

Positive Psychology and Secondary Transition for Children with Disabilities: A New Theoretical Framework

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Abstract

In spite of modest improvements in some transition outcomes over the past several years, students with disabilities still have poorer outcomes on every measure of transition when compared to their nondisabled peers. Self-determination approaches, while promising, have not been enough to leverage these students to achieve comparable postsecondary outcomes. We examine the construct of self-determination and suggest that it is at least partially comprised of three discrete psychological variables: mindset, grit and optimism. We distill the latest research findings regarding these three variables and link them theoretically to the construct of self-determination. We then propose a new theoretical framework of transition that includes these variables and suggests future avenues of research to encourage a positive psychology-driven reconceptualization of transition.

Key Words: Positive psychology, Self-determination, Transition special education

In the field of special education, an important domain and focus of programming throughout the secondary years (e.g., 6th – 12th grades) is on “transition.” Transition, according to the federal special education law IDEA 2004, is “a coordinated set of activities for a child with a disability that is ... focused on improving the academic and functional achievement of the child with a disability to facilitate the child’s movement from school to post-school activities...” including college/university education, employment,

community participation and independent living [34 CFR 300.43(a)] [20 U.S.C. 1401(34)]. This is a critical part of the work we do with children with disabilities, because adult life after high school is significantly different than K-12 experiences. This is true for *all* emerging adults; however, especially young adults with disabilities can face unique challenges in postsecondary settings that can have profound effects on the rest of their adult lives and outcomes.

However, the successful transition of students with disabilities to postsecondary

life continues to be a challenge for the field of special education. After high school, youth with disabilities are at-risk to experience unemployment, under-employment, lack of college participation and poor quality of life (Newman et al., 2011). Transition programming and practices have focused primarily on preparing students to use employment and academic skills, as well as skills in planning, decision-making, and self-advocacy to facilitate and enhance post-secondary outcomes (Kohler & Field, 2003; Loman, Vatland, Strickland-Cohen, Horner, & Walker, 2010). While these foci are appropriate to support successful transition, longitudinal outcome data suggest that these areas of focus simply have not been enough to aid students with disabilities in achieving outcomes comparable to their nondisabled peers. On average, when compared to their nondisabled peers, students with disabilities have below average academic achievement, low regular diploma graduation rates, and significantly worse post-secondary education employment, and community participation outcomes (Newman et al., 2011; Sanford et al., 2011). In short, an unacceptable gap persists in postsecondary outcomes for students with disabilities.

Transition Outcomes of Students with Learning Disabilities (LD) and Emotional Disabilities (ED).

Of the population of U.S. students aged 3-21 years served in special education, those with LD make up 35% and those with ED, 6% (Cortiella & Horowitz, 2014). According to data from the National Longitudinal Transition Survey -2 (NLTS2; Newman et al., 2011), these students continue to experience notably poor postsecondary outcomes across a number of critical indicators when compared to their nondisabled peers.

Earning of regular high school diplomas.

The Adjusted Cohort Graduation Rate (ACGR), required by a 2008 federal regulation issued by the U.S. Department of Education, now compels states to report graduation data using a uniform metric intended to provide more valid data for between and within state comparisons. Although this metric does not require states to break out graduation rates by specific disability category, it does require that states report data for ‘students with disabilities.’ According to these latest data (from 2012), nationally, while 80% of ‘all students’ earned regular high school diplomas in four years, only 61% of students with disabilities did so (Stetser & Stillwell, 2014), (although at vastly discrepant rates across states).

Other graduation rate data are available to provide a rough disability category-specific estimate of the rate of regular high school graduation for students with LD and ED. The best national estimate of regular high school diploma attainment by students with LD is 68% (Cortiella & Horowitz, 2014). For students with ED, older estimates of graduation rates place completion rates at approximately 40%, suggesting that over half of students with ED never achieve a regular high school diploma (National Center on Inclusive Education, 2014). Other data suggest that approximately 80% of students with ED “complete” high school, but these statistics consider “completion” as leaving high school with a diploma *or* a non-diploma certificate of completion (Wagner & Newman, 2012).

