National Picture of the Self-Determination Characteristics of Secondary School English Learners with Disabilities

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Abstract

Students' self-determination plays a critical role in both in-school and post-school outcomes. This study examined the self-determination of English learners with disabilities in secondary school, based on a secondary analysis of the National Longitudinal Transition Study 2012 (NLTS 2012). The NLTS 2012 youth survey, conducted in English and Spanish, included measures of three self-determination constructs—autonomy, self-realization, and psychological empowerment— based on 21 items from three of the four subscales of The Arc's Self-Determination Scale. The current study's sample included approximately 350 English learners with disabilities and comparison samples of 3,760 students with disabilities with an IEP who were not English learners, 90 English learners in the general population (those without an IEP), and 1,250 students in the general population who were not English learners. English learners with disabilities differed from other students with disabilities in several keyways. Disability identification for English learners is markedly different from other students with disabilities, including a significantly higher prevalence of learning disabilities and a lower incidence of autism, emotional disturbances, multiple disabilities, other health impairment, and traumatic brain injury. Beyond disability identification, results also indicate that English learners with disabilities were significantly more likely to have parents who had not completed high school than were all other students. Additionally, similar to their English learner peers in the general population, English learners with disabilities were more likely than other students to experience poverty and to attend urban, poor performing schools. Study findings indicate that on average, English learners with disabilities reported lower levels of self-determination than other students, including their being less likely to act autonomously or report empowerment- or self-realization related-behaviors. Multivariate logistic regression analyses identified several student and family

characteristics associated with variations in aspects of self-determination, including age, gender, and postsecondary expectations. Implications for practice and research are discussed, including the importance of considering these factors when selecting, implementing, and evaluating self-determination interventions for English learners with disabilities.

Key words: English learners with disabilities

Self-determination

Secondary school students

Autonomy, empowerment, self-realization

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Students' self-determination, which plays a critical role in both in-school and post-school outcomes (Mazzotti et al., 2021; Rowe et al., 2021), may be particularly important for secondary school English learners (ELs)[1] with disabilities. These students are at the intersection of two widely studied groups—ELs and students with disabilities—both with historically poor educational access and academic outcomes (Newman, Wagner, Huang et al., 2011; Slama, 2012). Opportunities to learn have been limited for both groups. In addition to the historical marginalization that prevented both ELs and students with disabilities from being served in general education classrooms, the accurate assessment of disability for ELs is an ongoing challenge (Klingner & Eppolito, 2014). Both groups also experience shortages of licensed teachers (Sutcher et al., 2019), and, for ELs with disabilities in particular, the majority attend under resourced schools (Trainor et al., 2019). It is in this context that ELs with and without disabilities have consistently scored far lower than their peers on the National Assessment of Educational Progress (NEAP) reading and math assessments (U.S Department of Education, 2019). Postschool outcomes also are problematic, with ELs with disabilities being significantly less likely than other young adults to have been employed at some point since high school or to have ever enrolled in a 2- or 4-year college or university (Newman, Wagner, Knokey et al., 2011; Trainor et al., 2016).

A constellation of additional causes likely contribute to the academic struggles and

[1] We recognize the English learner (EL) term as a label with an arguably deficit orientation; however, we use the term here to maintain consistency with how districts were asked to identify these students in the NLTS 2012 study.

diminished high school and post-school outcomes for ELs with disabilities (Burr et al., 2015). These dually identified students are disproportionately likely to face barriers associated with race-, class-, and linguistic-based historical marginalization and discrimination that are particularly relevant to self-determination. For example, ELs with disabilities who express goals in formal transition planning meetings have encountered teacher biases and experienced a lack of culturally responsive opportunities to express self-determination (Povenmire-Kirk et al., 2010). Few school districts report implementing research-based practices recommended for transition planning with ELs with disabilities, particularly culturally responsive practices focused on improving student self-determination in transition planning (Gothberg et al., 2019). Yet, culturally relevant pedagogy is an initial step in fostering postschool transitions, invoking perceptions and experiences about adulthood and disability across diverse families (Harry et al., 2005). Reflecting these issues, the current study's purpose was to examine the self-determination of secondary school ELs with disabilities, based on secondary analysis of the most recent national study of students with disabilities, the National Longitudinal Transition Study 2012 (NLTS 2012).

Self-determination is a multifaceted and complex concept (Cobb et al., 2009). Wehmeyer defined self-determination as, "the attitudes and abilities required to act as the primary causal agent in one's life and to make choices regarding one's actions free from undue external influence or interference" (1992, p. 305). Wehmeyer and colleagues (2003) identified four essential characteristics of self-determination; the individual: (a) acts autonomously–according to their preferences, interests and abilities; (b) initiates and responds to events in a psychologically empowered manner—believing in the relationship between actions and outcomes; (c) acts in a self-realizing manner—having a good understanding of their strengths and support needs; and (d)

acts with behaviors that are self-regulated. These four characteristics are operationalized in the domains measured by The Arc's Self Determination Scale (Wehmeyer, 2000).

There is consistent evidence that self-determination is a contributor to a range of positive outcomes for students during the school years, such as academic achievement (Cobb et al., 2009) and student involvement in transition planning (Williams-Diehm et al., 2008). Additionally, self-determination has been identified as a predictor of successful postschool outcomes, including increased postsecondary enrollment (Petcu et al., 2017), more positive employment outcomes, and improved independent living outcomes (Shogren et al., 2017).

Causal agency theory (Shogren et al., 2015) and its precursor, the functional theory of self-determination (Wehmeyer et al., 2003), formed the framework for our examination of self-determination. These theoretical frameworks are focused on how individuals become causal agents and therefore more self- rather than other-determined. To act with agency requires the mental or physical capacity to respond to opportunities or threats/challenges. Both Wehmeyer's functional schema and Shogren et al.'s "layers" of human agency acknowledge the importance of personal and environmental characteristics and indicate several points where instructional and environmental supports/interventions could be created to promote increased self-determination.

Students with disabilities vary considerably, particularly by disability category, in the extent to which they demonstrate self-determined behaviors. For example, research based on the NLTS2 indicated that those receiving high scores on the personal autonomy subscale from The Arc's Self-Determination Scale (Wehmeyer, 2000) ranged from 23% for students with autism to 63% of students with visual impairments (Wagner et al., 2007). Characteristics such as gender, age, ethnicity, family practices, parents' educational attainment, and household income also have been linked to aspects of self-determination, as has students' social involvement (Rodriguez &

Cavendish, 2015; Shogren et al., 2016; Zhang, 2005).

