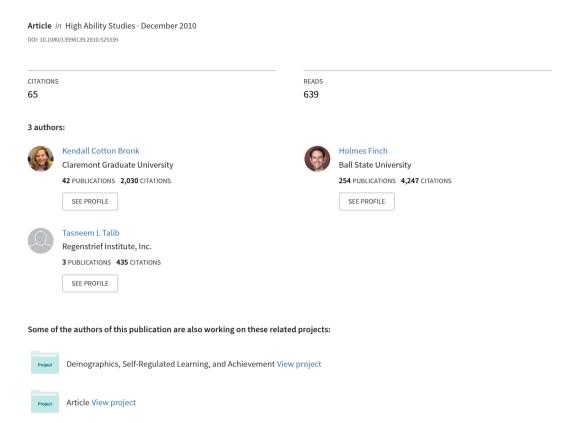
See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/233238083

Purpose in life among high ability adolescents





Purpose in life among high ability adolescents

Kendall Cotton Bronk*, W. Holmes Finch and Tasneem L. Talib

Educational Psychology Department, Ball State University, Muncie, IN, USA

Leading high ability scholars have proposed theories that suggest a purpose in life may be particularly prevalent among high ability youth; however, the prevalence of purpose has not been empirically assessed among this population. Therefore using in-depth interviews the present study established the prevalence of purpose among a sample of high ability adolescents and compared it to the prevalence of purpose among a sample of typical youth (N=203). Results revealed that purpose was present among high ability early and late adolescents at roughly the same rate as among more typical youth. However, high ability youth reported embracing self-oriented life goals earlier than more typical youth, and they identified different types of inspiring life purposes. Implications, including steps practitioners can take to foster purpose among high ability youth, are addressed.

Keywords: high ability; adolescents; gifted; purpose in life; meaning in life; goals

The positive role of purpose

A purpose in life represents a powerful source of long term motivation. It acts like a compass, guiding young people's lives in positive directions (Damon, Menon, & Bronk, 2003; Damon, 2008; Benson, 2006). As a motivator, it orients life goals and daily decisions by directing the use of personal resources, such as time, energy, and effort, toward prosocial aims. When young people identify a purpose in life and connect that purpose to their academic experience, schoolwork takes on a relevance and personal meaningfulness that it might otherwise lack. In this way, researchers have argued (Damon, 2009), purpose can serve as an important source of achievement motivation.

In addition to being a powerful motivator, research has established that a purpose in life is associated with other aspects of optimal youth development (Damon, 2008; Benson, 2006). For example, it has been identified as a developmental asset (Benson, 2006), an important component of human flourishing (Seligman, 2002), and a key factor in thriving (Bundick, Yeager, King, & Damon, 2010, in press). Related research suggests that purpose is associated with psychological health (Crumbaugh & Maholick, 1967; Kish & Moddy, 1989; Shek, 1993), happiness (French & Joseph, 1999), life satisfaction (Bronk, Hill, Lapsley, Talib, & Finch, 2009), and resiliency (Benard, 1991).

Definitional matters

While definitions of purpose have varied in the past, there appears to be a growing consensus that a purpose in life represents a stable and generalized intention to

^{*}Corresponding author. Email: kcbronk@bsu.edu

accomplish something that is at once meaningful to the self and leads to productive engagement with some aspect of the world beyond the self (Damon et al., 2003; Damon, 2008). This definition includes three important dimensions. First, a purpose represents an intention to progress toward a personally meaningful ultimate aim (Emmons, 1999). In this way, a purpose serves as a central driver, motivating and guiding one's actions toward a long term aim. Second, personal meaningfulness is underscored by active engagement. Through this behavioral manifestation, individuals commit time, energy, or resources to achieving their purpose in life. Third, purpose features a desire to make a contribution to the broader world. In other words, a purpose represents a motivation to act on behalf of others or in pursuit of a larger cause; this dimension distinguishes purpose from the related construct of meaning (Steger, Oishi, & Kashdan, 2009).

