

URBAN, EARLY ADOLESCENTS' DEVELOPMENTAL EXPERIENCES AND
ENGAGEMENT/DISENGAGEMENT WITH CHALLENGE IN OUT-OF-SCHOOL TIME
PROGRAMS

BY

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Abstract

In this study, associations between developmental experiences and engagement/disengagement with challenge were examined among a group of urban, early adolescents in Out-of-School Time Programs (OSTPs). The research literature suggests a number of cognitive, social, and emotional benefits are linked to engagement with challenge and developmental experiences should increase the chances of early adolescents' engagement with challenge in OSTPs. If we know which developmental experiences have the strongest relations with engagement with challenge, then OSTPs can be designed to provide more of these experiences and maximize benefits for youth. Results from a sample of 274 urban youth in 5th to 8th grades from 23 OSTPs in the Greater Kansas City area show that, at the individual-level unit of analysis, developmental experiences shared positive associations with engagement with challenge but they were negatively correlated with disengagement with challenge (all data is based on adolescents' self-reports). Adolescents in higher grades tended to spend fewer hours in OSTPs and reported lower rates of developmental experiences. Hierarchical multiple regressions revealed that after controlling for youth's intrinsic motivation to participate, developmental experiences together account for 35.1 % ($\hat{R}^2 = .351$) of the variance in engagement with challenge. More specifically, initiative experiences of problem-solving and time management were significantly associated with engagement with challenge. At the program-level unit of analysis, developmental experiences were significantly related to disengagement with challenge but not engagement with challenge. The major implication of these findings is that, for early adolescents, OSTPs providing higher rates of initiative experiences are likely to support higher engagement with challenge and, by extension, also provide greater learning benefits.

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Chapter 1: Introduction

Many youth participate in Out-of-School Time Programs (OSTPs) when not at home or school. According to Quinn (1999), OSTPs serve more than 30 million youth each year, which is second only to the Public School system. For children and adolescents living in at-risk settings, OSTPs may offer a particular developmental benefit (Halpern, 2002) with approximately 25% of this population spending 3-5 days a week in OSTPs. As used in this paper, OSTP is an umbrella term that includes extra-curricular activities (e.g., school team sports, drama), after-school programs (ASPs; e.g. art, dance, home-work help), summer programs (e.g. day camps), community organizations (e.g., Boys & Girls clubs, YMCA), and faith-based youth groups. High quality OSTPs are distinguished by their intentional design that provides structured activities and builds youths' skills and competencies (Walker, Marczak, Blyth, & Borden, 2005), as opposed to simply providing care or supervision.

Structured activities in OSTPs provide developmental experiences not readily offered in the formal educational context (Hansen, Larson, & Dworkin, 2003; Larson, Hansen, & Moneta, 2006), which is evidenced by higher psychological engagement in the OSTP setting than in the school setting (Eccles & Midgley, 1990). Although formal education is an essential learning environment, a leading national intermediary organization has suggested that it should not be seen as the sole learning context for youth (Hall, Yohalem, Tolman, & Wilson, 2002). More specifically, successful preparation for responsible adulthood requires involvement in other important learning environments, like OSTPs (Pittman, Irby, Yohalem, & Wilson-Ahlstrom, 2004). As a uniquely situated learning environment, OSTPs can complement formal education

and promote positive development, which differs from traditional deficit or intervention models that aim to eliminate negative behaviors or outcomes (Berliner, 2009).

A review of national data indicates that while OSTPs may be particularly important for urban, minority, and low-income youth, with benefits that include higher grades (associated with school programs and faith-based youth groups) and increased self-esteem, these populations are less likely to participate in OSTP activities than their suburban, European-American, middle-class counterparts (Pedersen & Seidman, 2005). Urban youths' reasons for *non*-participation in OSTPs tend to include factors such as more attractive options elsewhere, negative program perceptions, and family restrictions (priorities of work/school, chores, and fear of socialization with the opposite sex). Meanwhile, major reasons for participation include having a safe haven from street life, opportunities to learn new things (particularly skills), and the ability to have an impact on others (Perkins et al., 2007).

Positive youth development propagates the view that most risks associated with adolescence emanate from the environment and not youths themselves. Thus, the emphasis shifts from constraining adolescents' risky behaviors to building more adult-like competencies that emerge during adolescent development (Damon, 2004). Individuals gain increased capacities for cognitive, social, and emotional functioning during adolescence (Keating, 2004). The adolescent brain undergoes substantial neurological reorganization, resulting in increased capacity for information processing and higher order thinking skills (Eccles, Wigfield, & Byrnes, 2003; Keating, 2004; Kuhn, 2006), such as abstraction and hypothetical reasoning (Inhelder & Piaget, 1999). Building these emergent competencies entails provision of experiences that match the developmental needs of youth (Eccles & Midgley, 1989; Eccles et al., 1993) and hone their newly found skills (Eccles & Gootman, 2002; Larson, 2000). If attainment of optimal developmental

potentials is to be achieved, it is necessary to appropriately challenge youth (Vygotsky, 1978). Challenges/demands that are developmentally appropriate for adolescents, then, advance and expand the cognitive, social, and emotional functioning of youth. Youths' experiences of initiative, identity work, emotional regulation, positive relationships, and teamwork in OSTPs have been represented in the literature as being particularly salient for adolescent development (Hansen, Larson, & Dworkin, 2003).