Dropout rates. Dropout rates are now calculated using a metric similar to the ACGR to garner more accurate counts of students who leave school (Cortiella & Horowitz, 2014). Students with disabilities are at approximately twice the risk for

dropping out of school as their nondisabled peers (Thurlow, Sinclair, & Johnson, 2002). During the 2008-2009 school year, students with disabilities dropped out at a national rate of 13% (Thurlow & Johnson, 2011). Students with ED, who continually demonstrate the highest dropout rate of all disability categories (Smith & Routel, 2010), dropped out that year at a rate of 20.7%, while students with LD had a national dropout rate estimated at 14.7% that year (Thurlow & Johnson, 2011).

Postsecondary employment. The postsecondary employment outcomes of students with disabilities indicate an unacceptably high rate of unemployment and underemployment. Among working age adults with LD, statistics on the rates of employment vary with estimates of 79% of students with LD holding postsecondary employment at the point of NLTS2 interview (Sanford et al., 2011) to the more dismal estimate of 46% among young adults with LD (Cortiella & Horowitz, 2014). Cortiella and Horowitz (2014) also report that earnings remain low for this group, with 67% of working adults with LD earning less than \$25,000 per annum. Additional data from the NLTS2 suggest that only 65% of young adults with ED have paid employment after leaving high school (Sanford et al., 2011).

Enrollment in and completion of postsecondary education. Overall, students with disabilities do not participate in postsecondary education at the same rate as their nondisabled peers. Furthermore, they are less likely to access four-year colleges and universities and more likely to enroll at two-year institutions (Cortiella & Horowitz, 2014; Sanford et al., 2011; Wagner & Newman, 2012). Recent estimates suggest that 61-67% of students with LD accessed some form of postsecondary education

within eight years of leaving high school, a rate comparable to that of students without disabilities (Sanford et al., 2011). However, the college completion rate of young adults with LD is 41% compared to the 52% completion rate of young adults in the general population (Cortiella & Horowitz, 2014). Depending on estimates, between 21-45% of percent of students with ED have had some form of postsecondary education, and of those, about 40% completed their postsecondary education (attained a degree) within six years of leaving high school (Sanford et al., 2011; Wagner & Newman, 2012). Overall, of the 63% of students with disabilities who enrolled in some type of postsecondary education, only 38% had completed their postsecondary education at six years post high school (Sanford et al., 2011). Compared to the 52% postsecondary completion rate of young adults without disabilities (Cortiella & Horowitz, 2014), this is a significant and disappointing gap.

Social outcomes. Students with disabilities do not have social and community outcomes comparable to their nondisabled peers. Involvement with the criminal justice system is a major concern. Overall, students with disabilities are at a far higher risk of incarceration, with 23% having been arrested at some point (nearly double the 12% arrest rate for their nondisabled peers) and 13% having been on probation or parole (Sanford et al., 2011). Specifically, students with ED are far more likely than nondisabled peers and other peers with disabilities to live in criminal justice or mental health facilities or on the street (Wagner et al., 2005) and have far higher rates of involvement with the criminal justice system: 60.5% have been arrested and 44.2% have been on probation or parole (Wagner & Newman, 2012). The arrest rates of students with disabilities *who dropout* is truly alarming – 73% for students with ED

and 62% for students with LD (Thurlow, Sinclair, & Johnson, 2002). In short, the transition outcomes of students with LD and ED are significantly worse than those of their nondisabled peers. These outcome data necessitate an honest review and reflection about how the field of special education addresses transition for students with learning disabilities as well as earnest attempts to identify additional approaches to address this gap in outcomes.