Purpose statuses

A purpose in life represents the intersection of intention, engagement, and contribution. Research finds, however, that only a small subset of young people actually demonstrate each of these components (Damon, 2008; Moran, 2009). Other youth demonstrate some of the elements, or different purpose statuses, including *beyond-the-self dreams*, *self-oriented life goals*, and *drifting*. Youth categorized into the *beyond-the-self dreams* status demonstrate a clear intention to accomplish something beyond themselves and offer prosocial reasons for doing so, but are not actively engaged in these aims. Youth who are active in working toward personally meaningful, long term aims but cite purely self-oriented reasons for doing so aspire to *self-oriented life goals*. Finally, youth who discuss a commitment to a long term aim but are neither actively engaged in pursuing that aim and do not cite prosocial reasons for doing so are said to be *drifting*. Also included in this category are youth who demonstrate low levels of intention, because without a strong intention a purpose in life is unlikely to motivate youth to progress in positive directions. In this way, the three dimensions of purpose can be collapsed into two, as illustrated by Figure 1.

Despite the strong claims made by researchers about purpose, empirical work has only recently begun to focus on the construct as a force in its own right and to date has only included more typical samples of young people. Because purpose serves as an important source of motivation guiding young people in positive directions, its prevalence should be examined among all young people, including high ability youth.

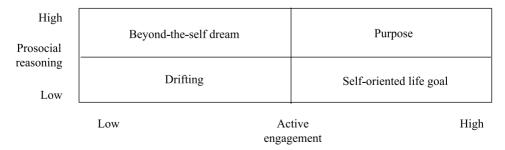


Figure 1. Purpose statuses scaled along two dimensions.

The case for purpose among high ability youth

In fact, research suggests high ability youth may be a particularly important group to investigate with regards to purpose. Findings suggest these young people may be *more* likely to demonstrate purpose than other youth. For example, youth with intense commitments to purposes (Bronk, 2005; Damon, 2008) and high ability youth (Colangelo & Assoline, 2000; Coleman & Cross, 2005; Davis, 2006; Mendaglio, 2007) share certain characteristics, including being persistent, creative, sensitive, and consistent strivers for mastery.

Further, high ability youth may be more inclined than other young people to act in prosocial ways, and prosocial engagement is an important aspect of the purpose construct. Leading theorists in high ability education (Dabrowski, 1964, 1966, 1967; Hollingworth, 1942; Mendaglio, 2007) have proposed that high ability youth demonstrate certain affective characteristics that may predispose them to purpose.

First, Dabrowksi's (1964) theory of positive disintegration describes a developmental process whereby individual growth is the result of a series of stages in which psychological structures are broken down and rebuilt. Such a cycle across development results in a shift from a more egocentric perspective to a more altruistic one. At the highest levels individuals reach a 'personality ideal' in which they experience the strongest sense of self-awareness but also adopt universal human values such as social responsibility and a sense of justice (Mendaglio, 2008). As high ability youth make this transformation, they become increasingly likely to demonstrate prosocial reasoning, a central component of the purpose construct (Damon, 2008; Damon et al., 2003).

Second, Mendaglio (2007) described the affective component of giftedness in terms of *heightened multifaceted sensitivity* which he defined as having an enhanced awareness of the behavior, emotions, and thoughts of both the self and others. The other-oriented dimension refers to high ability individual's enhanced perspective taking abilities, greater awareness of other's needs, and heightened sense of empathy (Mendaglio, 2007). Evidenced by their preference for other-oriented goals (Bronk & Finch, 2010), purposeful youth, like high ability youth, are also more likely than other young people to demonstrate a keen awareness of others' needs.

Taken together, these theories help explain why high ability individuals may be particularly likely to focus on social issues, demonstrate compassion, and have a heightened sense of moral thinking and social justice (Davis, 2006). These theories also help explain why high ability youth may be more likely than other young people to demonstrate the prosocial dimension of purpose.

Research aims and hypotheses

Given that purpose has not been investigated among high ability youth and that this group of young people may be particularly inclined to lead lives of purpose, this study was designed to explore purpose among high ability youth. Specifically, this cross-sectional study addressed the following questions:

- How prevalent is purpose among high ability youth?
- Do high ability youth commit to purposes earlier than other youth?
- Are high ability youth inspired by the same types of purposes as typical youth?

