Involvement and Self-Determination

There have been a limited number of studies testing the hypothesis that student involvement in transition planning enhances self-determination. Test, Mason, Hughes, Konrad, Neale, and Wood (2004) reviewed this literature, finding only limited data to support the link between student involvement and enhanced self-determination, though indicating that there was cause to believe that this relationship exists and that more research was needed. There are no data evaluating the impact of self-determination on student involvement. There is ample evidence, however, that although students can learn the skills leading to enhanced self-determination (Algozzine, Browder, Karvonen, Test, & Wood, 2001; Karvonen, Test, Wood, Browder, & Algozzine, 2004) they have limited opportunities to learn those skills (Agran, Snow, & Swaner, 1999; Wehmeyer, 1998). Therefore, the potential contribution of student involvement to enhanced self-determination is all the more important.

Current Study

Given the above noted issues, there is a need in the field for more research describing the relationship between self-determination and student involvement in IEP meetings. The purpose of this study was to examine differences in self-determination between groups of students who differed in terms of the level of involvement in their IEP meeting.

Method

Sample

Participants were 276 students receiving special education services recruited from 33 school districts within five states. Districts were recruited based upon their willingness to participate in the study and their physical proximity to researchers involved in the study. Teachers with instructional responsibility for students receiving special education services were recruited to participate and consent was obtained for teacher participation. Within those 33 school districts, students attended 62 different high schools or were involved with an 18-21 program linked, administratively, to that high school. The mean age for the sample (excluding 7 students for whom date of birth was not available) was 17.81 years (range=14.4 to 21.8 years, $SD=1.5$), with 169 males (Mean age=17.93 years, $SD=1.53$) and 107 females (Mean age=17.63, $SD=1.47$). One hundred and four students (38% of the sample) were receiving special education services under the mental retardation category, 75 (27%) were identified with learning disabilities, 24 (9%) with autism, and 20 (7%) with emotional or behavioural disorders, with the remaining students distributed across the special education categories of Hearing Impairment, Other Health Impairment, Speech or Language Impairment, and Visual Impairment, each of which contained less than 5% of the sample. Current IQ score data were available from school records for only 84 students. The mean IQ score for this group was 72.96 ($SD=18.78$). For analysis purposes, students were grouped into one of three "level of disability" groups. The first group ($n=57$) involved students who had no cognitive impairment (e.g., ADD/ADHD, physical disability), the second group ($n=105$) involved students with high incidence disabilities without global cognitive impairments (e.g., learning

disability, autism), and the third group ($n=114$) involved students with global cognitive impairments (e.g., intellectual disability). Participants for this study were recruited as part of a larger, multi-state, randomized trial intervention study.

Procedures

Data from the measures described subsequently were collected by teachers working with students recruited for the study or by project personnel at the request of the districts. The initial contact for participation in the study was made with district level personnel, typically followed-up by district level consent. Once district approval was obtained, teachers were recruited by district coordinators with the help of recruitment materials developed by project staff. Project staff and district coordinators worked together to establish a time during which training on administering the measures could be conducted by project staff. Measurement instruments were returned unscored to project staff, who scored them and entered data into SPSS for Windows.

Instrumentation

Measuring self-determination. Student self-determination was assessed by The Arc's Self-Determination Scale and The AIR Self-Determination Scale. The Arc's Self-Determination Scale (Wehmeyer, 1996; Wehmeyer & Kelchner, 1995) is a 72-item self-report measure providing data on four essential characteristics of and overall self-determination. The measure was normed with 500 students with and without cognitive disabilities in rural, urban, and suburban school districts across five states and has adequate validity and reliability. Coefficient alpha for the Scale was .90. Construct validity was determined by multiple means, the first of which was a factor structure analysis. The mean overall score from the norming sample was 97.52 ($SD=19.43$). The

mean score for each subdomain was as follows: Autonomy-63.35 ($SD=15.50$); Self-Regulation-9.78 ($SD=4.95$); Psychological Empowerment-13.28 ($SD=2.64$); Self-Realization-11.11 ($SD=2.25$). The scale operationalizes an empirically-validated theory of self-determination (Wehmeyer, 2001) and has been used to document the importance of self-determination for positive adult outcomes (Wehmeyer & Palmer, 2003; Wehmeyer & Schwartz, 1997) and student involvement in educational planning (Cross, Cooke, Wood, & Test, 1999; Zhang, 2001) for youth with disabilities, and provided validation of interventions to promote self-determination (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000).