Addressing the Gap: An Emerging Interdisciplinary Landscape **What is Positive Psychology?**

Positive psychology is a recently emerging branch of psychology which aims to engage the “scientific study of what goes right in life, from birth to death and all the stops in between...and that takes seriously those things in life that make life most worth living” (Peterson, 2006, p. 4). The Positive Psychology Center at the University of Pennsylvania, headed up by Dr. Martin Seligman, defines positive psychology as “...the scientific study of strengths and virtues that enable individuals and communities to thrive” (2007, p. 1). The field of positive psychology encompasses the study of personal emotions and traits linked to enhanced well-being and positive life outcomes, as well as investigation of the role of institutions (including schools) in helping individuals not just survive, but flourish (University of Pennsylvania, 2007). This naturally dovetails with transition efforts in that both fields seek to promote positive outcomes in arenas of life related to well-being and successful adult functioning.

Recent research in the field of positive psychology has revealed several factors correlated to optimal life outcomes and well-being, including constructs such as hope, optimism, grit, and the cultivation of

inherent strengths (Isaacowitz, Vaillant, & Seligman, 2003; Peterson, Park, Seligman, 2005; Seligman, 2002; Seligman, Reivich, Jaycox, & Gillham, 2007). This research has uncovered fascinating associations between several distinct psychological constructs and positive life outcomes, and additional research has suggested that many of these constructs are malleable (Dweck, 2006; Paunesku et al., 2015; Seligman, et al. 2007). However, the vast majority of these studies focus on adult populations: those focused specifically on children and youth are in the early stages of development with research focused on children and youth *with disabilities* even less developed (Huebner, Gilman, & Furlong, 2009). The translation and application of positive psychology findings to the field of special education has yet to be explored and holds great promise to enhance transition efforts for students with disabilities.

The Intersection of Positive Psychology and Disability Studies.

American schools have experienced criticism for a number of issues, not the least of which is the concern that schools “focus disproportionately on identifying and remediating students’ weaknesses while neglecting the identification and nurturing of their strengths” (Huebner, et al., 2009, p. 3). This is analogous to the traditional model employed in the field of clinical psychology in which individuals are diagnosed with mental illness based on the presence of pathological psychological symptoms and impaired functioning. In the traditional applied clinical psychology approach, practitioners employ directed interventions aimed at decreasing the presence of pathological symptoms to facilitate improved performance in various functional domains (American Board of Professional Psychology, 2015). In much the same way,

special education practitioners employ evidence-based interventions to address areas of difficulty for students with disabilities to improve their performance across identified domains (e.g., academic, social, behavioral) and related outcomes.

In contrast, the ascending field of positive psychology requires a fundamental paradigm shift in that it seeks to scientifically study and illuminate optimal human functioning and includes the systematic, scientific examination of positive human functioning and well-being (see Diener & Seligman, 2002; Isaacowitz et al., 2003; Peterson, Park, & Seligman, 2005; Seligman, 2011; Von Culin, Tsukayama, & Duckworth, 2015). It has only been very recently that positive psychology frameworks have been applied to the broad field of disability studies. December 2013 saw the first publication of an edited volume to marry these two topics: *The Oxford Handbook of Positive Psychology and Disability* (Wehmeyer, 2013). The editor of the volume frankly notes: “Put bluntly, across history, people with disabilities have not been viewed in the context of strengths and capacities...the literature in the field of disability has not been strengths-focused, and the literature in the field of positive psychology has not addressed disability” (Wehmeyer, 2013, p. 3). However, there is a growing interest among researchers in both of these fields to understand the construct of disability from a positive psychology framework and to consider the recognition and cultivation of positive characteristics and strengths in persons with disabilities. Similarly, an approach predicated on positive psychology constructs has the potential to enrich the 21st century field of special education into one that augments remediation of weaknesses with psychometrically sound approaches to

cultivating positive psychological orientations in students with disabilities.