Hypotheses were formed based on available theoretical and empirical research. For example, findings from a large-scale, national study of purpose determined that roughly one in five adolescents in the general population demonstrate a purpose in life (Moran, 2009; Damon, 2008). Given that adolescent purpose exemplars (Bronk, 2005; Damon, 2008) and high ability youth share certain characteristics (Colangelo & Assoline, 2000; Coleman & Cross, 2005; Davis, 2006; Mendaglio, 2007), we expected to find that purpose was more prevalent among high ability youth. Further, researchers have suggested that purpose may be a form of intrapersonal giftedness (Moran, 2009); therefore, we expected that purpose would surface with precocity among high ability youth. Finally, because high ability youth are particularly likely to demonstrate a concern for others (Dabrowski, 1966, 1967; Mendaglio, 2007, 2008), we anticipated they would be more likely to aspire to service-oriented purposes than typical youth.

Methods

Participants

To test these hypotheses, interviews were conducted with high ability seventh and eighth graders (n = 32) and twelfth graders (n = 32). As a point of comparison, data from the high ability youth were compared with data collected by the Stanford Center on Adolescence team members who, using the same protocol, procedure, and codebook, interviewed typical sixth graders (n = 68) and twelfth graders (n = 71; N = 203). High ability participants came from the Midwestern US while the typical youth came from locations across the US. Typical youth attended non-selective middle and high schools while the high ability youth attended high ability middle and high schools. Along with other considerations, admission to the high ability middle school was based on receiving WISC-IV scores at least two standard deviations above average and admission to the high ability high school was based on consistently strong academic records and above average SAT scores. Table 1 includes sample demographics.

Table 1. Sample demographics.

	High ability	Typical youth	Whole sample
Age			
Early adolescents	32	68	100
Late adolescents	32	71	103
Sex			
Female	36	64	100
Ethnicity			
Caucasian	52	42	94
African-American	3	13	16
Asian-American	7	33	40
Latino/a	1	33	34
Other	1	18	19
Total	64	139	203

Data collection

Both typical and high ability participants completed the requisite consent procedures and were interviewed at their respective schools during school hours. Members of both research teams underwent two rounds of training prior to serving as interviewers. The Revised Youth Purpose Interview Protocol (Andrews, Bundick, Jones, Mariano, Bronk, & Damon, 2006), a semi-structured measure designed to assess the purpose statuses among adolescents, was administered to both samples. In each case, interviews typically lasted one hour and addressed the things that mattered most to participants. Interviews were recorded and transcribed, and identifying information was removed.

Qualitative coding and analysis

To code the data from both samples, a qualitative content analysis (Miles & Huberman, 1994) based on the Stanford Center on Adolescence Youth Purpose Codebook (Malin et al., 2008) was utilized. Coding procedures included four steps:

- (1) Interviews were read once to identify the things that mattered most to the participant.
- (2) Interviews were read a second time to identify and code: quotations that evidenced a relative level of *intention* (high or low) to act on the personally meaningful aim; passages the reflected the participant's level of *active engagement* (high or low); and sections expressing the interviewee's desire to make a *contribution* (high or low) to the broader world.
- (3) Based on the *intention, active engagement,* and *contribution* scores and outlined in Table 2, the most appropriate purpose status was assigned.
- (4) Finally, the content of the young person's ultimate aim was identified and coded into one of the following categories: family, academic achievement, values, career, country, service, political and social issues, and other hobbies.

In order to establish inter-rater reliability, 20% of the interviews were randomly selected and two coders scored each independently. Scores were compared and a Kappa coefficient of 0.70 was reached (Cohen, 1960). According to convention, a Kappa coefficient between 0.60 and 0.80 is considered 'good agreement' (Altman, 1991).

Statistical data analysis

To test for significant differences among the types of purpose between high ability and more typical samples of youth as well as by the participant age (early and late

Status	Intention	Active engagement	Contribution	
Purpose	High	High	High	
Beyond-the-self dream	High	Low	High	
Self-oriented life goal	High	High	Low	
Drifting	High	Low	Low	
Drifting	Low	High/low	High/low	

Table 2. Statuses of purpose by intention, active engagement, and contribution.

adolescent), a multinomial logits model was used (Agresti, 2002). The multinomial logits model is an extension of standard logistic regression that allows for a nominal dependent variable with more than two categories. In this case, the dependent variable was the purpose status. The full multinomial model included the independent variables, type of youth (typical and high ability) and age (early and late adolescents), as well as the interaction of the two. This model addressed differences in the prevalence of purpose between typical and high ability youth, developmental differences overall in purpose, and, through the interaction term, developmental differences in the prevalence of purpose between typical and high ability youth.