The relationship of student, school, and family characteristics with self-determination is complex. A synthesis of the literature examining the relationship between culture and self-determination of students with disabilities indicated that perceptions, experiences, and behaviors associated with self-determination varied across what Shogren (2011) referred to as cultural identities. In subsequent work, Shogren and colleagues (2014) found that Hispanic youth tended to have lower scores than Black or White youth on the three self-determination subscales measured in NLTS2. Researchers have suggested these racial/ethnic differences may be associated with differences in family interaction patterns, particularly the extent to which families and cultures identify with familial/collective vs. individualistic/independence values (Suárez-Orozco & Suárez-Orozco, 1995; Trainor, 2005). Additionally, there are variations by disability category related to cultural identity. In their exploration of the relationship of race/ethnicity and self-determination, Shogren and colleagues (2014) identified a complex pattern of differences in aspects of self-determination based on race/ethnicity within disability groups. For example, within the cognitive impairment disability group, students who were Black reported significantly higher self-realization levels then did those who were Latinx; in contrast, within the sensory impairment group, students who were Latinx scored higher than those who were Black in psychological empowerment.

The secondary school population of these dually identified students is growing (Colby & Ortman, 2015); approximately 10% of secondary students with disabilities are ELs (Lipscomb et al., 2017). Given the demographic differences between ELs with disabilities and other students, their poor academic and postschool outcomes, and the demonstrated relationship of self-determination with improved outcomes, it is important to consider their self-determination

behaviors as well as the factors related to variations in their self-determination. Using data from the most recent national transition study (i.e., NLTS 2012), this study addressed the following questions: What are the self-determination behaviors—those related to autonomy, self-realization, and psychological empowerment— of a national sample of secondary school ELs with disabilities? How do the self-determination behaviors of ELs with disabilities compare with that of other students with disabilities, EL students in the general population, and other students in the general population? What are the student, family, and school characteristics associated with variations in self-determination of ELs with disabilities?

Method

Data Source

The NLTS 2012 dataset is uniquely suited to augment our understanding of self-determination for ELs with disabilities and generalize to the full U.S. population of ELs with disabilities in secondary school.

NLTS 2012 overview. NLTS 2012 is a nationally representative study. The sample includes approximately 22,000 students, including students with disabilities who have an Individualized Education Program (IEP) (81%), a comparison sample of students with disabilities who have a 504 Plan (5%), and students in the general population with no IEP or 504 Plan (14%; Burghardt et al., 2017). A two-stage sampling process entailed first sampling a stratified national probability sample of school districts and then a stratified sample of students within districts. A nationally representative sample of 572 districts were drawn, based on district size (i.e., student enrollment) and geography. These districts included local education agencies, charter schools, and state-sponsored special schools that serve deaf and/or blind students in the eligible age range and serve a minimum of 30 youth with an IEP. Of those districts, 432 (76%)

agreed to participate. Stage two sampling entailed random selection of students in Grades 7 through 12 (or ungraded) and who were 13 to 21 years old as of December 1, 2011, from participating districts rosters. Students were selected from each of 14 sample strata categories, including students in each of the 12 federal IDEA-recognized disability categories, those with a 504 Plan, and general population students.

Parent and youth surveys. Parent and youth surveys were completed in 2012 and 2013, when youth were ages 12 to 23, and most still were in secondary school. Surveys were administered in English or Spanish through a combination of computer-assisted interviewing (by phone and in person) and through web-based surveys. Parents of youth younger than 18 were surveyed first, and subsequently the youth survey was attempted. Approximately 12,900 parent surveys were completed, representing a 59% response rate, and 11,130 youth survey were completed, representing a 51% response rate. The potential for nonresponse bias in the parent/youth survey was assessed. Results suggest that weighting was successful in limiting the potential for bias. Weighting and nonresponse bias analysis of parent/youth survey processes are more fully described in the *NLTS 2012 Design Documentation* (Burghardt et al., 2017).

District records. Districts provided administrative records that contained background characteristics of sampled youth, including English learner status and disability category.

Sample

To be included in the current study's sample, students needed to have a completed youth survey, been 13 to 16 years old when sampled to match the NLTS2 sampling age for subsequent analyses, and have been in secondary school during the year the survey was completed. Students missing EL status were deleted from the current sample. The sample included 350 ELs with disabilities and comparison samples of 3,760 students with disabilities with an IEP who were not

ELs, 90 ELs in the general population (those without an IEP), and 1,250 students in the general population who were not ELs. These sample sizes and those reported in all subsequent results are rounded to the nearest 10, per U.S. Department of Education's Institute of Education data reporting requirements for a restricted-use dataset.

Measures

Sampled districts provided students' EL status and disability category. Student and household demographic information were from the parent survey. Household poverty level was a created variable in the NTLS 2012 dataset, calculated using parent-reported income. This variable indicated whether the youth's household income in the prior year was at or below the federal poverty level, the eligibility cutoff for schools' free or reduced-price lunch programs. The school's academic proficiency and urbanicity also were created variables included in the NLTS 2012 dataset, based on the school the student attended at sampling in the 2011–12 academic school year. Academic proficiency had been categorized using ED*Facts* data for 2011–2012 and is expressed as the average of each school's rate of proficiency in math and in reading. The distribution of schools within each state was divided into quarters based on the average math and reading proficiency rate in each school, with categorical values from 1 (lowest-performing quarter) to 4 (highest-performing quarter). School urbanicity was categorized based on the Common Core of Data for the 2011–2012 school year, indicating whether the school was in an urban, suburban, or rural/town locale.

The youth survey included measures of three self-determination constructs—autonomy, self-realization, and psychological empowerment— based on 21 items from three of the four subscales of The Arc's Self-Determination Scale (Wehmeyer, 2000). NLTS 2012 did not include measurement of the fourth self-determination construct—self-regulation; therefore, a summary

self-determination measure could not be created. The autonomy subscale included seven items. For each of the items, e.g., “I plan weekend activities that I like to do,” respondents were provided a statement and asked to indicate the response that best indicated how they acted in that situation; the four response categories ranged from “I do not do even if I have the chance” to “I do every time I have the chance.” Respondents were instructed that if their disability limited them from performing the activity, but they had control over the activity–such as a personal care attendant–they should answer as if they performed that activity. The empowerment items asked respondents to indicate which of two contradictory statements best reflected them; for example, “I do not make good choices, or “I can make good choices.” The positive responses were coded as a yes. The self-realization items asked respondents to indicate whether they agreed or disagreed with each of several statements, such as, “I like myself.” Responses were dichotomously coded as a yes/no. The empowerment and self-realization subscales included seven items each. Mean scale scores were created for each of the scales, with a scale range of 0 to 21 for the autonomy scale, and 0 to 7 for each of the other two subscales.