Transition and Self-Determination

In an effort to address poor transition outcomes for students with disabilities, a number of programs, practices and approaches have been investigated in the field of special education to improve our understanding of factors associated with a successful transition for students with disabilities. Certainly there is an important body of research detailing evidence-supported ways for special educators to facilitate improved outcomes for students with disabilities. For example, career-related work experiences have been linked to higher graduation rates (Benz, Lindstrom, & Yovanoff, 2000). Also, interagency collaboration and collaborative service delivery across agencies has been linked to improved postsecondary service provision and the attainment of transition goals (Devlieger & Trach, 1999; Kohler, 1998; Kohler & Field, 2003). Historically, in an effort to promote improved transition outcomes, the field of special education has focused not only on improvement of academic skills, attainment of employment skills, and training in functional life skills, but also instruction in skills associated with *self-determination*, including self-advocacy skills, planning, problem-solving and decision-making (National Secondary Transition Technical Assistance Center (NSTTAC), 2014; Sanford et al., 2011). This construct of self-determination is an area that has received considerable attention and is now considered a gold standard in the transition special education landscape.

A number of self-determination interventions have been shown to increase self-determination (see Loman et al., 2010 for a useful review), and important work

relating the degree of self-determination to transition outcomes has emerged from the work of seminal researchers in the field (e.g., Field & Hoffman, 2007; Morningstar et al., 2010; Shogren Wehmeyer, Palmer, Rifenbark, & Little, 2013); Shogren et al., 2015; Wehmeyer & Field, 2007). In short, most research in this area suggests that the more self-determined a student with a disability is, the better his or her transition outcomes. However, even in the context of this good work, the observed modest improvements in some transition outcomes are not leveraging students with disabilities to achieve outcomes comparable to their nondisabled peers (see Newman et al., 2011).

A number of factors likely play a role in the continually poorer transition outcomes for students with disabilities, and it is critical that we understand the variables both endogenous to the individual as well as those exogenous that are germane to transition issues. However, for the purposes of our efforts to examine and specifically address the endogenous, cognitive aspects of self-determination, the confluence of several important advancements in the fields of disability studies and positive psychology may offer a new framework from which to develop approaches that may lead to more comprehensive and effective intervention. Indeed, notably absent from much of special education transition research are investigations of constructs recently identified in the field of positive psychology and linked to the transition/life outcomes we hope to encourage and promote in students with disabilities. An exception to this omission is the work of Wehmeyer (e.g., 2013) and Shogren and colleagues (e.g., 2015) to be reviewed shortly).

The Evolution of the Self-Determination Construct

In September of 1989, the Office of Special Education Programs (OSEP) put out a call for model demonstration projects to investigate the skills necessary for self-determination (Ward, 2005). This important work propelled forward the scientific investigation of self-determination for individuals with disabilities. Several important models emerged out of this early 1990s work.

This variety of research teams, their heterogeneous theoretical orientations and frameworks, and their continual refinement of the self-determination construct and associated practice have resulted in several different theories and models of self-determination and a broad construct that has been conceptualized in a variety of ways. One important detail that has been investigated in the literature is the interaction between individual variables endogenous to the individual and external environmental variables as they relate to self-determination. An individual's knowledge of and skill set in, for example, self-advocacy skills is an important variable in his degree of self-determination. However, the environmental variables of "parenting style" or "classroom procedures" will interact with this endogenous one and certainly influence the degree to which it can be expressed, practiced and developed (Soenens & Vansteenkiste, 2005).

Refining the self-determination construct.

Attention to both endogenous and exogenous variables is important to continue moving this important work forward. However, for the purposes of our current work, we believe it is time to revisit our approach to the cultivation of endogenous variables involved in self-determination. We

believe this to be true for a number of reasons. First, historically, the field has investigated specific programs and/or curricula that can be used to teach specific self-determination skills and skill subsets (Ward, 2005; Wehmeyer, Palmer, Shogren, Williams-Diehn, & Soukup, 2012). The teaching of skills is important, but evidence from cognitive-behavioral psychology suggests that the cognitions underlying behaviors are critically important to the cultivation, development and refinement of target behaviors. In short, if we want to promote self-determined behaviors in individuals with disabilities, it would behoove us to directly address the cognitions and psychological orientations related to those behaviors. Secondly (and related), there are some limited data suggesting that the beliefs (or ‘cognitions’ in the psychological sense of the word) of students with high incidence disabilities may be different than those observed in their typically developing peers. For example, there is preliminary evidence that students with learning disabilities believe that their intelligence is fixed and that because they have a disability there are some things (e.g., math) that they just cannot do (e.g., Baird, Scott, Dearing & Hamill, 2009; May & Stone, 2010). Considering the likely interactions between beliefs, self-determined behaviors, and eventual transition outcomes, it is important that we, as a field, direct our attention to this issue. Another reason, we believe, we must revisit our approach to the endogenous variables involved in self-determination is related to the emerging field of positive psychology. This field challenges us to think about how endogenous variables are related not to just “better” outcomes but “optimal” outcomes. The systematic investigation of variables that promote well-being and which are directly related to positive adult outcomes allows us to broaden our focus in transition