One of the benefits related to providing relevant developmental experiences in OSTPs is that adolescents can learn to engage with challenge. Engagement with challenge is characterized by higher-order linkages between adolescents' intrinsic motivation and task demands that invoke adult-like responsibilities (Hansen & Moore, n.d). This definition highlights the importance of two factors: intrinsic motivation and appropriately challenging demands (developmental experiences). Previous qualitative research shows that youths' *intrinsic* motivation to participate in OSTPs is related to subsequently higher engagement levels while youths' *extrinsic* motivation to participate in OSTPs is related to subsequently lower engagement levels (Pearce & Larson, 2006). Adolescents' motivations to participate in OSTPs, while important to engagement with challenge, are influenced by a variety of factors in their psychosocial networks outside of the programs. However, the literature supports the view that OSTPs can be intentionally designed to provide youth with structured activities that embody developmental experiences (Mahoney, Vandell, Simpkins, & Zarrett, 2009; Walker, et al., 2005).

The malleability of OSTP-provided developmental experiences make them prime candidates for change (e.g., most OSTPs are not burdened with meeting restrictive, artificial performance standards). Much of the past research on developmental experiences, engagement, and other positive outcomes associated with OSTP participation has focused on older adolescents

(8th grade and up), leaving a gap in the understanding of how OSTPs contribute to development in early adolescence. The aim of this study is to examine the association of early adolescents' (grades 5 -8) developmental experiences and engagement with challenge in OSTPs, while controlling for the contribution of participants' motivations. If more is known about the relationship between developmental experiences and engagement with challenge, OSTPs can be modified to provide conditions that best support positive youth development, especially since youths' engagement in OSTPs has been linked to positive academic, social, and emotional outcomes, such as higher academic achievement, prosocial behaviors and positive affect (Shernoff, 2010; Shernoff & Vandell, 2007).

Chapter 2: Literature Review

Adolescents' Development and Learning in OSTPs

Positive youth development has become the focus of many successful, high-quality OSTPs that seek to maximize learning outcomes for youth (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002; Eccles & Gootman, 2002). Various developmental and learning theories have been advanced that provide insight into how adolescents' increased cognitive, social, and emotional capacities can be supported by developmental experiences in OSTPs. Some of the more prominent developmental theories that are applicable to adolescent participation in OSTPs includes psychosocial development theory (Erikson, 1968), ecological systems theory (Bronfenbrenner, 1979), and stage-environment fit theory (Eccles & Midgley, 1989; Eccles, et al., 1993). Dewey's (1938) concept of experience-based learning and Vygotsky's (1978) social construction of learning are among the theories relevant to adolescents' learning in OSTPs. It is necessary to examine the fundamental principles of these theories in order to establish a framework for understanding research related to adolescent development and learning in OSTPs.

Psychosocial development. Erikson's (1968) stage theory of psychosocial development posits that the prime tasks of adolescence are identity exploration and reflection. Youth must carve out roles for themselves, both in a personal and social context, and try out various roles before achieving identity clarity. Conditions of autonomy, challenge, and meaningful relationships with peers and adults support adolescents' exploration of identities. Adolescent psychosocial development of identity can help to explain why OSTP participation is especially relevant for youth. When adolescents autonomously/voluntarily choose to participate in OSTPs, they potentially exercise considerable control over the type of activities, the number of different

activities (diversity), and how often (intensity) they participate in them. Adolescent choices regarding activity type, diversity, and intensity may thus be reflective of various roles or identities being explored by youth within the greater social contexts of OSTPs (Barber, Eccles, & Stone, 2001; Busseri & Rose-Krasnor, 2009).

Ecological systems. Bronfenbrenner (1979) considered the role of environmental factors in development from the perspective of different ecological systems. Any attempt to understand individuals' development requires attention to the contexts/systems where it takes place. Dynamic conditions in ecological systems within an individual's immediate environment (microsystem) and beyond it (mesosystem, exosystem, macrosystem) collaboratively affect his/her development. The microsystem is arguably the most important system for understanding development because this is where the individual directly interacts with his/her environment (Mahoney, et al., 2009). Although OSTPs are embedded in larger systems such as schools, communities, churches, and government-funded agencies, the developmental experiences youth have in organized activities comprise their microsystems. Therefore to understand youths' development in OSTPs one must think in terms of interactions between individual participants and the demands of their immediate contexts (program activities).

Stage-environment fit. Stage-environment fit theory purports that a match between person variables (e.g. developmental stage/needs) and context variables (e.g. environmental demands) is optimal for learning in early adolescence. (Eccles & Midgley, 1989; Eccles, et al., 1993). This idea has some similarities to both the psychosocial perspective and the ecological systems perspective but goes a step further by emphasizing motivational and achievement-related outcomes. In theory, learning environments that satisfy the developmental needs of early adolescents providing them with appropriate challenge, freedom to choose among alternatives,

positive interactions with peers or adults, and opportunities to reflect on relevant issues increase motivation to learn and maximize performance outcomes. Likewise, high-quality OSTPs that provide developmental experiences and thereby embody a stage-environment fit may promote engagement among early adolescent participants.