All measures included in the multivariate analyses, other than disability category and school academic proficiency, were from the parent and youth survey. Age, gender, race/ethnicity, household income, parents’ educational attainment, and whether students had ever been suspended or expelled were based on parent report, as was the students’ daily living index score. This index is a constructed variable in the NLTS 2012 dataset and was based on parent responses to seven items about the student’s ability to perform daily living activities, such as using an ATM machine, making appointments, and fixing breakfast; item responses ranged from never to always. The frequency with which parents talked with the child about school included responses ranging from never to regularly. Both parents and youth were asked the highest level

of schooling they each thought the youth would complete, with attainment expectations ranging from less than high school to advanced degree. Participation in extracurricular activities and frequency of seeing friends were based on youth report. Youth were asked whether they had participated in any school activities outside of class in the past 12 months and also were asked to report the number of days/week they usually got together with friends outside of school and organized groups, with responses ranging from never to 6 or 7 days/week.

Analysis

All statistics were weighted to represent population estimates, using the *enrolled youth weight* included in NLTS 2012 restricted data file, which limits the population to youth who were enrolled in school in the reference school year. The demographic characteristics and self-determination characteristics of secondary El students with disabilities were compared with those of all other students with disabilities, EL students in the general population, and all other students in the general population. Two-sample *t* tests with unequal variances were used to determine whether the difference between the group averages of ELs with disabilities and those of students in each of the other three groups were greater than would be expected to occur by chance. A Benjamini-Hochberg procedure was conducted to adjust the false positive rates for multiple comparisons by calculating the appropriate false discovery rates (Benjamini & Hochberg, 1995). Statistically significant differences were set at a probability of 0.05. Missingness ranged from 0% to 8%; no imputation of missing values was conducted. Because of the intersectionality of student, family, and school characteristics, it was important to explore the relationship of these characteristics with self-determination using a multivariate analysis approach. Three multivariate linear regression models estimated the adjusted association between student, family, and school correlates and each of the three self-determination subscale

scores (measures described above), using the SAS *proc surveyreg* procedure. All models accommodated the cluster, stratification, and sampling weights used in NLTS 2012 and used the Taylor series linearization technique for variance estimation to account for lack of independence due to sampling within clusters. Regression coefficients, standard errors, and significance levels are reported.

Results

ELs with Disabilities in Comparison with Other Students

ELs with disabilities differ from other students with disabilities in several key ways (Table 1). Disability identification for ELs is markedly different from other students with disabilities, including a significantly higher prevalence of learning disabilities (62% vs 49%; $p<.001$) and a lower incidence of autism, emotional disturbances, multiple disabilities, other health impairment, and traumatic brain injury. Beyond disability identification, results also indicate that ELs with disabilities were significantly more likely to have parents who had not completed high school (48%) than were all other students with disabilities (12%; $p<.001$), ELs in the general population (23%; $p<.001$), and all other students in the general population (9%; $p<.001$). Similar to their EL peers in the general population, ELs with disabilities were more likely to experience poverty and to attend urban, poor performing schools than were other students. For example, 84% of Els with disabilities and 80% of ELs in the general population qualified for free and reduced-priced lunch, as compared with 54% of other students with disabilities ($p<.001$) and 41% of students in the general population ($p<.001$).

Self-determination of ELs with Disabilities in Comparison with Other Students

The self-determination characteristics of ELs with disabilities differed significantly from those of other students (Table 2). ELs with disabilities were more likely than other students to

report never acting autonomously in several situations. The summary autonomy scale score of 10.34 for EL students with disabilities was significantly lower than that of other students with disabilities (11.54, $p<.01$) and of other (non-EL) students in the general population (12.39, $p<.001$). Although their overall summary autonomy score did not significantly differ from that of ELs in the general population, they were more likely than ELs in the general population to report never choosing gifts for friends and family (14% vs 3%, $p<.05$) or planning weekend activities (16% vs 5%, $p<.05$). ELs with disabilities were more likely than other students with disabilities to report that they never chose restaurants (14% vs 6%; $p<.05$) or activities like movies, concerts, or dances (25% vs 15%, $p<.05$). ELs with disabilities were consistently less likely to act autonomously than were other students in the general population across all of the autonomous measures included in NLTS 2012.

Despite empowerment scores being high for all groups of students, ELs with disabilities were less likely than ELs in the general population to report several empowerment-related behaviors. For example, ELs with disabilities were less likely to indicate that they believed that trying hard in school would help them get a good job (88% vs 98%, $p<.05$), that they know how to make good choices (91% vs 100%, $p<.01$), or that they were able to make important choices (95% vs 99%, $p<.05$). Their summary empowerment scale score was lower than that of ELs in the general population, as well as of other students in the general population. Empowerment characteristics of ELs with disabilities did not differ significantly from that of other students with disabilities.

There were fewer differences between ELs with disabilities and their peers in their self-realization characteristics. Mean self-realization scale scores did not differ significantly between ELs with disabilities and their peers in the three other groups. Of the few self-realization item-

level differences, two were between ELs with disabilities and ELs in the general population, with ELs with disabilities being less likely than ELs in the general population to report they were confident in their own abilities (95% vs 99%, $p<.05$) or knew how to make up for their own limitations (89% vs 96%, $p<.05$).

Factors Associated with Variations in Self-Determination of ELs with Disabilities

Multivariate analyses identified several characteristics related to aspects of self-determination of ELs with disabilities (Table 3). When holding other characteristics constant, girls reported lower levels of empowerment than boys and ELs with autism had lower empowerment and self-realization scores than did ELs with learning disabilities. Students whose parents held higher expectations for their attending postsecondary school were more likely to report empowered behaviors. Students' postsecondary expectations also were related to self-determination; those who expected to attend postsecondary school reported more self-realization behaviors. Older students also had higher self-realization scores than younger students. ELs with disabilities who saw friends more frequently reported higher levels of autonomy.

When other characteristics were taken into account through multivariate analyses, several characteristics did not significantly differentiate between levels of self-determination within the EL with disabilities group, including race/ethnicity, daily living skills, parent's educational attainment, household income, frequency parent talks with their child about school, school's academic performance, student's participation in extracurricular groups, and having ever having been suspended or expelled.

Discussion

Self-determination has been shown to be positively related to student outcomes, both during and after high school (Mazzotti et al., 2021; Rowe et al., 2021). This secondary analysis

of data from NLTS 2012 extended prior analyses by focusing on the extent to which reported levels of self-determination for secondary school ELs with disabilities differed from that of their peers. These analyses also explored the student, family, and school characteristics associated with variations in self-determination of ELs with disabilities, using a multivariate analysis approach.