special education beyond the historical focus on, for example, independent living or postsecondary employment, and instead extend our focus (and thus, implicitly, our expectations) to the cultivation of well-being, flourishing, and thriving in the transition outcomes of individuals with disabilities.

The current model of self-determination that is most specific to these ideas is the functional model of self-determination delineated by Shogren and colleagues. In line with recent developments in positive psychology and disability studies, Shogren and colleagues (2015) have revisited the construct of self-determination and offered an enhanced functional model of self-determination situated in a framework based explicitly on positive psychology constructs and causal agency theory. This latest iteration of the functional model clearly refocuses the construct of self-determination on psychological theories of motivation (as it was focused in Deci’s and Ryan’s original seminal work in the 1980s) rather than as a personality construct (Shogren et al., 2015).

Although an in-depth analysis of this most recent iteration of the functional model of self-determination is beyond the scope of this article, Shogren et al. offer an exceptionally comprehensive and lucid treatment of the topic in their 2015 article. Several key elements of the model, reviewed below, are critical to the theoretical and conceptual framework shaping our present call to action in the field. This model situates the concept of self-determination firmly in causal agency theory (Shogren et al., 2015). This theoretical orientation is rooted in humanistic and motivational psychology theory and places the individual in the role of an ‘agentic person,’ one who is the agent (or actor) of their own actions, constructs and adjusts their self-generated

goals, persists in challenging endeavors, and learns from failure (Shogren et al., 2015). Thus, embedded in this theory and model of self-determination are the abilities of the individual to reflect on actions, interpret feedback, adjust responses, and self-monitor, all of which result in an individual orientation of empowerment which is moderated by the demands of the environment (including its supports and hindrances; Shogren et al., 2015). Therefore, this approach to “...self-determination requires an explicit focus on the interface...” between the individual’s agency and the features of their environmental context (Shogren et al., 2015, p. 256). Consequently, this iteration of functional self-determination theory incorporates new essential characteristics that focus on volitional and agentic *action* rather than the more narrowly focused *behavioral* elements in the prior functional model (Shogren et al., 2015).

This critical distinction between an action-focus and a behavioral-focus is of great importance in terms of how we think about self-determination and the transition outcomes related to it. Action is a broader construct than behavior. In the field of psychology, action is thought of as the contextualization of behaviors in terms of the cognitions and motivations which drive them (see Gollwitzer & Bargh, 1996). Therefore, we cannot address self-determination without considering the psychological components of cognition and motivation related to individuals’ behaviors. Considering the evidence of a relationship between self-determination and transition outcomes, we believe that it is crucial to consider this psychologically contextualized notion of agentic action if we want to thoroughly understand the relationship between the self-determination of students with disabilities and their transition outcomes. We further speculate that recently

identified and investigated positive psychology constructs, which very clearly overlap with cognitive and motivational constructs, may be directly related to agentic action, self-determination, and transition, and may reveal themselves as crucial malleable factors in the work we seek to do in transition special education. However, these constructs have not been explicitly addressed in the transition special education literature.