In order to test the relationships between type of youth with age and domain of purpose, respectively, Fisher's Exact test (Agresti, 2002) was used because the sample was too small for the assumption that the expected counts were five or more for every category combination for the pairs of variables. Fisher's test works by finding all possible permutations of the sample data (e.g., randomly matching one individual's youth type with another person's age), and for each of these permutations calculating the chi-square statistic testing the relationship between the variables. Because the data are randomly mixed in all possible ways, the resulting set of chi-square values obtained from these permutations represents the sampling distribution one would expect to see were the two variables unrelated to one another. The actual chi-square value obtained from the original sample is then compared with the sampling distribution created from the data permutations in order to obtain a p-value, which is the proportion of chi-squares in the distribution below the actual one.

Results

RQ1: prevalence of purpose

Our first aim was to determine the prevalence of purpose among high ability youth. Results revealed purpose among 9% of the high ability early adolescents and 34% of the high ability late adolescents. Participant transcripts were coded globally, but youth coded as demonstrating purpose said things similar to the following late adolescent female:

I'm really passionate about my cows... When I was young, very young, my mom took me out to the pasture field like she did with my two older sisters, and I was able to pick whichever cow I wanted and it would be my cow... I got attached... It's something I've always wanted to be able to accomplish, to take over the family farm and really just to have those cattle with me for the long-run... I have like five hours straight of classes and when I'm done I spend four to six hours apprenticing with a local veterinarian. (IN20)

The brief preceding passage was drawn from a longer interview in which the participant continued to indicate a strong commitment to working with animals, particularly cattle. This young woman was actively engaged in pursuing her long term aim, and her reasons for doing so underscored a yearning to care for the cattle to which she felt strongly 'attached'.

Six per cent of the high ability early adolescents and 19% of the high ability late adolescents demonstrated *beyond-the-self dreams*, typified by the following quotation:

I would want to work up the political ladder, so to speak... My role in this would be just a public servant – a complete person that echo's the voices of the people... I would want

to support the lower class a little bit more... Looking at my life is, and what I'm striving for, that is truly what is most important to me. I'm truly striving to make a difference in the world. That would be my personal success... It is very important to me that by the end of my life I am seen as having done more good than bad. (IN28)

When asked how he was making progress toward his political aims, the participant replied, 'In my class, in my political classes, or even history classes, I give the socialist perspective on many things' (IN28). Other than that, however, the participant was not actively engaged in helping others through the political process, and therefore this participant's aim in life was coded as a *beyond-the-self dream* rather than a *purpose* in life.

The *self-oriented life goal* status applied to 19% of the high ability early adolescents and 16% of the high ability late adolescents. Statements representative of this status included the following:

I want to be an OB [because]... I just want to do something where I can be proud of it... and be successful... That would be more like a fulfillment to just go do something that makes me happy, and that I would enjoy and not end up being an angry worker. (IN24)

This young woman might have cited altruistic reasons for wanting to pursue a career in medicine, but instead her reasons centered primarily on herself (e.g., making herself feel proud and making herself happy). Therefore, she was categorized as having a *self-oriented life goal*.

Finally, 66% of high ability early adolescents and 31% of high ability late adolescents demonstrated few if any signs of purpose. While the nature of these transcripts varied, they were categorized as *drifting* if they included passages such as the following:

I really just want to be happy. My goal of what happiness is has changed over the years. Now, I guess, it's just kinda knowing as much as I can. So I guess that I will pursue that... I mean, I always have these just spurts of initiative with specific things. Like [with wanting to learn as much as I can], I guess it just depends on how successful it is. It might fall out. I might fall out. But I just keep going with other things. I'm not really sure if I get distracted by it or if something else catches my attention, but I try to stick with things and it's not really — I don't feel that I'm not responsible enough to stick with it. I think something else just comes up. (IN04)

This quotation portrays an adolescent still trying to decide what he cares about and how to pursue that interest. Because he has yet to dedicate himself to any enduring interest, he was designated as *drifting*.

Results suggest that high ability youth exhibit these four purpose statuses in roughly the same proportions as more typical youth. There was no significant main effect for type of youth (p = 0.9820). Table 3 lists the purpose statuses by stage and type of youth.