This dually identified population differed from other students with disabilities. English learners had a significantly higher prevalence of learning disabilities and a lower prevalence of autism, emotional disturbances, and other health impairments. Similar to their EL peers in the general population, they were more likely to attend urban, poor performing schools. They were more likely to experience poverty than were other students with disabilities and students in the general population who are not ELs. In addition, they were more likely to have parents without high school diplomas than students in all of the comparison groups. Understanding how these differences contribute to students' identities, often conceptualized as their culture, is challenging because experiences associated with having specific disabilities and being exposed to community- and family-level poverty intersect and likely influence individuals' perspectives on self-determination and on future goals. Additionally, culture is interactional. This means that one's identity and perspectives vary as one navigates resources and interpersonal relationships (Bronfenbrenner, 2005). The measures for self-determination used in the NLTS 2012, however, provides information about individuals' self-determination in autonomy, empowerment, and self-realization. With this understanding, we focus on what can be learned from the salient individual characteristics in each of the subscale findings.

Study findings indicate that on average, ELs with disabilities tended to report lower levels of autonomy, empowerment, and to a lesser extent, self-realization than other students. For

example, the mean autonomy scale score of ELs with disabilities was significantly lower than that of other students with disabilities as well as those in the general population who are not ELs. Several of the items included in the autonomy subscale of The Arc's Self-Determination Scale (Wehmeyer, 2000) require monetary resources, such as going to restaurants, choosing gifts to give to family and friends, and going to movies, concerts, and dances. The lower autonomy mean scale scores of ELs with disabilities as compared with other students may be related in part to their being more likely than other students to live in lower income households; they may have limited opportunities to engage in these resource-dependent behaviors. The literature suggests a relationship between socioeconomic status and self-determination (Zhang, 2005) when these relationships are explored as separate factors. However, the present study found that when other factors were taken into account through multivariate analyses, neither household income or parents' educational level, singly or jointly, had a significant relationship with self-determination after adjusting for other factors. Parent and teacher support of autonomy is key to its development (Deci & Ryan, 1991). Parenting styles of parents/guardians of ELs with disabilities may be informed by beliefs about disability and adulthood, as well as experiences with schools outside the United States in ways that influence how they foster their children's autonomy. Extant literature does support that there is variation in parenting style by race/ethnicity and economic background with regard to autonomy (Rafferty et al., 2012). Teachers' approaches to instruction and collaboration with families also influence the development of autonomy (Lam et al., 2012). School resources and teachers' beliefs about student performance both play a role in teachers' fostering of autonomy.

For the empowerment scale, the dually identified students' mean score was lower than that of ELs in the general population as well as all other students in the general population. It is

possible that having a disability is a key factor in the items in this subscale that focus on peer interactions. Research suggests that students with some disabilities need targeted supports to experience peer relationships (Asmus et al., 2017). In contrast to the between-group differences evidenced in the other self-determination measures, mean self-realization scale scores did not differ between ELs with disabilities and students in the three comparison groups. Approximately 90% or more ELs with disabilities reported positive responses to self-realization items.

Consistent with other research that identified the relationship of student age and self-determination (Shogren et al., 2016), when other student, family, and school characteristics were taken into account, older ELs with disabilities reported significantly higher self-realization levels than younger students. Aligning with other studies that described the lower self-determination characteristics of students with autism as compared with students in other disability categories (e.g., Wagner et al., 2007), this study found that those with autism reported fewer empowerment and self-realization behaviors than students with learning disabilities. Also consistent with some of the prior research focused on the relationship of gender and self-determination (Rodriguez & Cavendish, 2013;), female ELs with disabilities tended to demonstrate fewer empowerment behaviors than males. The current study's findings also support the importance of social involvement, as indicated in other research (Shogren et al., 2016). ELs with disabilities who are more socially involved had higher autonomy scale scores. Other studies suggest a relationship between race/ethnicity and self-determined behavior (e.g., Shogren et al., 2014). However, within the ELs with disability group, when other factors were considered, race/ethnicity was not significantly related to the three sub-scale self-determination measures. This discrepancy with prior findings may partially reflect the limited racial/ethnic diversity within the ELs with disabilities group – more than three-quarters were Latinx.

Limitations

Several limitations should be considered in interpreting the findings of this study. As a secondary analysis of the NLTS 2012 dataset, this study was constrained by the design and the items in the study. Respondents were given the option of responding in English or Spanish to the surveys that included the self-determination items. The minority of students in the sample who spoke another language might have experienced difficulty in answering the questions in a language they were in the midst of learning. A subset of items from each of three of the four subscales in The Arc's Self-Determination Scale were included in the NLTS 2012 survey; the fourth subscale, self-regulation, was not measured. Therefore, overall self-determination scores could not be constructed. Self-determination data was based on student self-report, with no opportunity to document self-determined behavior at school or home or to ascertain teachers' and parents' perceptions of students' self-determined behaviors. Also, the relationship among variables reported in this study is correlational and does not permit causal inference.

Implications for Research

Our findings suggest that both EL and disability statuses may influence aspects of self-determined behavior, and that both should be considered in all research focused on self-determination. Consideration should particularly be given to potential cultural and language preferences when designing and evaluating any interventions to promote self-determination. Attention also should be focused on the intersectionality of language, culture, disability, and socioeconomic status, particularly in relation to identifying culturally sustaining transition planning practices that are more responsive to student's experiences (Paris, 2012). Additionally, researchers have demonstrated the importance of self-determination to school and postschool outcomes for other groups of students with disabilities (e.g., Mazzotti et al., 2021). Given the

differences between ELs with disabilities and other students, future research should explore the relationship of self-determination with outcomes for these dually identified students.

The Arc scale measured a discrete set of self-reported behaviors. An in-depth qualitative exploration of the factors related to variations in levels and types of autonomous, self-realization, and empowerment behaviors, as well as on teachers' and parents' perceptions of the self-determined behaviors of EL's with disabilities, would extend these findings based on survey responses and add to our understanding of how differences in the social construction of expectations of adulthood, independence, and disability may map to self-determination.

Implications for Practice

Researchers have demonstrated that students can become more self-determined if given adequate encouragement and supports and appropriate interventions (e.g. Wehmeyer et al., 2013). The present study's focus on the factors related to the self-determination of ELs with disabilities provides guidance for schools to be more equitable and inclusive by being better able to target, design, and implement supportive and effective practices to promote the self-determination of this dually identified population of students.