Construct overlap: Teasing out specific components of a construct. Therefore, it is our contention that because of “construct overlap,” a number of constructs in the field of positive psychology may actually critically inform, moderate, mediate, or otherwise relate to the construct of self-determination in individuals with disabilities. The evidence that self-determination is related to transition outcomes is clear. However, outcomes still fall far short of what we want them to be. Perhaps they fall short because the current focus on self-determination (and the curricula developed to teach it), while peripherally addressing some critical related psychological variables, are not directly addressing the most fundamental aspects of the motivational psychology underlying self-determination. In short, we suggest that we might enhance transition outcomes for students with high incidence disabilities through a more direct approach that clearly addresses psychological constructs which are embedded in self-determination theory (and related self-determination interventions and assessments) but that have been only obliquely, if at all, addressed in transition special education and self-determination efforts.

Upon review of the positive psychology literature, outcome data for students with disabilities, and reflection on the latest

iteration of the functional model of self-determination, we have narrowed our current focus to three variables, clearly associated with cognitive and motivational psychology constructs, which we believe: 1) are distinct variables related to positive transition outcomes and underlying the broad construct of self-determination, 2) hold great promise as components of a more comprehensive conceptual framework for transition efforts, and 3) should be meaningfully integrated into our professional dialogue and systematically investigated. These three positive psychology variables are mindset, grit, and optimism.

Positive Psychology Variables Associated with Self-Determination

Mindset

The roles of motivation, academic self-efficacy, and cognitive self-regulatory processes have been examined in the psychological literature for several decades (Bandura, 1993; Blackwell, Trzesniewski, & Dweck, 2007; Bouffard-Bouchard, Parent, & Larivee, 1991; Dweck and Leggett, 1988; Zimmerman, 2000). Emerging from the psychological literature on motivation, Dweck and colleagues (2006) have developed the concept of ‘implicit theories of intelligence,’ often referred to as ‘mindset.’ (It is important to note: these ‘theories of intelligence’ as defined by Dweck and colleagues are not related to general theories of intelligence (e.g., *g*) as defined by Spearman or other psychologists who study the construct of I.Q.) Children generally subscribe to one of two theories of intelligence, but these theories are ‘implicit’ because many children are not consciously aware of them. One view emphasizes intelligence as ‘fixed’, an inherent trait that is stable and not amenable to change. This is

known as a “fixed” or “entity” mindset. The other view is that intelligence is changeable and can demonstrate growth in response to experiences and effort, known as a “growth” or “incremental” mindset (De Castella & Byrne, 2015; Dweck, 2006). The implicit theories of intelligence a child holds have not been found to be related to their measured intelligence quotient (Ablard & Mills, 1995), but *are* associated with their motivational patterns in challenging learning situations and associated learning goals (Baird et al., 2009). On average, children who have a fixed mindset are more likely to pursue *performance* goals, which allow them to display their competence and receive positive evaluations from others and avoid any display of incompetence, which might result in negative evaluations (Baird et al., 2009; De Castella & Byrne, 2015). In contrast, children who subscribe to a growth mindset tend to pursue *learning* or *mastery* goals in which they tackle challenging situations with the goal of developing skills and increasing competencies, even if this pursuit will require initial failure or difficulty (Baird et al., 2009; Blackwell, et al., 2007; Chen & Pajares, 2010; De Castella & Byrne, 2015). Further research in this area has indicated that these implicit theories and their associated motivational patterns are clearly linked to students’ academic outcomes including grades, academic achievement test scores, underachievement, and levels of engagement or disengagement (De Castella & Byrne, 2015).

A recent psychological study on cognitive self-regulatory processes of secondary students included a measure of implicit theories of intelligence and goal orientation for a sample of students with LD in 6th-12th grade (Baird et al., 2009). The researchers found that, compared to their nondisabled peers, these students were more likely to hold an entity theory of intelligence, pursue

performance rather than mastery goals, and interpret their struggle with academic tasks as indicating low ability rather than an opportunity to learn new skills (Baird et al., 2009). This finding mirrors conclusions from a very small contingent of earlier studies in which elementary students with LD were found to be far more likely to hold an entity theory of intelligence when compared to their peers without disabilities (Heyman, 1990; Meese, 1987; Rothman & Cosden, 1995), and one study in which this was also true for college students (May & Stone, 2010). These small studies provide important preliminary evidence that the mindset of students with disabilities may be a unique risk factor associated with poor academic outcomes and motivational states.