Experience-based learning. Dewey emphasized the importance of experience for learning in his theories on education. According to Dewey (1938), the subjective abstraction and synthesis of related elements of experience (such as personal and situational factors), frames the learning context as individuals make cognitive connections between actions and consequences. In simpler terms, learning is a function of experiences (Byrnes, 2003). Individuals learn only when experiences assume new value, take on meaning, and are internalized (Dewey, 1997). Experiences that interest learners allow them to achieve aims and become engaged are necessary for learning to be effective (Glassman, 2001). Therefore, learning environments that provide interesting, goal-oriented, and engaging experiences (i.e., developmental experiences) are likely to result in the most positive learning outcomes for youth.

Social construction of learning. Vygotsky (1978) viewed challenge as a salient factor in learning. It is especially important that adults do not provide children/youth with tasks that they can easily accomplish on their own or tasks that are too far beyond their mental aptitude. Learners should be provided with tasks that present reasonable challenge and that require the assistance of more knowledgeable others to expand their development. Although, the role of adults is critical in the initial (external) regulation of behavior through social-collaborative learning, it is the child/adolescent who “owns” the discovery when experiences are internalized. Development (when it results from learning) is also a function of experience (Keating, 2005). In

OSTPs, developmental experiences that are scaffolded or supported by adults could act as the necessary social conditions or tools required for learning.

Adolescents' Developmental Experiences in OSTPs

Research indicates that youth are exposed to both positive experiences and negative experiences in OSTPs but reported having more positive and less negative developmental experiences in OSTPs than elsewhere (Hansen, et al., 2003). For the purposes of this study developmental experiences refer only to positive experiences and include initiative, identity work, emotional regulation, positive relationships, and teamwork. These higher-order categories consist of specific experiences identified as salient to positive youth development in OSTPs by previous literature (Hansen, et al., 2003). 1) Initiative experiences comprise goal-setting, effort, problem-solving, and time management; 2) identity work experiences involve youth working on identity development and comprise identity exploration and identity reflection; 3) emotional regulation experiences include coping with stress, anger, and anxiety; 4) positive relationship experiences pertain to diverse peers and prosocial norms; and 5) teamwork comprises group-process skills, authentic feedback, and leadership (Hansen & Larson, 2005). These five categories have been grouped by Hansen, et al. (2003) into intrapersonal and interpersonal domains of development, which are deemed characteristic of adolescence (Barber, 2005). Initiative, identity work and emotional regulation experiences support adolescents' intrapersonal development in OSTPs while positive relationships and teamwork experiences foster interpersonal development (Dworkin, Larson, & Hansen, 2003).

Intrapersonal Developmental Experiences

Initiative experiences. Initiative is an example of a ‘21st century skill’ that is necessary for young adults to navigate rapidly evolving work environments and fast-paced global development (Larson, 2000). Larson, Hansen and Walker (2005) described initiative as the consistent application of effort over time toward accomplishing a set goal. Communicative exchanges among youth and adults in the context of activities that are ‘flow-inducing’ (intrinsically motivating, engaging, and challenging) can foster initiative (Csikszentmihalyi, 1990). Initiative is viewed as a competency that increases from childhood to adolescence to adulthood. In adolescence, initiative develops as a function of experiences that furnish appropriate challenge and choice, require considerable planning and effort, and result in feelings of ownership, enjoyment, and accomplishment. Organized activities that meet participating youths’ needs for autonomy, relatedness and competence, and facilitate their optimal intrinsic motivation (Ryan & Deci, 2000), should promote age-appropriate competencies such as initiative (Mahoney, Larson, Eccles, & Lord, 2005).

Initiative experiences can be broken down into smaller categories of goal setting, effort, problem-solving, and time management (Dworkin et al., 2003). Both action-control theory and self-determination theory share the fundamental assumption of the person as an active, goal oriented, and self-regulating organism (Little, Hawley, Heinrich, & Marsland, 2002). In OSTPs adolescents are presumably involved in tasks that require agentic behavior such as goal-setting (Larson, et al., 2005). In the process of goal attainment, adolescents’ agency beliefs reflect their individual assessment of how much control they can exercise and thereby how much effort they are willing to expend on goal-directed activities (Walls & Little, 2005). The amount of effort that adolescents are willing to put into organized activities is likely linked to the problem-solving

strategies that they use. Problem-solving experiences in learning contexts such as OSTPs have been linked to cognitive engagement and youth resiliency (Connell, 1990; Fredricks, Blumenfeld, & Paris, 2004; Fredricks & Eccles, 2008). Additionally, developmental experiences in OSTPs that encourage self-regulatory processes, like time management, are among the many factors likely to spur the development of autonomy in adolescence (Turner, Irwin, Tschann, & Millstein, 1993; Zimmer-Gembeck & Collins, 2008).

Past literature supports the importance of initiative experiences for adolescent development in OSTPs. Initiative experiences were the particular developmental experiences that had the most differentiation across contexts and activities for adolescents in grades 9 to 12 in a study by Hansen, et al. (2003). Not only did youth report more initiative experiences in OSTPs than at school and with friends, but they also reported having the most initiative experiences in community service programs (the least in performing arts programs). Another study by Larson, et al. (2006) found that 11th graders reported the most initiative experiences in sports and the least in academic clubs. In addition, partnerships with adults tend to scaffold youth's learning of initiative in OSTPs (Larson, et al., 2005). One can expect that adolescents who participate in OSTPs are likely to have initiative experiences and that the rate of initiative experiences will vary from program to program.