Promoting the self-determination of secondary students with disabilities has long been a transition planning best practice. More than three-quarters of the studies included in a recent meta-analysis of self-determination interventions for students with disabilities were focused on transition-age students, with all of these studies aimed at helping students set and achieve transition-related goals (Burke et al., 2018). Involvement in goal setting is fundamental to person-centered planning (Michaels & Ferrara, 2006), and self-determination has been linked to student involvement in setting transition-related goals (Williams-Diehm et al., 2008). Trainor and colleagues (2019) found that although ELs with disabilities and their families reported that

they attended transition planning meetings at the same rate as other students with disabilities, they were significantly more likely to report that their goals were mostly generated by teachers. Professional development is a necessary first step in transition planning with culturally and linguistically diverse families (Gothberg et al., 2019). In addition to professionals' cross-cultural communication competence, their ability to share information or cultural capital in accessible ways with students and families is critical (Trainor, 2010). Individualizing culturally sustaining teacher practices, which benefit all students with disabilities and their families, are especially important because ELs with disabilities is such a diverse population. ELs vary in many ways: the extent they are developing fluency in English and maintaining their home language, their immigration experiences, their wide range of languages, their identification with mainstream cultural values, their gender, their disability, their age, and socioeconomic status. The current study identified several of these characteristics as being significantly related to differences in aspects and levels of self-determined behavior. Given these patterns, it is particularly important that transition professionals consider these student factors when selecting, implementing, and evaluating self-determination interventions for ELs with disabilities. EL students with disabilities who reported fewer self-determined behaviors, such as those with autism, girls, and younger students may need additional supports and accommodations to develop self-determination skills, as well as structured opportunities to practice these skills.

Additionally, working with families to reach shared understandings of self-determination and its role in the dominant view of adulthood might augment students' opportunities to practice related skills across settings and contexts. Recognizing potential cultural differences and how these are reinforced and expected at school is particularly important. Teachers can also benefit from listening to students and their families about the unique ways they are supporting self-

determination. When interactions with teachers and schools reflect professionals' knowledge and appreciation of students' backgrounds and the experiences of their family and community, culturally responsive practices (i.e., using students' language and culture to teach dominant group ways of transitioning into adulthood) can begin to make a much-needed shift to culturally sustaining practices (i.e., valuing and supporting students' and families' ideas and approaches to becoming an adult) in ways that expand the conceptualization of what it means to be self-determined (Paris, 2012). For example, teachers can both share information about independent living choices with transition-aged English learner students with disabilities and their families, and also support families who decide that their child with a disability will increase their independence skills, roles, and responsibilities within the family home into early adulthood.

Additionally, working with families to reach shared understandings of self-determination and its role in the dominant view of adulthood might augment students' opportunities to practice related skills across settings and contexts. Teachers can also benefit from listening to students and their families about the ways they are supporting self-determination. Recognizing potential cultural differences and how these are reinforced and expected at school is particularly important. Listening and expanding teachers' views of what counts as self-determination may also help educators avoid stereotypes. While researchers have found that some Latinx families may value interdependent/collective approaches to self-determination (Shogren et al., 2012), disability and economic background intersect with race/ethnicity and family support of self-determination may vary according to both additional sociodemographic indicators (Raftery et al., 2012). Employing a stance of cultural responsiveness in fostering self-determination requires that teachers really get to know the students and families with whom they are working to understand what the most salient aspects of their identities are the most influential during the transition

planning process. Such a stance includes providing cultural capital around all aspects of transition so that students and their families understand how self-determination is conceptualized and how it impacts transitions to adulthoods in U.S. contexts, with which some families may be unfamiliar. More than being responsive, though, Paris (2012) argues for culturally sustaining practices that also support resistance and resilience to marginalization and exclusion.

Researchers have identified strong linkages between parent and student expectations and postsecondary outcomes (Mazzotti et al., 2021). The current study identified that students who held higher expectations demonstrated higher levels of self-determined behaviors. ELs with disabilities and their parents may need additional support and information to consider postsecondary education a realistic option. Almost of half the parents of ELs with disabilities had not completed high school and may be less knowledgeable about college and the application process. Transition professionals will need to consider culturally and linguistically appropriate ways to provide information and support to ELs with disabilities and their families, so that they better understand postsecondary options, such as financial aid and postsecondary disability-related supports, to help raise parent and youth awareness and expectations. Considering the families' poverty levels of these students', a specific focus on financial strategies for covering the costs of postsecondary education is likely necessary.

The current study identified the relationship of social involvement and aspects of self-determination. Other researchers have demonstrated the importance of social engagement as a predictor of educational and employment outcomes (Mazzotti et al., 2021). Consideration should be given to incorporating social skills instruction when implementing self-determination interventions. Additionally, in their review of self-determination interventions, Wood and colleagues (2005) identified self-advocacy as an important component of self-determination.

Self-advocacy skills are particularly important when ELs with disabilities leave the secondary school setting and transition to employment and postsecondary education, where individuals are required to advocate for their own supports and accommodations. ELs with disabilities should be provided opportunities throughout their secondary school careers to make decisions, assume control, and should be encouraged and supported to empower themselves by learning the skills needed to advocate for themselves.

Conclusion

This study's exploration of the self-determination characteristics of English learners with disabilities found significant differences between their self-determination and that of their peers, including their being less likely to act autonomously or report empowerment behaviors. Additionally, this study identified several student and family characteristics associated with variations in aspects of self-determination for ELs with disabilities, including age, gender, disability category, and parent and student expectations for the student's postsecondary education attainment. These finding also highlighted implications for expanding research about English learner students with disabilities in ways that address linguistic and cultural diversity as interactional phenomena. Clearly, these student and family characteristics need to be considered when selecting, implementing, and evaluating self-determination interventions for these dually identified students.

References

Asmus, J., Carter, E. W., Moss, C. K., Biggs, E. E., Bolt, D. M., Born, T. L., Bottema-Beutal, K., Brock, M. E., Cattey, G. N., Cooney, M., Fesperman, E. S., Hochman, J. M., Huber, H. B., Lequia, J. L, Lyons, G. L., Vincent, L. B., & Weir, K. (2017). Efficacy and social validity of peer network interventions for high school students with severe disabilities. *American Journal on Intellectual & Developmental Disabilities, 122*(2), 118-137. https://doi.org/10.1352/1944-7558-122.2.118

Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: a practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society, Series B. 57(*1), 289–300. http://www.jstor.org/stable/2346101

Bronfenbrenner, U. (Ed.) (2005). *Making human beings human: Biological perspectives on human development*. Sage. https://doi.org/10.1080/10749030802186785

Burghardt, J., Haimson, J., Lipscomb, S., Liu, A. Y., Potter, F., Waits, T., Wang, S., Sekino, Y., & Silverberg, M. (2017). *National Longitudinal Transition Study 2012 design documentation* (NCEE 2017-4021). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance.