RQ2: developmental differences

Our second aim was to determine if high ability youth committed to purposes earlier than typical youth. The results for the multinomial logits model indicated significant differences in the purpose statuses between early and late adolescents ($\chi^2(3, N = 203)$)

Table 3.	Rates	of purpose	among	high	ability	and	non-identified	samples	of early	and late
adolescen	ts.			_				_		

	No purpose			Self-oriented Beyond-the- life goal self dream		Purpose		Total		
									Typical Youth	
Early adolescents	3									
f	43	21	6	6	8	2	11	3	68	32
%	63%	66%	9%	19%	12%	6%	16%	9%	100%	100%
Late adolescents										
f	25	10	25	5	5	6	16	11	71	32
%	35%	31%	35%	16%	7%	19%	23%	34%	100%	100%

= 15.76, p = 0.001) and a significant interaction between the type of youth and age ($\chi^2(3, N = 203) = 8.63$, p = 0.035). The significant interaction will be the primary focus here, rather than the main effects, which cannot be interpreted independently of the interaction. An examination of the individual coefficients revealed that typical youth were more likely to display *self-oriented life goals* later in adolescence than their high ability counterparts ($\beta = 2.534$, e^{β} 12.604, p = 0.018). Table 3 shows that 9% of early adolescent typical youth held *self-oriented life goals*, while 35% of the late adolescent typical youth did. On the other hand, among high ability youth, 19% reported *self-oriented life goals* in early adolescence as compared to 16% in later adolescence.

In terms of the significant main effect for age, the model parameters revealed that early adolescents were significantly more likely to be *drifting* than were later adolescents ($\beta = 0.740$, $e^{\beta} = 2/100$, p = 0.001). This result is clearly borne out in Table 3 for both groups, where over 60% of the younger group were categorized as *drifting*, while just over 30% of the older subjects were categorized as such. Again, however, interpretation of such main effects must be drawn carefully in light of the significant interaction described above.

RO3: domains of purpose

Our final aim was to determine if high ability and typical youth were inspired by the same types of purposes. Results revealed that in general they were, with two exceptions. 'Values, beliefs, and faith' was the most commonly cited purpose domain among the high ability sample and the third most commonly cited purpose domain among the typical sample. Speaking about her belief in environmental causes, one high ability youth said:

Before everybody was all 'go green', I was already, like we recycle stuff at my house and I really care about the environment and like nature... We went to the conference in October and the theme was environmental justice so I was really interested in that... Now we're working on a project for our school. We're going to try to get our school to have a cool roof with a reflective coating, and it saves energy which is cool, but it also helps the surrounding area because it reduces pollution which comes from air conditioning and heating. I'm the researcher because I've done all the research and stuff for it, you know. It's just something I really care about. (SYC 0830)

	Purposeful ear	ly adolescents	Purposeful late	Purposeful late adolescents		
	Typical youth	High ability	Typical youth	High ability		
Values, beliefs, faith	1	1	5	4		
Career	3	1	4	3		
Service	0	0	0	2		
Family	0	1	1	1		
Political/social interests	1	0	1	1		
Other hobbies or leisure	6	0	5	0		
Country	0	0	0	0		

Table 4. Frequency counts of the domains identified by purposeful youth.

'Careers' were the second most commonly cited domain of purpose among high ability and typical youth. Of her career-oriented purpose, a high ability early adolescent said:

I hope to get into a medical school... [I'm working hard in school because] if I get good grades, then I'll get a better job... [If I become a doctor] I'd go work in a hospital and help to treat patients. I'd try to shape – like become a pediatrician. I'll probably go work at [the local children's hospital] or something so I can just help children and change their lives... [Or], if I became a doctor I could travel to different countries that can't afford healthcare. I'd help them, given them medicine and stuff... I just really like the doctor thing. (SYC 0709)

The purpose domains were similar across the two groups, but two significant differences emerged. While the sample sizes were very small, it was possible to test the relationship between age and domain and type of youth (typical and high ability) using an exact test, which was described previously. Results of this test demonstrated no significant relationship between age and purpose ($\chi^2(5, N = 41) = 4.35, p = 0.612$), but there was a significant relationship between type of youth and purpose ($\chi^2(5, N = 41) = 11.62, p = 0.0137$). The reader should note that in order to control the Type I error rate, given that two tests were conducted, Bonferroni's correction was used. Referring to the standardized residuals in the 2×7 cross-tabulation, it appears that the high ability youth endorsed the 'service' purpose category more frequently than would be expected, and the 'hobby' purpose category less frequently than would be expected. Table 4 features the number of high ability and non-identified early and late adolescent purposeful youth who cited each type of purpose.