Implications for future study The implications of these findings for students with LD (and we suspect other disability categories) and the importance of further investigating these findings are plain to see. However, a thorough exploration of the associations between these constructs is warranted before the field undertakes the development of interventions. For example, it is possible (perhaps likely) that ‘mindset’ is related to additional outcome variables of interest for students with disabilities beyond grades and achievement, such as engagement in school, high school graduation, and the pursuit of post-secondary education. Recent research on students without disabilities (De Castella & Byrnes, 2015) suggests that students who have fixed mindsets (observed to be more likely in students with learning disabilities) are more likely to be truant, avoid academic challenges, and eventually give up on school. We cannot help but suspect that children with LD as well as ED, may be particularly vulnerable to this. Furthermore, we suspect mindset is robustly associated with the degree to which a child is self-

determined, a construct strongly associated with successful transition.

Grit

Grit has emerged as a construct of interest in broader educational conversations and research. Grit has been conceptualized as persistence or perseverance, even in the face of intense difficulty, failure or sacrifice, for a goal that may only pay off far into the future (Duckworth, Peterson, Matthews, & Kelly, 2007). Duckworth and colleagues have investigated the correlations between grit and successful adult outcomes (see Duckworth & Eskreis-Winkler, 2013; Duckworth et al., 2007; Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2010; Robertson-Kraft & Duckworth, 2014) and have found, for example, that the degree of grit an individual possesses predicted the retention rate among West Point cadets in challenging classes, and overall college G.P.A in Ivy League undergraduates *above and beyond I.Q.* (Duckworth, et al., 2007). Indeed, across multiple investigations, they have found that the degree of ‘grit’ an individual displays is more highly correlated with positive life outcomes than intelligence or academic achievement (Duckworth & Eskreis-Winkler, 2013). The transition outcomes of students with disabilities (including attendance rates, graduation rates, academic achievement, postsecondary employment, and college enrollment) are directly related to the life outcomes Duckworth and colleagues have associated with grit. Furthermore, the construct of grit is also reflected in Shogren and colleagues’ reconceptualization of the construct of self-determination, although it is not explicitly identified as such (2015).

Implications for future study Grit can be defined broadly as persistence in the face of difficulty and is related to the psychological construct of motivation. Specifically, the

construct is logically connected to motivational styles and associated behaviors and, we suspect, is particularly relevant for children with disabilities. For instance, they are likely to encounter challenges and setbacks in their pursuit of academic goals, content mastery, attendance, and/or graduation. Thus, it is logical to speculate that grit may be a mediating or moderating variable on these transition outcomes. Furthermore, it is important to consider how the construct of grit is related to and/or overlaps with the construct of 'mindset.' Duckworth and colleagues have found a moderate correlation between grit and growth mindset in school-age children (Duckworth & Eskreis-Winkler, 2013). These constructs appear to be intimately related, but the relationships are unclear to date, as empirical investigations of them are just getting underway. These preliminary findings lead us to wonder if these findings would be replicated in a sample of children with disabilities.

Optimism

Optimism is a construct with initial roots in philosophy and later roots in the field of general psychology. As the construct evolved, it came to be understood as a dispositional orientation related to either expectancy (e.g., proactively framing what people came to expect of their experiences) and/or a coping explanatory process (e.g., a reactive disposition used to explain the cause of events and promote a coping response; Boman, Furlong, Shochet, Lilles, & Jones, 2009). In a similar vein, Seligman (2006) has suggested that optimism can encompass both expectancy and explanatory processes, and is evidenced when an individual possesses a sense of confidence and personal ability in their approach to problems and setbacks. Thus, extending beyond the layman's notion of optimism as

a "sunny disposition," the positive psychology-based conceptualization of optimism refers to a life orientation in which one conceives of adversity as temporary and changeable. Considering the struggles children with disabilities encounter in daily life, and the long-term difficulties they face in their transition to adult life, it is important to understand the potential role of optimism in their outcomes.