Identity work experiences. Establishment of identity is a major developmental task for adolescents, who are likely to explore a number of options and roles that they evaluate and incorporate into their self-concepts. Current research has linked activity type, diversity, and intensity of participation in OSTPs to identity formation, where the element of choice (volition) is key to youths' emergent self-concept (Busseri & Rose-Krasnor, 2009). Additionally, the developmental experiences youth have in organized activities are likely to encourage both

identity exploration and reflection, collectively referred to here as identity work. Identity exploration and reflection entails those identity work experiences linked to the ‘moratorium’ identity status where adolescents seek and try out meaningful adult roles and values before forming firm commitments (Kroger, 2003). Thus, OSTPs that allow early adolescents to explore and reflect on meaningful life directions, choose from a number of activities, adopt various roles and be introduced to appropriate values can foster identity formation (also referred to as identity achievement/clarity/affirmation).

Empirical studies that have examined identity clarity and self-identification/identity affirmation found that these are also important to youth development in OSTPs. McIntosh et al (2005) conducted a longitudinal study that followed 173 middle-class suburban youth from 10th to 12th grades. Findings indicated that adolescent identity clarity (certainty of identity) fluctuates over time, taking a sharp dip in middle high school years before a sharp return to initial levels at the end of high school. Community service participation (a type of OSTP activity) was found to be a significant predictor of identity clarity, along with age, gender, and peer group. Apart from the type of OSTP activity, the peer context embodied by the activity is linked to adolescents’ identity formation. In a longitudinal study, Barber, et al. (2005), followed 1800 working-class and middle-class youth, from 6th to 12th grades. They found that types of activity participation were often related to youth’s self-identification with stereotypical characterizations. For example, male athletes readily identified themselves as jocks and cheerleaders identified themselves as princesses. Furthermore, self-identification and one’s identified peer context combined to predict educational attainment; for example, male and female jocks in academic peer contexts were more likely to go on to college and earn a degree than similar youth in non-academic or risky peer contexts. Therefore, adolescents’ interaction with groups of peers and

types of activities that they may identify with in OSTPs is likely to be linked to the developmental experience of identity work.

Emotional regulation experiences. Abilities to internally regulate and express emotions in building important social relationships increase in early adolescence as youth demonstrate greater independence in setting goals and executing plans. Skills that are important to emotional regulation such as adaptive goals, decision-making, prosocial behaviors, and establishing healthy interpersonal relationships can be acquired through SEL – social and emotional learning (Elias & Gordon, 2009). Previous research has identified SEL as a major outcome of OSTP participation. However, in the same way that learning is a function of experience, SEL might be a function of emotional regulation experiences. Adolescents tend to report having to confront situations in OSTPs that involve emotional regulation experiences such as controlling anger, overcoming fear and anxiety, handling stress, and managing the effect of emotions on performance (Dworkin et al., 2003). Research supports that these types of emotional regulation experiences foster emotional competence, a key developmental task of adolescence (Catalano, et al., 2002; Salovey & Mayer, 1990) Hence, the relationship between OSTP participation and SEL could implicate a major role for emotional regulation experiences.

The idea that OSTP participation is particularly linked to SEL is well supported in the literature. Mahoney et al, (2004) found that social and emotional competencies, such as increased self-esteem and decreased aggressive behavior, were associated with youth involvement in organized activities during after-school hours. In a recent meta-analysis that examined SAFE (sequenced, active, focused and explicit) features of ASPs and their moderating effect on SEL, participation as opposed to non-participation had an overall positive and statistically significant impact on youth's feelings and attitudes (Durlak, Weissberg, & Pachan,

2010). Similar use of a control group of non-participants by Darling (2005) among a sample of 3761 adolescents in high school revealed that OSTP participation was associated with more positive attitudes toward school over time. In another longitudinal study by Bohnert and Garber (2007), 12th grade adolescents with higher participation rates (and presumably more emotional regulation experiences) in OSTPs reported lower scores on externalizing psychopathological behaviors (e.g. smoking and substance abuse), even after controlling for SES, risk, and 8th grade externalizing behaviors. Clearly, emotional regulation experiences should be relevant to the SEL of youth participating in OSTPs.

Interpersonal Developmental Experiences

Positive relationship experiences. Relationships with prosocial peers and supportive adult leaders in OSTPs provide youth with positive social norms, opportunities to belong, feelings of accomplishment, and a sense of importance (Eccles & Gootman, 2002). Adolescents' increasing pursuit of autonomous action as they forge identities for themselves (Erikson, 1968), is related to the transformation of their role in attachment relationships from passive recipients to active and responsible agents (Allen & Land, 1999). Close, positive, and egalitarian relationships with adults provide a model for youth to construct and learn new adult-like roles in interpersonal relationships (Vygotsky, 1978). Relationships with adults and peers that meet adolescents' needs for autonomy support, connectedness, and social feedback, foster attachment security (Ainsworth & Ainsworth, 1958). In turn, attachment security sustains motivation, effort, and persistence in the face of challenges that are likely to arise in navigation of interpersonal relationships (Shaver & Mikulincer, 2007) and teamwork experiences.