Discussion

Along with being associated with a variety of positive developmental outcomes, purpose serves as an important source of long term motivation for young people. However, despite high ability youths' reported likelihood of demonstrating a central component of the purpose construct, namely a concern for matters beyond the self, the present study determined that purpose was not particularly prevalent among these youth. In fact among high ability youth, only about one in ten early adolescents and one in three late adolescents identified an enduring commitment to a personally meaningful aim to contribute to matters larger than the self. Only about one in twenty early adolescents and one in five late adolescents identified a beyond-the-self dream,

and approximately one in five early adolescents and one in six late adolescents reported being dedicated to self-oriented life goals. Roughly two-thirds of high ability early adolescents and one-third of high ability late adolescents were categorized as drifting or failing to commit to any personally meaningful long term aims.

This is the first empirical study of purpose among high ability youth, and the results are important for several reasons. First, in spite of their theorized propensity for demonstrating a concern for others, the high ability youth in this study were not significantly more likely to commit to prosocial purposes than were more typical adolescents. This result suggests that particularly strong academic abilities are not required or even preferred for the pursuit of purpose. In support of this conclusion, a related study determined that youth with particularly intense commitments to purposes varied widely in terms of their academic achievement; one purpose exemplar was a Rhodes Scholar while another was a high school drop-out (Bronk, 2005).

Further, high ability early adolescents did not demonstrate purpose at significantly higher rates than more typical early adolescents. These results run counter to researchers' theoretical claims that purpose may represent a form of 'intrapersonal giftedness' (Moran & Gardner, 2006; Moran, 2009). In this sample, high ability youth did not demonstrate purpose precociously as anticipated.

A different developmental trend did appear, however. The incidence of drifting among high ability adolescents diminished significantly between early and late adolescence. This finding should be interpreted cautiously given the interaction effect; however, it is strengthened by the fact that typical youth reported the same trend (Moran, 2009).

Interesting differences also emerged regarding the types of purposes that high ability and more typical youth identified as inspiring. High ability youth were significantly more likely to cite service-oriented purposes and significantly less likely to cite leisure-oriented purposes than other young people. Given that high ability youth are more likely to demonstrate perspective taking abilities (Mendaglio, 2007), altruism, (Dabrowski, 1966, 1967), and social values (Mendaglio, 2008), we expected this result.

Finally, despite a general trend of similarity in terms of purpose statuses between high ability and typical youth, the present study did identify a significant interaction that warrants further discussion. Results revealed that high ability youth commit to self-oriented life goals earlier than more typical youth. This finding is consistent with the conventional developmental path which features growth from drifting to self-oriented life goals (Moran, 2009). Related research in career and identity development points to a similar trajectory (see Erikson, 1968; Super, 1990). In sum, these findings suggest that high ability youth are on an accelerated path toward conventional aims rather than purposeful ones.

This final result highlights an important opportunity. Researchers have theorized that purpose is a product of both individual and environmental factors (Damon, 2008). According to leading scholars, high ability youth share important internal factors that are likely to dispose them to lives of purpose (Mendaglio, 2007, 2008; Dabrowski, 1966, 1967). However, despite these proclivities, high ability youth are not significantly more likely to commit to purposes. Therefore, it may be fruitful to consider the environmental factors at work in these young people as changes made on this level may address the gap between their inclinations for purpose and their actual commitments to purposeful aims.

Educational settings specifically designed to cater to the needs of high ability youth may send an implicit message that students should be highly concerned with promoting

their own welfare and best interests. That is the aim, after all, of the special schools they attend. This tendency may help explain, in part, why high ability early adolescents espoused self-oriented aims earlier than more typical youth and why high ability youth failed to demonstrate purpose more often than typical youth. Of course, these settings could be altered to more intentionally foster purpose and a prosocial concern for matters beyond the self. For example, educators could encourage high ability youth to engage in long term thinking and to consider how what they are doing now could help them progress toward the things that matter most to them. Encouraging youth to link their daily activities in school or in extracurricular pursuits to long term personal aims is a critical step in fostering purpose (Damon, 2009). Teachers could also be attentive to the 'sparks' of interest (Benson, 2008) their high ability students identify, and they could take an active role in helping youth determine the best way of acting on those interests (Damon, 2008). Roughly one in twenty high ability early adolescents and one in five high ability late adolescents identified enduring interests in matters beyond the self; however, they were not actively involved in pursuing these interests, because, according to them, there were no opportunities to get involved, they were unsure of where to begin, or they did not feel they had the time or ability to contribute in a meaningful way. Finally, in order to more intentionally foster purpose, educators could help young people reflect on ways in which their skills could be put to work to address social needs (Damon, 2008).