Burke, K. M., Raley, S. K., Shogren, K.A., Hagiwara, M., Mumbardo-Adam, C., Uyanik, H., & Behrens, S. (2018). A meta-analysis of interventions to promote self-determination for students with disabilities. *Remedial and Special Education, 1*, 1–13. https://doi.org/10.1177/0741932518802274

Burr, E., Haas, E., & Ferriere, K. (2015). *Identifying and supporting English learner students with learning disabilities: Key issues in the literature and state practice* (REL 2015-086). Institute of Education Sciences.

Cobb, B., Lehmann, J., Newman-Gonchar, R., & Morgan, A. (2009). Self-determination for students with disabilities: A narrative metasynthesis. *Career Development for Exceptional Individuals, 32*(2), 108–114. https://doi.org/10.1177/0885728809336654

Colby, S., & Ortman, J. (2015). Projections of the size and composition of the U.S. population: 2014 to 2060. *Current Population Reports* (P25-1143). U.S. Census Bureau.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum. https://doi.org/10.1007/978-1-4899-2271-7_2

Gothberg, J. E., Green, G., & Kohler, P. D. (2019). District implementation of research -based practices for transition planning with culturally and linguistically diverse youth with disabilities and their families. *Career Development for Exceptional Individuals, 42*(2), 77–86. https://doi.org/10.1177/2165143418762794

Harry, B., Kalyanpur, M., & Day, M. (1999). *Building cultural reciprocity with families*. Paul H. Brookes.

Klingner, J. K., & Eppolito, A. M. (2014). *English language learners: Differentiating between language acquisition and learning disabilities*. Council for Exceptional Children.

Lam, S., Wong, B. P. H., Yang, H., & Lui, Y. (2012). Understanding student engagement with a contextual model. In S. Christenson, A. L. Reshley, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 403–420). Springer.

Lipscomb, S., & Johann, A. (2017). *The characteristics and experiences of English learner students with disabilities in secondary school: Evidence from the National Longitudinal*

Transition Study 2012 (Working Paper No. 56). Mathematica Policy Research.

Mazzotti, V. L., Rowe, D. A., Kwiatek, S., Voggt, A., Chang, W., Fowler, C. H., Poppen, M., Sinclair, J., & Test, D.W. (2021). Secondary transition predictors of postschool success: An update to the research base. *Career Development and Transition for Exceptional Individuals, 44*(1), 1–18. https://doi.org/10.1177/2165143420959793

Michaels, C. A. & Ferrara, D. L. (2009) Promoting post-school success for all: The role of collaboration in person-centered transition planning. *Journal of Educational and Psychological Consultation, 16*(4), 287–313. https://doi.org/10.1207/s1532768Xjepc1604_4

Newman, L., Wagner, M., Knokey, A., Marder, C., Nagle, K., Shaver, D., & Wei, X. (2011). *The post-high school outcomes of young adults with disabilities up to 8 years after high school: A report from the National Longitudinal Transition Study-2* (NLTS2) (NCSER 2011-3005). SRI International.

Newman, L., Wagner, M., Huang, T., Shaver, D., Knokey, A, Yu, J., Contreras, E., Ferguson, K, Green, S., Nagle, K., & Cameto, R. (2011). *Secondary school programs and performance of students with disabilities: A special topic report from the National Longitudinal Transition Study-2* (NLTS2) (NCSER 2012-3000). SRI International.

Paris, D. (2012). Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational Researcher, 41*(3), 93–97. https://doi.org/10.3102/0013189X12441244

Petcu, S. D., Van Horn, M. L., & Shogren, K. A. (2017). Self-determination and the enrollment in and completion of postsecondary education for students with disabilities. *Career Development and Transition for Exceptional Individuals, 40*(14), 225–234. https://doi.org/10.1177/2165143416670135

Povenmire-Kirk, T. C., Lindstrom, L., & Bullis, M. (2010). De escuela a la vida adulta/From school to adult life: Transition needs for Latino youth with disabilities and their families. *Career Development and Exceptional Individuals, 33*(1), 41–51. https://doi.org/10.1177/0885728809359004

Raftery, J. N., Grolnick, W. S., & Flamm, E. S. (2012). Families as facilitators of student engagement: Toward a home-school partnership model. In S. Christenson, A. L. Reshley, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 343-364). Springer.

Rodriguez, R.J. & Cavendish, W. (2013). Differences in the relationship between family environments and self-determination among Anglo, Latino and female students with disabilities. *Career Development and Transition for Exceptional Individuals, 36*(3), 152–162. https://doi.org/ 10.1177/2165143412461524

Rowe, D. A., Mazzotti, V. L., Fowler, C. Y., Test, D. W., Mitchell, V. J., Clark, K. A., Holzberg, D., Owens, T. L., Rusher, D., Seaman-Tullis, R. L., Gushanas, C. M., Castle, H., Chnag, W., Voggt, A., Kwiatek, S. & Dean, C. (2021). Updating the secondary transition research base: Evidence- and research-based practices in functional skills. *Career Development and Transition for Exceptional Individuals, 44*(1), 1–19 https://doi.org/10.1177/2165143420958674

Shogren, K. A. (2011). Culture and self-determination: A synthesis of the literature and directions for future research and practice. *Career Development and Transition for Exceptional Individuals, 34*(2), 115-127. https://doi.org/10.1177/0885728811398271

Shogren, K. A. (2012). Hispanic mothers' perceptions of self-determination. *Research and Practice for Persons With Severe Disabilities, 37*(3), 170–184. https://doi.org/10.1177/2165143412461524

Shogren, K. A., Kennedy, W., Dowsett, C., Villarreal, M. G., & Little, T. D. (2014). Exploring essential characteristics of self-determination for diverse students using data from NLTS2. *Career Development and Transition for Exceptional Individuals, 37*(3), 168-176. https://doi.org/10.1177/2165143413486927

Shogren, K. A., Lee, J., Panko, P. (2017). An examination of the relationship between postschool outcomes and autonomy, psychological, empowerment, and self -realization. *The Journal of Special Education. 51*(2), 115-124. https://doi.org/10.1177/0022466916683171

Shogren, K. A., Villareal, M. G., Dowsett, C., & Little, T. D. (2016) Exploring student, family, and school predictors of self-determination using NLTS2 data. *Career Development and Transition for Individuals with Disabilities,. 39*(1), 23–33. https://doi.org/10.1177/0022466916683171

Shogren, K. A., Wehmeyer, M. L., Palmer, S. B., Forber-Pratt, Little, T. J., & Lopez, S. (2015). Causal agency theory: Reconceptualizing a functional model of self-determination. *Education and Training in Autism and Developmental Disabilities, 50*(3), 251–263. https://doi.org/10.1177/1534508418788168

Slama, R. B. (2012). A longitudinal analysis of academic English proficiency outcomes for adolescent English language learners in the United States. *Journal of Educational Psychology, 104*(2), 265–285. https://doi.org/10.1037/a0025861

Suárez-Orozco, C., & Suárez-Orozco, M. M. (1995). *Transformations: Immigration, family life, and achievement motivation among Latino adolescents.* Stanford University Press.

Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2019). Understanding teacher shortages: An analysis of teacher supply and demand in the United States. *Education Policy Analysis Archives, 27*(35), 1–37.https://doi.org/10.14507/epaa.27.3696

Trainor, A. (2005). Self-determination perceptions and behaviors of diverse students with LD during the transition planning process. *Journal of Learning Disabilities*, *38*(3), 233–248. https://doi.org/10.1177/00222194050380030501

Trainor, A. A. (2010). Reexamining the promise of parent participation in special education: An analysis of cultural and social capital. *Anthropology & Education Quarterly*, *41*(3), 245–263. https://doi.org/10.1111/j.1548-1492.2010.01086.

Trainor, A. A., Newman, L., Garcia, E., Woodley, H. H., Traxler, R. E., & Deschene, D. N. (2019). Postsecondary education-focused transition planning experiences of English learners with disabilities. *Career Development and Transition for Exceptional Individuals*, *42*(1), 43–55. https://doi.org/10.1177/2165143418811830

Trainor, A. A., Murray, A., & Kim, H. (2016). English learners with disabilities in high school: Population characteristics, transition programs, and postschool outcomes. *Remedial and Special Education*, *37*(3), 146–158. https://doi.org/10.1177/0741932515626797

U.S. Department of Education. (2013). *The condition of education 2013*. http://nces.ed.gov/pubsearch

U.S. Department of Education (2019). *The nation's report card 2019*. https://www.nationsreportcard.gov/reading/nation/groups?grade=8

Wagner, M., Newman, L., Cameto, R., Levine, P., & Marder, C. (2007). *Perceptions and expectations of youth with disabilities. A special topic report of findings from the National Longitudinal Transition Study-2 (*NCSER 2007-3006). SRI International.

Wehmeyer, M. L. (1992). Self-determination and the education of students with mental retardation. *Education and Training in Mental Retardation*, *27*(4), 302–314. https://doi.org/10.1023/A:1024981820074

Wehmeyer, M. L. (2000). *The Arc's Self-Determination Scale: Procedural Guidelines (Revised).* The Arc of the United States.

Wehmeyer, M. L., Abery, B., Mithaug, D. E., & Stancliffe, R. J. (2003). *Theory in self-determination: Foundations for educational practice.*. Charles C. Thomas Publisher.

Wehmeyer, M. L., Palmer, S. B., Shogren, K. A., Williams-Diehm, K. & Soukup, J. H. (2013). Establishing a causal relationship between interventions to promote self-determination and enhanced student self-determination. *The Journal of Special Education, 46*(4), 195–210. https://doi.org/10.1177/0022466910392377

Williams-Diehm, K., Wehmeyer, M. L., Palmer, S., Soukup, J. H. & Garner, N. (2008). Self-determination and student involvement in transition planning: A multivariate analysis. *Journal on Developmental Disabilities, 14*(1), 25–36.

Wood, W. M., Fowler, C. H., Uphold, N. & Test, D. W. (2005) A review of self-determination interventions with individuals with severe disabilities. *Research & Practice for Persons with Severe Disabilities, 30*(3), 121–146. https://doi.org/10.2511/rpsd.30.3.121

Zhang, D. (2005). Parent practices in facilitating self-determination skills: The influences of culture, socioeconomic status, and children's special education status. *Research and Practice for Persons with Severe Disabilities, 30*(3) 154–162. https://doi.org/10.2511/rpsd.30.3.154

Table 1

Demographic Characteristics of Secondary School English Learners with Disabilities, Other Students with Disabilities, English Learners in the General Population, and Other Students in the General Population

Characteristic	English learners with disabilities		All other students with disabilities		English learners in the general population		All other students in the general population	
	%	SE	%	SE	%	SE	%	SE
Male	63.67	3.53	66.98	1.10	48.98***	1.77	47.87***	1.91
Race/ethnicity								
Latinx	75.06	3.173	18.39***	0.91	73.68	5.70	21.41***	1.50
Black (not Latinx)	5.32	1.87	19.08***	0.89	5.26	3.51	14.55***	1.39
White	19.62	2.81	62.53***	1.12	21.05	5.00	64.04***	1.82
Disability category								
Autism	2.11	0.56	5.75***	0.30				
Deaf-blindness	0.02	0.01	0.02	0.01				
Emotional disturbance	5.55	1.09	9.68***	0.46				
Hearing impairment	1.95	0.40	1.15	0.09				
Intellectual disability	7.99	1.30	8.67	0.46				
Multiple disabilities	0.68	0.20	2.27***	0.14				
Orthopedic impairment	1.16	0.24	0.90	0.08				
Other health impairment	8.50	1.56	15.75**	0.69				
Specific learning disability	62.01	3.18	48.76***	1.18				
Speech or language impairment	4.62	0.77	3.97	0.22				

Characteristic	English learners with disabilities		All other students with disabilities		English learners in the general population		All other students in the general population	
	%	SE	%	SE	%	SE	%	SE
Traumatic brain injury	0.27	0.11	0.52*	0.06				
Visual impairment	0.43	0.15	0.43	0.05				
Parent highest education level is less than high school	47.78	3.71	12.16***	0.75	22.99***	5.55	9.08***	1.00
Household income 1% to 185% of poverty level (qualify for free and reduced-price lunch)	83.59	2.69	54.35***	1.16	79.87	4.67	40.63***	1.87
School academic performance in lowest or second lowest state quarter	66.86	3.29	51.72***	1.01	74.5	6.90	45.51***	1.57
Urban school	40.55	3.50	26.90***	0.98	35.30	5.85	25.96***	1.62
Unweighted N	350		3,760		90		1250	

Note: All comparisons with English learners with disabilities. % = percent, SE = standard error. Percentages are weighted population estimates. Unweighted sample was size rounded to nearest 10, as required by the Institute of Education Sciences, U.S. Department of Education, for restricted-use data sets. SOURCE: U.S. Department of Education, National Center for Education Evaluation, National Longitudinal Transition Study 2012 (NLTS 2012).