Research supports the importance of diverse and prosocial peer relationships for adolescent development in OSTPs. Interaction with prosocial peers was related to greater school engagement and lower levels of depression among 498 middle-class youth in 9th, 10th and 11th grades who participated in extra-curricular activities (Fredricks & Eccles, 2005). Yet, results can be mixed concerning the relevance of peers. For example, Barber (2005) found that among a sample of OSTP youth from 8th to 12th grade in 933 middle-class families, aspects of interpersonal interactions, such as social initiative and perspective taking, were positively related to academic achievement but peer connection was not. Both prosocial norms and diverse peer relationships emerged as important factors in interpersonal interactions among youth in OSTPs (Larson, et al., 2006). Positive relationships experienced in OSTPs are key to adolescents' development as prosocial individuals capable of dealing with diversity.

The ability to form positive peer relationships is an indicator of psychological adjustment (Masten & Coatsworth, 1998). Diverse peer relationships present a healthy alternative opposite to 'cliquish' behaviors that have been associated with maladaptive behavior such as co-rumination among adolescents (Smetana, Campione-Barr, & Metzger, 2006). For example, intergroup contact can increase adolescents' thinking about fairness and equality when considering racial exclusion (Killen, 2002). Community-based OSTPs often provide adolescents with the opportunity to interact with a heterogeneous group of individuals, which has been linked to adolescents' social trust, tolerance, and reduction of stereotypes (Flanagan, Gill, & Galloway, 2005). Positive social norms should feature prominently in positive developmental settings such as OSTPs (Catalano, et al., 2002; Eccles & Gootman, 2002). Participation in OSTPs, particularly community-based programs that espouse prosocial ideologies, can lead to positive development in the formation of prosocial identities among youth (Youniss, McLellan, & Yates, 1997).

OSTPs can be viewed as part of the extrafamilial context that facilitates connections to prosocial organizations and prosocial adults outside of the family, thereby promoting resilience among adolescents (Masten & Coatsworth, 1998).

Teamwork experiences. Teamwork experiences in OSTPs can teach youth character life skills (Danish, Taylor, & Fazio, 2003) that are crucial in a globally expanding job markets that emphasize collaboration. The amount of teamwork experiences that youth have in OSTPs vary considerably by activity type. Youth report more teamwork experiences in sports, service-learning, and faith-based activities but less teamwork experiences in academic clubs, arts programs, and community-oriented programs (Larson, et al., 2006). In an intensive case study of youth in an OSTP (FFA Chapter), youth reported learning how to operate within a team and develop interpersonal skills during organized activities (Larson, et al., 2005). However, that study was based on a rural sample of adolescents. A longitudinal study of urban youth in a media design OSTP (Larson, 2007) revealed that through working together with their peers and guided by adult workers, adolescents learnt to help and be helped, to give and take feedback, to lead and to be led. These processes labeled group process skills, authentic feedback, and leadership, respectively, are indicative of the development of teamwork among adolescents in OSTPs.

Group process skills are those teamwork experiences that allow adolescents to learn important social and communication skills that help them to function in teams, assimilate feedback, and assume positions of leadership/responsibility. Research by Larson (1983) has shown that peer group interactions, similar to that which takes place in OSTPs, are associated with positive feedback. Also, in early adolescence youth assume more autonomy in relationships and positive feedback from adults in relevant developmental settings (such as OSTPs), which facilitate learning new cognitive-affective appraisals of these relationships and the autonomous

roles undertaken (Granic, Dishion, & Hollenstein, 2003). OSTPs that support youth autonomy permit youth to experience efficacy and mattering through taking on responsibility and lead roles (Eccles & Gootman, 2002). Leadership is among the skills essential to preparing adolescents for challenges and responsibility of adulthood (Villarruel, Montero-Sieburth, Dunbar, & Outley, 2005) and should be part of the intentional design for OSTPs (Walker et al 2005). Many youth develop leadership skills during structured extracurricular activities (Wehman, 1996), and youth who participate in formal and informal leadership activities tend to report higher levels of self-efficacy (Sipe, Ma, & Gambone, 1998).

Factors of Program Participation Linked to Developmental Experiences

Developmental experiences have been treated as an outcome of program participation in prior research. Types of activities that youth participate in at OSTPs bear a relationship with the amount of developmental experiences youth report in organized activities. For example, Larson, Hansen, and Moneta (2006) found that faith-based OSTPs tend to provide more developmental experiences than performing arts groups, academic clubs, and sports. Likewise, Pedersen and Siedman (2005) concluded that religious groups, which can contribute to urban minority youth's cultural identity, may be particularly beneficial in determining outcomes. Beyond activity type, other participation factors like dosage, enjoyment (intrinsic motivation to participate), adult-youth ratios, and leadership opportunities can amplify youth's developmental experiences in OSTPs (Hansen & Larson, 2007). The quality of a program is another factor believed by many to be of paramount importance to adolescent development in the OSTPs (Grossman, Campbell, & Raley, 2007; Hirsch, Mekinda, & Stawicki, 2010; Smith, Peck, Denault, Blazeovski, & Akiva, 2010) and youth tend to report more developmental experiences in higher quality programs

(Cross, Gottfredson, Wilson, Rorie, & Connell, 2010). In this study, however, developmental experiences are treated as independent variables in order to examine the association of developmental experiences with early adolescents' engagement/disengagement with challenge in OSTPs.

Adolescents' Motivation and Engagement in OSTPs

To understand the link between early adolescents' developmental experiences in OSTPs and engagement/disengagement with challenge, it is important to first understand what motivates youth to participate in OSTPs and how this might affect their subsequent engagement. It could be that motivations interact with developmental experiences to influence outcome states such as engagement with challenge. Intrinsic motivation in particular is important for maximum learning and developmental benefits in achievement-related contexts as intrinsically motivated youth are likely to become engaged in the tasks at hand. Self-determination theory and flow theory are two motivational theories that have been used to help explain why youth get involved and stay involved in OST programs.