Optimism has been linked to important adjustment measures and outcomes. For example, it is linked to better coping in school-related challenges (Boman & Yates, 2001) and inversely correlated with hostility toward school and destructive expressions of anger at school (Boman, Smith & Curtis, 2003). Other research has suggested that optimism is inversely correlated to risky behaviors in adolescent populations, including alcohol use, substance use, violent behavior, and risky sex (Carvajal, Garner, & Evans, 1998). All of these variables are part of the equation of successful transition to adult life.

Implications for future study.

Optimism within the context of disability has gone virtually unexplored, especially among people with cognitive, developmental, or emotional/behavioral disorders (Rand & Shea, 2013). Again, this gap in the research must be addressed in order to understand the relationships among optimism and desired outcomes for students with disabilities. Because optimism has been correlated with grit and mindset in the previously cited recent psychological research, and because these two variables are clearly linked to important academic outcomes and later adult outcomes, we have a particular interest in how optimism mediates or moderates grit and mindset and how it might function as an important

predictor of transition on its own. Our interest in optimism is to understand its relationship to these two psychological variables and transition outcomes. In short, evidence suggests that optimism is reliably associated with grit and mindset and that optimism itself is also malleable in school age and college students (Duckworth & Eskreis-Winkler, 2013; Gillham, Reivich, Jaycox, & Seligman, 1995; Zhang & Fishbach, 2010). Is optimism a proxy for these variables? Is it a mediator or moderator variable? Might responses to mindset and grit interventions function differently based on degree of optimism? These relationships have yet to be explored for students with disabilities.

Toward a New Conceptual Framework of Transition

Transition Orientation

Exploration of the relationships among selected positive psychology factors, self-determination, and transition outcomes would allow for a scientific investigation of our hypothesis of a distinct psychological aspect of the process of transition that has not been meaningfully explored, nor explicitly addressed in school settings. We tentatively refer to this overarching construct as a student's "transition orientation." We suggest that the psychological *processes* underlying transition, and indeed the psychological process *of* transition, have not been sufficiently explored, and that the field's focus on concrete outcomes or *products* of transition have directed our focus away from these critical variables. Thus, the clarification of the relationships among mindset, grit, optimism and self-determination as they relate to the process of transition is critical exploratory work and a prerequisite for future intervention

development. This is especially true in light of psychological research evidence suggesting that these factors are related to desirable adult outcomes and are malleable and amenable to intervention (Duckworth & Eskreis-Winkler, 2013; Dweck, 2000; Seligman, 2002; Shogren et al., 2015). Thus, our current call to action for an interdisciplinarily-informed investigation of this issue provides a preliminary model and conceptual framework on which to situate future research into this issue.

Conclusion

Positive psychologists have been earnestly exploring these non-academic constructs and their relationships with life outcomes for approximately the last two decades. Findings from this work suggest that mindset, grit, optimism and self-determination are correlated with desirable adult outcomes. Despite the lack of research exploring these constructs in individuals with disabilities, it is clear that these constructs capture factors for which children with disabilities are developmentally at risk to resolve negatively. We argue that meaningful exploration of these constructs in children with disabilities is a critical step toward a positive approach to transition special education.

The investigation of these factors holds a great practical importance for the field of special education. Critical questions about the associations among these three constructs, self-determination, and transition outcomes remain. Considering the disappointing and frustrating transition outcomes for young adults with disabilities, it is important to ask and explore new research questions to inform work in the field of special education. Traditional approaches to improve transition outcomes have not closed the gap in outcomes

between students with and without disabilities, and continued attention to this issue is critical. It is important to consider the utility of emerging models of interdisciplinary and translational research to help us try to address this problem from a holistic framework for students with disabilities. The education of students with disabilities (indeed, *all* students) is one that is inherently interdisciplinary in nature; thus, our orientation as a field to the education and eventual transition of students with disabilities is one that may be meaningfully informed by the related psychology disciplines and their theoretical constructs.

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