* $p <. 05$; ** $p <. 01$; *** $p <. 001$

Table 2

Self-Determination Characteristics of Secondary School English Learners with Disabilities, Other Students with Disabilities, English Learners in the General Population, and Other Students in the General Population

	English learners with disabilities		All other students with disabilities		English learners in the general population		All other students in the general population	
Self-determination subscale	%	SE	%	SE	%	SE	%	SE
Autonomy subscale								
When youth have the chance, they never:								
Choose activities to do with friends	9.15	2.26	7.48	0.70	4.85	2.24	2.71*	0.69
Write letters, texts, or talks on phone to friends/family	11.66	2.36	6.94	0.55	7.29	3.42	3.20**	0.65
Go to restaurants they like	13.58	3.00	5.90*	0.55	10.20	3.81	4.27*	0.73
Choose gifts for family/friends	13.76	2.67	7.62	0.62	3.31*	2.23	4.04***	0.84
Go to movies, concerts, dances	24.67	3.46	14.67*	0.86	20.96	5.75	7.89***	1.00
Plan weekend activities	16.19	2.80	10.17	0.75	5.10*	2.23	4.38***	0.67
Volunteer	28.54	3.46	21.34	1.00	18.52	4.99	12.46***	1.18
Mean personal autonomy scale score (scale range 0 – 21)	10.34	0.32	11.54**	0.10	10.81	0.48	12.44***	0.14
Empowerment subscale								
Believes trying hard in school helps get a good job	88.07	2.87	89.60	0.73	98.09*	1.90	93.37	0.86

Self-determination subscale	English learners with disabilities		All other students with disabilities		English learners in the general population		All other students in the general population	
	%	SE	%	SE	%	SE	%	SE
Keeps trying even after getting something wrong	95.88	1.27	93.31	0.59	99.27	0.70	95.43	0.87
Knows how to make friends	94.74	1.37	92.33	0.65	99.95**	0.05	96.96	0.55
Knows how to make good choices	90.98	2.42	95.04	0.55	100.00**	0.00	97.09*	0.55
Able to make choices that are important to them	94.83	1.31	95.48	0.47	98.81*	1.19	97.31	0.65
Able to make friends in new situations	87.47	2.21	86.30	0.81	84.41	6.56	92.13	1.07
Youth tells people when s/he can do things others cannot	84.78	2.46	88.40	0.81	87.65	4.49	91.93*	0.99
Mean empowerment scale score (scale score range 0 – 7)	6.39	0.06	6.41	0.03	6.70*	0.09	6.64***	0.03
Self-realization subscale								
Knows what they do best	96.72	1.07	94.83	0.59	95.63	2.09	93.03*	0.95
Likes themself	95.12	1.31	94.83	0.55	98.67	0.96	94.83	0.88
Confident in own abilities	95.02	1.31	92.05	0.66	98.67*	0.96	91.89	0.97
Liked by others	93.95	1.43	91.38	0.68	96.10	2.36	94.83	0.84
Believes better to be yourself than to be popular	95.25	2.23	95.77	0.49	95.58	2.81	97.77	0.52

Self-determination subscale	English learners with disabilities		All other students with disabilities		English learners in the general population		All other students in the general population	
	%	SE	%	SE	%	SE	%	SE
Knows how to make up for own limitations	89.03	2.16	89.58	0.74	96.43*	1.92	92.88	0.92
Feels loved because gives love	90.49	1.99	92.13	0.65	91.46	5.38	93.75	0.93
Mean self-realization scale score (scale range 0 – 7)	6.57	0.06	6.51	0.02	6.73	0.07	6.59	0.03
Unweighted N	350		3,760		90		1,250	

Note: All comparisons with English learners with disabilities. % = percent, SE = standard error. Percentages are weighted population estimates. Unweighted sample was size rounded to nearest 10, as required by the Institute of Education Sciences, U.S. Department of Education, for restricted-use data sets. Items from the autonomy subscale of The Arc's Self-Determination Scale (Wehmeyer, 2000).
SOURCE: U.S. Department of Education, National Center for Education Evaluation, National Longitudinal Transition Study 2012 (NLTS 2012).

*p <. 05; ** p <. 01; *** p <. 001

Table 3

Factors Related to Self-Determination Subscales for English Learners with Disabilities

	Autonomy		Empowerment		Self-Realization	
	β	SE	β	SE	β	SE
Student characteristics						
Age	0.00	0.04	0.04	0.07	0.11*	0.05
Girls vs Boys	0.04	0.12	-0.44**	0.18	-0.18	0.12
Black vs Latinx	-0.04	0.24	0.12	0.30	0.20	0.15
White/Asian/Other vs Latinx	0.27	0.17	0.15	0.22	0.19	0.13
Student's postsecondary education expectations	-0.00	0.03	0.08	0.06	0.13**	0.05
Disability-related factors						
Learning disability comparison category						
Autism	-0.07	0.45	-1.43**	0.49	-1.26*	0.56
Emotional disturbance	0.04	0.14	-0.10	0.28	-0.60	0.47
Intellectual disability	0.08	0.17	-0.38	0.36	-0.31	0.30
Sensory impairment	-0.21	0.13	-0.30	0.21	-0.21	0.14
Speech language impairment	-0.06	0.17	-0.21	0.18	-0.03	0.12
Other disability category	0.21	0.12	-0.37	0.23	-0.21	0.17
Daily living skills index	0.06	0.07	0.10	0.10	0.19	0.08
Family characteristics						
Head of household's level of education	0.06	0.04	0.08	0.06	0.01	0.04
Household income	-0.07	0.09	-0.08	0.11	-0.01	0.08
Parent postsecondary expectations	0.06	0.04	0.15*	0.07	0.01	0.05
Parent talks with student about school	-0.02	0.06	0.06	0.9	0.11	0.06
School & social related factors						

	Autonomy		Empowerment		Self-Realization	
	β	SE	β	SE	β	SE
Schools' academic performance quartile	-0.07	0.06	0.00	0.08	-0.08	0.07
Participation in extracurricular activities	0.03	0.10	0.05	0.17	0.09	0.10
Ever suspended or expelled	0.17	0.11	-0.17	0.20	-0.23	0.14
Frequency of seeing friends	0.11***	0.03	0.07	0.05	0.02	0.03
Intercept	0.81	0.67	4.57***	1.12	4.22***	0.83
R^2	0.21		0.22		0.26	
N	230					

Note: β = regression coefficient; SE = standard error. Unweighted sample size numbers are rounded to the nearest 10 as required by the restricted data use agreement with the U.S. Department of Education. Self-determination subscales from The Arc's Self-Determination Scale (Wehmeyer, 2000). SOURCE: U.S. Department of Education, National Center for Education.

*p < .05, **p < .01, ***p < .001