Self-determination. Self-determination theory views individuals as intrinsically motivated to satisfy needs of autonomy, competence, and relatedness (Ryan & Deci, 2000). Thus individuals tend to actively seek out and perform at optimal levels in environments that facilitate satisfaction of these needs. The developmental experiences that youth are presented with in OSTPs challenge them to balance autonomy with relatedness (Larson, Pearce, Sullivan, & Jarrett, 2007); youths' successful navigation of this challenge is associated with feelings of competence. OSTPs, therefore, are poised as prime settings to meet youths' motivational needs, bringing youth to an optimal level of intrinsic motivation, and maximizing learning benefits.

Flow. Researchers have predominantly used flow indicators as behavioral measures of youths' engagement in OSTPs (Shernoff, 2010; Shernoff & Vandell, 2007; Vandell et al., 2005). A state of flow is characterized by concentration, challenge, effortful control, enjoyment, and de-emphasis of self (Csikszentmihalyi, 1990). Flow is a subjective experience of intrinsic motivation that requires an individual's complete immersion in a task and a predominance of positive affect. A match between the level of challenge in the activity context and the skill level of the individual is integral to achievement of flow (Csikszentmihalyi, 1990; Eccles & Wigfield, 2002). Developmental experiences in OSTPs that represent a stage-environment fit are therefore likely to be conducive to flow-related states of intrinsic motivation.

Defining the Broader Concept of Engagement

The issue of engagement is a 'hot topic' in contemporary educational psychology; however, there have been problems in coming to a consensus about what comprises engagement. Firstly, engagement is a multi-dimensional construct and differences exist in the literature as to what those dimensions are. Engagement may consist of: cognitive and behavioral dimensions (Martin, 2009); cognitive, behavioral and affective components along with the cognitive and behavioral (Fredricks, et al., 2004; Jimerson, Campos, & Greif, 2003); cognitive/psychological elements (Appleton, Christenson, Kim, & Reschly, 2006); or flow-related concepts such as persistence, effort, and choice (Vandell, Shernoff, et al., 2005) or enjoyment, concentration and interest (Shernoff, 2010).

Another issue that has emerged is the entanglement of motivation and engagement in the literature so that it can be difficult to ascertain whether they are one and the same, whether motivation precedes engagement or vice versa, whether certain types of motivation such as

intrinsic motivation are necessary for engagement, or whether engagement is simply a form of active (behaviorally-expressed) motivation. Motivation is separate from engagement because individuals can be initially motivated to participate in an activity yet not be engaged in actual activity (Appleton, et al., 2006). It is implied that while motivation is necessary for engagement to occur, it is not sufficient. I propose that in addition to motivation, developmental experiences are also important for engagement/disengagement with challenge.

Adolescents' Engagement/Disengagement with Challenge in OSTPs

Engagement/disengagement with challenge differs from other conceptions of engagement found in previous literature because it focuses specifically on the enjoyment of challenge/ lack of interest in OSTP activities. Enjoyment, challenge, and interest are indicative of both self-determination and flow. Engagement with challenge is characterized by, "higher-order linkages between adolescents' intrinsic motivation and the demands or 'challenges' within domains that mimic conditions faced by adults." (Hansen & Moore, n.d). The concept of engagement with challenge includes cognitive, affective, and behavioral dimensions because it implies that youth are particularly engaged when the intrinsic motivation to participate is cognitively linked with positive feelings of challenge in the context of focused activity participation. However, it is recognized that not all youth in OSTPs will report engagement with challenge in their programs. Instead activities that are unfocused, unimportant to youth, and boring may be associated with youths' disengagement. A lack of intrinsic motivation to participate, coupled with low task-value in the ambiguous context of poorly designed activity, is likely to characterize youths' disengagement in OSTPs. Thus, engagement with challenge and disengagement with challenge

do not simply exist on opposite ends of a continuum but are separate, divergently related constructs.

Engagement/disengagement with challenge is a fairly new concept and little empirical research has been done on it, although it has been examined in qualitative research looking at the development of initiative and teamwork among rural adolescents in an OSTP (Larson, et al., 2005). Other forms of engagement have been regarded in past studies as both an outcome of participation in OSTPs and a mediator of other outcomes such as social competence, emotional adjustment and academic performance (Mahoney, Lord, & Carryl, 2005; Shernoff, 2010; Shernoff & Vandell, 2007; Vandell, Pierce, & Dadisman, 2005; Vandell, Shernoff, et al., 2005). Thus engagement is viewed as playing a key role in the positive outcomes associated with adolescents participation in OSTPs (Durlak, Mahoney, Bohnert, & Parente, 2010).

Current Study

The current study proposes to examine the association of youths' self-reported developmental experiences in OSTPs (initiative, identity work, interpersonal relationships, teamwork and emotional regulation) with youth's engagement/disengagement with challenge, in order to better understand how youths' participation in OSTPs can have positive outcomes. Particularly, the aim is to answer the general research question of whether specific developmental experiences of OSTP youth are related to their engagement with challenge/disengagement and to explore the implications of these findings.