The AIR Self-Determination Scale (AIR; Wolman, Campeau, DuBoid, Mithaug, & Stolarski, 1994) is available in a Student, Educator, and Parent version. For the purposes of this study the Student and Educator versions of the scale were utilized. The AIR-Educator (AIR-E) has thirty questions that provide data on students' capacity and opportunity for self-determination. Capacity and opportunity subscale scores can be calculated, as well as a total self-determination score, which is the sum of the capacity and opportunity subscales. The capacity subscale consists of information on students' ability to perform self-determination behaviours; knowledge of self-determination behaviours; and perception of knowledge and ability to perform self-determination behaviours.

The opportunity subscale consists of information on students' opportunity to perform self-determination behaviours at school and at home. However, because a large subset of the participating teachers reported an inability to report on students' self-determination behaviours at home, the six questions on this domain were dropped from the AIR-E and AIR-Student (to keep the scales parallel in these analyses). Thus, the opportunity domain only consisted of students' opportunity to perform self-determination behaviours at school. Therefore the version of the AIR-E utilized in this study consisted of 24 questions, rated on a scale from 1 (Never) to 5 (Always).

The AIR-Student (AIR-S) is similar to the AIR-E. Capacity and opportunity subscale scores can be calculated, as well as a total self-determination score, which is the sum of the capacity and opportunity subscales. The capacity subscale consists of questions pertaining to things students do related to self-determination ("Things I Do" subscale) and how students feel about performing these self-determined behaviours ("How I Feel" subscale). The opportunity subscale consists of questions regarding students' perceptions of their opportunities to perform self-determined behaviours at home and at school. However, as mentioned above, the information on the home subscale was dropped to keep the Student and Educator versions of the AIR parallel in these analyses. Therefore, the AIR-S consisted of 18 questions rated on a scale of 1 (Never) to 5 (Always).

The AIR-S and AIR-E were developed and normed with 450 students with and without disabilities and their teachers in California and New York (Wolman et al., 1994). Both versions of the scale were demonstrated

Table 1. Items Measuring Student Involvement in Transition Planning

<p>Did you attend your last IEP meeting? If yes, did you prepare for your meeting the day before of the meeting? Did you talk about things that were important to you at the meeting? Did people listen when you talked during your meeting? Do you know what your IEP goals and objectives are? If yes, have you talked with anyone about these goals? Can you describe one of your IEP goals?</p>

to have adequate reliability and validity in the measurement of self-determination for students with and without disabilities. Although correlations between the AIR-S and AIR-E were not reported, it was reported that students with disabilities tended to rate their capacity for self-determination, as measured by the capacity subscale, higher than their special education teachers, while the reverse pattern was seen on the school opportunities subscale (Mithaug, Campeau, & Wolman, 2003). In this study, Cronbach's alpha for the AIR-E was 0.95 and for the AIR-S, 0.92.

Measuring student involvement. To measure student involvement in transition planning, we created a questionnaire consisting of seven items, each of which was answered by the student (Table 1, page 31). Items were generated based upon generally accepted indicators of student involvement in transition planning. We have used these questions in prior research evaluating a student-directed transition planning process (Wehmeyer & Lawrence, 1995). Binomial responses were tallied by awarding a student zero (0) points for each "no" response and a one (1) point for each "yes" response. Students were