The present study offers an important starting point for understanding purpose among high ability youth. Future studies, however, should consider including a larger participant pool. This will not be easy, given that the multifaceted purpose construct is difficult to assess with survey research, but it would be worthwhile since a larger sample may yield more significant differences. Further, the present study was primarily concerned with determining the prevalence of purpose among high ability youth and only secondarily with comparing these results with more typical youth. Therefore, we only matched participants on age. Future studies should consider matched samples. Future studies should also ensure the comparison group does not include any high ability individuals. It is possible that results of the present study under-reported the difference in the rate of purpose between high ability and typical youth because the typical youth sample unintentionally included some high ability adolescents. Given the extraordinary nature of being designated as high ability, it is unlikely that this sample included enough high ability youth to dramatically alter the results. Nonetheless, this is an empirical issue which future studies should address. Finally, participants in this study attended schools designed to serve high ability youth, but the middle and high school identified high ability students in different ways. Early adolescents in this study were identified as high ability based primarily on their WISC-IV scores, while late adolescents were identified as high ability based on their previous academic records and SAT scores.

Given high ability youths' reported concern for matters beyond-the-self, these youth are poised to enact lives of purpose. High ability youth, in many cases, represent our best hopes for a brighter future, and consequently they are often the recipients of enhanced learning opportunities. However, along with this important right, they should be taught that they also have a special responsibility, namely to use their talents not only to advance themselves, but also in service to others. A purpose in life can provide a critical source of motivation guiding high ability youth to apply their skills in socially responsible ways, and fostering purpose among these youth is likely not only to enhance their lives, but also the lives of the people they touch. Therefore,

educators concerned with promoting the healthy development of young people should work to match the exceptional talents of high ability youth with personally meaningful, purposeful pursuits.

Acknowledgements

This research used, with permission, the Revised Youth Purpose Interview instrument from the Stanford Center on Adolescence Youth Purpose Project, funded in part by the John Templeton Foundation and the Thrive Foundation for Youth. Portions of this study were also generously supported by an Aspire grant from Ball State University. Thank you to Kristie Speirs-Neumeister who helped with the literature review, to the Stanford Center on Adolescence research team which shared their measures, data, and codebook, and to the youth who shared their time.

References

- Agresti, A. (2002). *Categorical data analysis*. Hoboken, NJ: John Wiley & sons publications. Altman, D.G. (1991). *Practical statistics for medical research*. London, England: Chapman and Hall.
- Andrews, M.C., Bundick, M.J., Jones, A., Bronk, K.C., Mariano, J.L. & Damon, W. (2006). Youth purpose interview, version 2006. Unpublished instrument. Stanford Center on Adolescence, Stanford, CA.
- Benard, B. (1991). Fostering resiliency in kids: Protective factors in the family, school and community. San Francisco: Western Regional Center for Drug Free Schools and Communities.
- Benson, P.L. (2006). All kids are our kids: What communities must do to raise caring and responsible children and adolescents. San Francisco: Jossey Bass.
- Benson, P.L. (2008). Sparks: How parents can ignite the hidden talents of their teenagers. San Francisco: Jossey-Bass.
- Bronk, K.C. (2005). Portraits of purpose: A study examining the way purpose contributes to positive youth development. (Doctoral dissertation, Stanford University, 2006). *UMI ProQuest Digital Dissertations, AAT 3187267*.
- Bronk, K.C., & Finch, W.H. (2010). Adolescent characteristics by type of long-term aim in life. *Applied Developmental Science*, 14(1), 1–10.
- Bronk, K. C., Hill, P., Lapsley, D.K., Talib, T., & Finch, H. (2009). Purpose, hope, and life satisfaction in three age groups. *Journal of Positive Psychology*, 4(6), 500–510.
- Bundick, M., Andrews, M., Jones, A., Mariano, J.M., Bronk, K.C., & Damon, W. (2006). Revised youth purpose survey. Unpublished instrument, Stanford Center on Adolescence, Stanford CA.
- Bundick, M.J., Yeager, D.Y., King, P., & Damon, W. (2010, in press). Thriving across the life span. In W.F. Overton, & R.M. Lerner (Eds.), *Handbook of lifespan human development*. New York: Wiley.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37–46.
- Colangelo, N., & Assoline, S.G. (2000). Counseling gifted students. In K.A. Heller, F.J. Monks, R.J. Sternberg, & R.F. Subotnik (Eds.), *International handbook of giftedness and talent* (pp. 595–607). New York: Elsevier.
- Coleman, L., & Cross, T. (2005). Being gifted in school. Waco, TX: Prufrock Press.
- Crumbaugh, J.C., & Maholick, L.T. (1967). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. In V.E. Frankl (Ed.), *Psychotherapy and existentialism* (pp. 183–197). New York: Washington Square Press.
- Dabrowski, K. (1964). Positive disintegration. Boston: Little, Brown.
- Dabrowski, K. (1966). The theory of positive disintegration. *International Journal of Psychiatry*, 2, 229–244.
- Dabrowski, K. (1967). Personality-shaping through positive disintegration. Boston: Little, Brown.