First, at the individual level, developmental experiences are expected to be positively associated with engagement with challenge but negatively associated with disengagement with challenge after controlling for individual differences in gender, grade level, hours of participation, and motivations for participation. Second, it is also expected that developmental

experiences will have positive bivariate correlations with engagement with challenge but negative correlations with disengagement at both the individual-level and the program-level units of analysis. Also at the program-level, participants' age and hours of participation in program activities should be significantly correlated with both early adolescents' engagement/disengagement with challenge and self-reported developmental experiences. Similarities are expected among the developmental experiences that emerge as significant within individual-level and program-level units of analyses.

Chapter 3: Methods

Participants

This research used secondary data from the United Way of Kansas City's OST Quality Matters Project. This study includes only those participants in 5th - 8th grades ($N = 274$) that made up 82% of the original sample ($N = 334$). A total of 23 different OSTPs in the Greater Kansas City area were sampled. These OSTPs comprised national programs (Boys and Girls Club, Y-clubs), community programs (e.g. Guadalupe Center, Swope Corridor Renaissance – including faith-based programs, Local Investment Commission), and school district-level programs. Extra-curricular activities and summer-programs were not included in this sample. The mean age for participants was 12.12 ($SD = 1.19$). Participants ranged in age from 10 – 16 years old with most participants being either 11 years old (29.2%), 12 years old (25.5%) or 13 years old (21.9%). There were 145 females and 124 males, with five participants choosing not to respond to the question on gender. The ethnic composition of the sample was: 47.8% Black, 17.2% Hispanic, 15.3% White, and 11.7% other; 8% failed to indicate.

Procedures

Researchers recruited 25 out-of-school time programs in a mid-western metropolitan area. The programs were selected so that approximately 50% of youth in the sample were eligible for the Federal Free and Reduced Lunch Program. Additionally, a combination of different types of out-of-school time programs, such as academic focused programs or life-skill focused programs, were included. Prior to the actual data collection, programs were contacted and provided with a description of the study. Of the 25 programs selected, two combined to form one program, resulting in a total of 23 programs.

During data collection, questionnaires were administered to youth at the program sites by research staff. Staff was trained according to the standards of the Human Subjects Committee of Lawrence (HSCL) to ensure ethical treatment of participants. At the site, a researcher read the instructions aloud to youth in the beginning and made it clear that they did not have to participate if they did not wish to and that they could discontinue at any point if so desired. After written assent was obtained, youth were then given as much time as necessary to complete the questionnaire. Research staff then collected completed questionnaires from youth and thanked them for their participation.

Measures¹

Engagement/Disengagement with challenge. Engagement with challenge was evaluated using a self-report measure by Hansen and Larson (2007) that consisted of two sub-scales, each containing three items. The first sub-scale was called engagement with challenge ($\alpha = .73$, $M = 3.99$) and the second sub-scale was called disengagement ($\alpha = .61$, $M = 3.07$). Scores ranged from 1 – strongly disagree to 6 – strongly agree, with high mean scores reflecting either high engagement with challenge or high disengagement accordingly.

Developmental experiences. To measure youth's experiences in the program, the five main scales and eleven sub-scales from the Youth Experience Survey – YES; (Hansen & Larson, 2005; Hansen, et al., 2003) were used (see Appendix 1). Participants were asked to rate how much of specific experiences they had in program activities. All items were rated on a close-ended four point Likert-type scale from 1 to 4. A score of 1 = 'yes, a lot' and a score of 4 = 'not at all'. However, these scores were reversed so that a higher score means youth are having more of these experiences (see Table 1 for sample items).

¹ Only measures pertaining to the current study are described here. See appendix 2 for complete survey.

The initiative scale ($\alpha = .88, M = 2.72$) comprised 14 items in total, three items each from the goal setting ($\alpha = .81, M = 2.75$), effort ($\alpha = .82, M = 2.75$) and problem-solving ($\alpha = .75, M = 2.64$) sub-scales, and five items from the time management sub-scale ($\alpha = .51, M = 2.74$). The identity work scale ($\alpha = .81, M = 2.56$) comprised seven items in total, three items from the identity exploration sub-scale ($\alpha = .65, M = 2.49$) and four items from the identity reflection sub-scale ($\alpha = .82, M = 2.66$). The emotional regulation scale ($\alpha = .70, M = 2.73$) comprised 4 items and had no sub-scales. The positive relationships scale ($\alpha = .84, M = 2.89$) comprised 8 items in total, four items each from the diverse peer ($\alpha = .77, M = 3.04$) and prosocial norms sub-scales ($\alpha = .75, M = 2.75$). Lastly, the teamwork scale ($\alpha = .89, M = 2.76$) comprised 14 items in total, seven items from the group process skills sub-scale ($\alpha = .81, M = 2.82$), four items from the feedback sub-scale ($\alpha = .78, M = 2.69$) and three items from the leadership sub-scale ($\alpha = .72, M = 2.68$).

Participation motivation. To measure youth's motivation, a scale developed by Hansen and Larson (2007) was used that looked at adolescents' reasons for after-school program participation. This scale comprised six sub-scales: future motivation, intrinsic motivation, parent motivation, skill development motivation and extrinsic motivation (each comprising three items); and social motivation comprising four items. Participants rated their responses on a scale from 1 to 3, where a score of 1 = 'not a reason', a score of 2 = 'sort of a reason', and a score of 3 = 'a big reason'. Therefore, a higher mean score indicates greater motivation in the areas of future motivation ($\alpha = .75, M = 1.99$); intrinsic motivation ($\alpha = .84, M = 2.15$); social motivation ($\alpha = .69, M = 1.86$); parent motivation ($\alpha = .56, M = 1.88$); skill development motivation ($\alpha = .50, M = 1.91$); and extrinsic motivation ($\alpha = .66, M = 1.84$).