Table 2. Self-Determination Mean Scores for Sample

Scale Domain	Level of Disability	n	Min	Max	Mean	Std.Dev.
<i>The Arc's SD Scale</i>						
Autonomy	No Cognitive	55	28	96	58.73	15.03
	Specific Cognitive	95	20	93	62.39	15.71
	Global Cognitive	106	12	96	57.38	19.85
	All	256	12	96	59.53	17.50
Self-Regulation	No Cognitive	55	0	20	10.98	4.27
	Specific Cognitive	95	3	19	11.14	3.82
	Global Cognitive	106	0	18	8.35	3.88
	All	256	0	20	9.95	4.15
Psych Empower	No Cognitive	55	6	16	13.35	2.65
	Specific Cognitive	95	8	16	13.39	2.07
	Global Cognitive	106	6	16	12.45	2.63
	All	256	6	16	12.99	2.47
Self-Realization	No Cognitive	55	7	15	12.22	1.71
	Specific Cognitive	95	5	15	11.54	1.97
	Global Cognitive	106	5	15	11.03	2.09
	All	256	5	15	11.47	2.01
Overall SD	No Cognitive	55	44	138	95.09	16.86
	Specific Cognitive	95	28	132	98.45	18.87
	Global Cognitive	106	5	141	88.36	23.56
	All	256	5	141	93.55	20.99
<i>The AIR SD Scale</i>						
Educator Capacity	No Cognitive	53	18	88	56.47	14.69
	Specific Cognitive	88	21	87	56.99	12.21
	Global Cognitive	99	18	83	50.95	13.34
	All	240	18	88	54.38	13.51
Educator Opportunity	No Cognitive	53	6	30	24.36	4.35
	Specific Cognitive	88	12	30	24.69	4.09
	Global Cognitive	99	6	30	24.22	4.53
	All	240	6	30	24.42	4.32
Student Capacity	No Cognitive	53	26	60	46.21	7.59
	Specific Cognitive	88	34	60	48.05	6.86
	Global Cognitive	99	30	60	46.21	8.43
	All	240	26	60	46.88	7.72
Student Opportunity	No Cognitive	53	14	30	23.36	4.11
	Specific Cognitive	88	14	30	23.61	4.09
	Global Cognitive	99	12	30	23.71	4.51
	All	240	12	30	23.60	4.26
Educator Total	No Cognitive	53	41	113	80.83	16.52
	Specific Cognitive	88	36	115	81.68	14.33
	Global Cognitive	99	24	113	75.17	15.57
	All	240	24	115	78.81	15.59
Student Total	No Cognitive	53	44	90	69.57	11.05
	Specific Cognitive	88	50	90	71.66	9.99
	Global Cognitive	99	49	90	69.92	12.02
	All	240	44	90	70.48	11.09

Table 3. *Multivariate Tests (Wilks' Lambda) for Student Involvement Group for all Self-Determination Measures*

Measure Effect	Value	F	p
<i>The Arc's Self-Determination Scale</i>			
<i>Covariates</i>			
Age	.961	2.00	.079
Level of Disability	.928	3.86	.002
<i>Factor</i>			
Student Involvement Group	.948	2.71	.021
<i>AIR Self-Determination Scale</i>			
<i>Covariates</i>			
Age	.919	5.11	.001
Level of Disability	.983	1.03	.393
<i>Factor</i>			
Student Involvement Group	.934	4.12	.003

Table 4. *Between-Subjects Effects on all Self-Determination Scores for Student Involvement Group*

Scale Dependent Variable	Type III Sum of Squares	Mean Square	F	p
<i>The Arc's SD Scale</i>				
Autonomy	811.18	811.18	2.65	.10
Self-Regulation	19.23	19.23	1.22	.27
Psych Empower	65.88	65.88	11.59	.001
Self-Realization	14.14	14.14	3.71	.05
Total	1703.06	1703.06	4.01	.05
<i>The AIR SD Scale</i>				
Educator Capacity	290.6	290.16	1.66	.20
Educator Opportunity	3.68	3.68	.20	.65
Student Capacity	778.96	778.96	13.71	.001
Student Opportunity	150.08	150.08	8.71	.003
Educator Total	228.45	228.45	.96	.33
Student Total	1612.88	1612.88	13.85	.001

assigned to a “low student involvement group” based upon whether their student involvement score fell in the upper or lower half of the distribution of scores. Fifty-six percent (n=155) students scored from zero to four points and were assigned to the “low student involvement group.” Forty-four percent of students scored from five to seven and were assigned to the “high student involvement group.”

of missing data, we conducted separate MANCOVAs, one for each scale.