- Damon, W. (2008). The path to purpose: Helping children find their calling in life. New York: Free Press.
- Damon, W. (2009). The why question: Teachers can instill a sense of purpose. *Education Next*, 9(3), 84.
- Damon, W., Menon, J., & Bronk, K.C. (2003). The development of purpose during adolescence. *Applied Developmental Science*, 7(3), 119–128.
- Davis, G. (2006). Gifted children, gifted education. Scottsdale, AZ: Great Potential Press.
- Emmons, R.A. (1999). The psychology of ultimate concerns: Motivation and spirituality in personality. New York: Guilford Press.
- Erikson, E.H. (1968). Identity: Youth and crisis. New York: Norton.
- French, S., & Joseph, S. (1999). Religiosity and its association with happiness, purpose in life, and self-actualization. *Mental Health, Religion, & Culture, 2*, 117–120.
- Hollingworth, L. (1942). Children above 180 IQ, Stanford-Binet: Origin and development. Yonkers, NY: World Book.
- Kish, G.B., & Moody, D.R. (1989). Psychopathology and life purposes. *International Forum* for Logotherapy, 12(1), 40–45.
- Malin, H., Reilly, T.S., Yeager, D., Moran, S., Andrews, M., Bundick, M., & Damon, W. (2008). Interview coding process for statuses of purpose determination. Stanford: Stanford Center on Adolescence.
- Mendaglio, S. (2007). Affective-cognitive therapy for counseling gifted individuals. In S. Mendaglio, & J.S. Peterson (Eds.), *Models of counseling gifted children, adolescents, and young adults* (pp. 35–68). Waco, TX: Prufrock Press.
- Mendaglio, S. (2008). Dabrowski's theory of positive disintegration. In S. Mendaglio (Ed.), *Dabrowksi's theory of positive disintegration* (pp. 13–40). Scottsdale, AZ: Great Potential Press.
- Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks, CA: Sage.
- Moran, S. (2009). Purpose: Giftedness in intrapersonal intelligence. *High Ability Studies:* Special Issue on Giftedness and Character, 20(2), 143–159.
- Moran, S., & Gardner, H. (2006). Extraordinary development. In W. Damon, D. Kuhn, & R. Siegler (Eds.), *Handbook of child psychology* (Vol. 2, pp. 905–949). New York: Wiley.
- Seligman, M.E.P. (2002). Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfilment. New York: Free Press.
- Shek, D.T. (1993). The Chinese purpose-in-life test and psychological well-being in Chinese college students. *International Forum for Logotherapy*, 16, 35–42.
- Steger, M.F., Oishi, S., & Kashdan, T.B. (2009). Meaning in life across the lifespan: Levels and correlates of meaning in life from adolescence to older adulthood. *Journal of Positive Psychology*, 4(1), 43–52.
- Super, D.E. (1990). A life-span, life-space approach to career development. In D.L. Brown,
 L. Brooks, and Associates (Eds.), Career choice and development: Applying contemporary theories to practice (2nd ed., pp. 197–261). San Francisco: Jossey-Bass.