Results

There were 256 students for whom complete data on The Arc's Self-Determination Scale was available and 240 for whom completed data was available on the AIR self-determination scale. Table 2 provides

Analyses

We were interested in examining the differences in student self-determination between groups who differed in level of student involvement in their IEP meeting. First, descriptive statistics for self-determination for the sample were computed to be reported in tabular format. Second, multiple Multivariate Analyses of Covariance (MANCOVA) were conducted to examine differences in scores (overall and subscale) on both measures of self-determination by student involvement group (high or low) with age and level of level of disability (non-cognitive, no global cognitive impairment, global cognitive impairment) as covariates. We included level of disability and age as covariates because research has shown that level of self-determination varies by cognitive ability and age (Wehmeyer, Abery, Mithaug, & Stancliffe, 2003). Because we were interested in the unique differences by measure and because

mean, standard deviation, and range scores for the sample, as a whole, across both scales and relevant subdomain scores [see page 32].

The MANCOVA conducted to examine differences by student involvement group and total and subdomain scores from The Arc's Self-Determination Scale controlling for age and level of disability yielded main effects for student involvement group (Wilks' $\Lambda=0.948$, $F(3,253)=2.71$, $p=0.021$) as well as for the level of disability covariate (Wilks' $\Lambda=0.928$, $F(3,253)=3.86$, $p=0.002$), as was expected. Table 3 provides statistics from the multivariate test. Subsequent univariate analyses for self-determination total and subdomain scores by student involvement group found significant differences between groups on Total Self-Determination, Psychological Empowerment, and Self-Realization subdomain scores [see page 33]. Table 4 provides data from the univariate analyses [see page 33]. As depicted in Table 5, all differences between total and subdomain scores by student involvement group were in the direction that would be expected; students in the high student involvement group scored more adaptively than did their peers in the low student involvement group.

The MANCOVA conducted to examine differences by student involvement group

Table 5. Means for SDS Total and Subdomain Scores and AIR Educator and Student Capacity, Opportunity, and Total Scores by Student Involvement Group

Dependent Variable	Level of Student Involvement	Mean	Std. Error	Lower Bound	Upper Bound
SDS					
Autonomy	Low	57.74	1.55	54.68	60.79
	High	61.38	1.58	58.27	64.48
Self-Regulation	Low	9.67	.35	8.98	10.37
	High	10.23	.36	9.53	10.94
Psychological Empowerment	Low	12.48	.21	12.06	12.90
	High	13.52	.22	13.10	13.94
Self-Realization	Low	11.24	.17	10.90	11.58
	High	11.72	.18	11.37	12.06
Total	Low	90.95	1.8	87.35	94.56
	High	96.23	1.8	92.57	99.89
AIR					
Educator Capacity	Low	53.26	1.2	50.84	55.67
	High	55.51	1.2	53.01	57.92
Educator Opportunity	Low	24.55	.39	23.77	25.33
	High	24.30	.39	23.52	25.08
Student Capacity	Low	45.04	.69	43.66	46.41
	High	48.73	.69	47.36	50.11
Student Opportunity	Low	22.78	.38	22.03	23.54
	High	24.41	.38	23.65	25.16
Educator Total	Low	77.81	1.42	74.00	80.62
	High	79.81	1.42	76.00	82.62
Student Total	Low	67.82	.99	65.85	69.79
	High	73.14	.99	71.17	75.11

and total and subdomain scores from the AIR Self-Determination Scale controlling for age and level of disability yielded main effects for student involvement group (Wilks' $\Lambda=0.934$, $F(4,236)=4.12$, $p=0.003$) (Table 3). Unlike the analysis with The Arc's Self-Determination Scale, there were no main effects for disability level, but there were effects by age (Wilks' $\Lambda=0.919$, $F(4,236)=5.11$, $p=0.001$). Subsequent univariate analyses for self-determination total and subdomain scores by student involvement group found significant differences between groups on Student Capacity, Opportunity, and Total

scores, but not on any Educator scores (Table 4). As depicted in Table 5, all differences between Student Capacity, Opportunity, and Total scores by student involvement group were in the direction that would be expected, that being that students in the high student involvement group scored more adaptively than did their peers in the low student involvement group.

Discussion

The findings from this study provide additional evidence to advance the knowledge base pertaining to self-determination and student involvement. Specifically, findings showed that students who were more actively involved in transition planning were also more self-determined. In general, the results support previous findings that suggest that student involvement and self-determination are linked, although it is obvious that the design of this study did not allow us to examine the direction of the causal link between self-determination and student involvement.

One apparently discrepant finding was that scores from the AIR Educator version did not differ by student involvement group. In a recent study, Shogren and colleagues (in press) conducted a structural equation modeling analysis to determine the relationship between and among The Arc's Self-Determination Scale (SDS), the AIR Student Scale (AIR-S), and the AIR Educator (AIR-E) Scale. The relationships among the various subdomains on both the SDS and AIR-S showed high levels of correlation. However, this was not the case for the AIR-E. The subdomains of the Educator version were only weakly correlated with SDS and AIR-S scale scores (Shogren et al., in press). Further, Shogren et al. (in press) were able to fit a model of a higher-order self-determination construct for both the SDS and AIR-S but not for the AIR-E due to the low

correlations found within subdomains. At one level, this is likely a function of the fact that both the SDS and the AIR-S are self-report measures and provide a student's perspectives with regard to his or her self-determination (although the SDS does not measure perspectives of self-determination, but instead scores are based upon actions associated with self-determined behaviour). The AIR-E is a teacher estimate of self-determination. Given, however, previous findings about teacher's attitudes about self-determination and students with more severe disabilities (Wehmeyer, Agran, & Hughes, 2000), these findings may indicate that teachers do not perceive students who vary in student involvement as varying in levels of self-determination, or, at least, opportunities or capacity to self-determine.

There were also significant differences in self-determination scores for level of disability as a covariate on The Arc's Self-Determination Scale. In general, as can be seen in Table 2, students with global cognitive disabilities scored lower on measures of self-determination. In previous research efforts, we have consistently found significant negative correlations between self-determination scores and IQ scores (see Wehmeyer, 2005), but have also found that IQ is not a dominant predictor of self-determination when other factors, such as choice availability, are factored into the model (Wehmeyer & Garner, 2003). Because we were not able to obtain IQ scores for every student in the sample, we opted to classify 'level of disability' into three rather global groups; no cognitive impairment, mild cognitive impairment, global cognitive impairment) and to use this as a covariate instead of a dependent variable. Future research, as discussed subsequently, should examine the interaction between level of disability and student involvement.

Implications for Practice and Future Research

It is important for teachers of students with disabilities to recognize the importance of promoting both self-determination and student involvement in IEP meetings. Since the identification of self-determination is a desired educational outcome (Karvonen et al. 2004; Wehmeyer, 1997), it is important that teachers provide opportunities for students to learn and practice the skills enabling them to become more self-determined. This includes teaching students all the component elements of self-determined behaviour (Wehmeyer, 2001) including decision-making, goal setting, and problem solving skills.

That such skills are important to active student involvement suggests that the transition planning process is an ideal context in which to both teach skills leading to enhanced self-determination and to enable students to implement and practice those skills. Teachers should work to actively involve students in their transition and educational planning meetings. There are currently numerous curricula and lesson packages that help promote both self-determination and student involvement, including the Self-Directed IEP (Martin, Huber Marshall, Maxson, & Jerman, 1997), *Whose Future is it Anyway?* (Wehmeyer, Lawrence, Kelchner, Palmer, Garner, & Soukup, 2004), *Steps to Self-Determination* (Hoffman & Field, 2005), and *Next S.T.E.P.S.* (Halpern, Herr, & Doren, 2000).

In terms of future research, much is still unknown about the relationship between student involvement and self-determination, particularly with regard to the direction of any causal effect. Further, research needs to examine the degree to which current practices to promote self-determination and student involvement are culturally-laden (Zhang, 2006, Zhang & Benz, 2006) and how to promote self-

determination and student involvement in culturally-relevant ways. Next, it has been identified that the majority of research in the area of self-determination revolves around choice-making and self-advocacy (Algozzine, et al., 2001). Goal setting and attainment was identified as needing more research to support the evidence base for these elements (Algozzine, et al., 2001). The essential component of goal setting and attainment directly related to the transition-planning process and, as such, becomes a logical context in which to teach goal setting and attainment.

Limitations

While this study adds to the knowledge base pertaining student involvement and self-determination, certain limitations of the study must be acknowledged and taken into account when interpreting results. First, this research did not examine the environment in which the educational planning meeting occurred and, indeed, relied on student self-report of their attendance at and participation in the transition/IEP planning process to determine student involvement levels. The study would have been stronger with a direct indicator of student involvement. Second, although the sample is reflective of multiple states, it is limited to district, teacher and student agreement in order to participate in the study and may or may not be reflective of the entire population.

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