Other control variables. Participants were asked to indicate gender as being male or female. Participants also selected the grade they were presently in. Age was reported using an open-ended fill in the blank item. Hours of participation was measured with a single open-ended item that asked youth, ‘About how many hours each week are you at [name of program]?’ with the average number of hours reported being 10.6 per week.

Chapter 4: Results

Individual Level Analysis

Descriptive statistics and bivariate correlations. The mean for the engagement with challenge scale ($\alpha = .73$) was 3.99 with a standard deviation of .18 (see Table 1). Engagement with challenge was scored on a 1 to 6 point scale. A mean of 3.99 indicates that students only ‘slightly’ agreed that they were engaged with challenge in their programs. All developmental experiences had significant, positive, and moderate correlations with engagement with challenge (see Table 2). Group process skills from the teamwork scale had the strongest relationship with engagement with challenge ($r = .40$) while leadership, also from the teamwork scale, had the weakest ($r = .25$). The motivation scales were also all significantly and positively correlated with engagement with challenge (see Table 3). Correlations ranged from moderate to weak with intrinsic motivation having the strongest relationship ($r = .31$) and skill development motivation having the weakest ($r = .17$). Grade level was the only independent variable that had a significant negative correlation with engagement with challenge ($r = -.224$), indicating that younger adolescents reported higher engagement with challenge.

The mean for the disengagement with challenge scale ($\alpha = .61$) was 3.07 with a standard deviation of 0.18. Disengagement with challenge was also scored on a 1 to 6 point scale. A mean of 3.07 indicates that students ‘slightly disagree’ that they were disengaged with challenge in their programs. Compared to engagement with challenge, slightly different patterns were seen for disengagement with challenge; it was significantly and negatively correlated with all the developmental experiences except for the sub-scales of diverse peers and emotional regulation with which it shared no significant relationship. The strength of relationships varied from moderate to weak. Goal setting from the initiative scale had the strongest relationship ($r = -.36$)

with disengagement with challenge while leadership had the weakest ($r = -.16$). The correlations between participants' motivations and disengagement with challenge were negative in direction and weak in magnitude. Intrinsic motivation ($r = -.19$) and parent motivation ($r = -.17$) were the only motivation scales that were significantly correlated with disengagement with challenge.

Participants' means for developmental experiences (scored on a scale from 1-4) ranged from 2.49 to 3.04, indicating that, on average, early adolescents in this sample reported 'quite a bit' of developmental experiences in their OSTPs. Positive relationship experiences had the highest mean score ($M = 2.89$, $SD = .27$) and identity work experiences had the lowest ($M = 2.58$, $SD = .18$). Among the subscales, participants reported having diverse peer experiences the most ($M = 3.04$, $SD = .16$) and identity exploration experiences the least ($M = 2.49$, $SD = .24$). The main scales for developmental experiences (initiative, identity work, positive relationships, teamwork and emotional regulation) were highly correlated with each other, particularly positive relationships and teamwork ($r = .69$), and initiative and identity experiences ($r = .66$). The subscales were also all strongly and positively correlated ($r \geq .70$) with the corresponding main scales. Among the initiative sub-scales, goal setting and effort were highly correlated ($r = .70$) with all other sub-scales sharing moderate correlations with each other. There was a trend of moderate correlations among sub-scales for the identity work ($r = .48$), positive relationships ($r = .60$) and teamwork sub-scales (ranging from .50 to .58).

The higher-order scales for developmental experiences had positive and significant correlations with all of the motivation scales, except parent motivation, which only shared a correlation with identity work ($r = .14$). Initiative experiences had the strongest correlation with skill development motivation ($r = .36$) but the weakest with extrinsic motivation ($r = .25$). Identity work had the strongest correlations with both future and skill development motivation (r

= .39) and the weakest with extrinsic motivation ($r = .33$). The other developmental experiences – positive relationships, emotional regulation, and teamwork – each had the strongest correlation with social motivation ($r = .34, .28$ and $.24$), respectively. Both positive relationships and teamwork had the weakest correlations with skill development motivation ($r = .23$ and $.16$), respectively, while emotional regulation had the weakest relationship with extrinsic motivation ($r = .24$).

All of the developmental experiences had significant correlations with participants' grade level except for the problem-solving and leadership sub-scales. Correlations were negative in direction and ranged from moderate to weak in magnitude. Time management had the strongest correlation with grade level ($r = -.25$) and feedback had the weakest ($r = -.13$). A few of the developmental experiences main and sub-scales were also significantly and positively correlated with the number of hours of participation, such as initiative ($r = .15$), – including goal setting ($r = .24$) and effort ($r = .19$); and positive relationships ($r = .15$), including diverse peers ($r = .14$). Grade level and hours of participation were significantly and negatively correlated with each other although the magnitude of the correlation was weak ($r = -.16$).

Participants scored highest on intrinsic motivation ($M = 2.15, SD = .05$) and lowest on extrinsic motivation ($M = 1.84, SD = .09$). Considering motivation was scored on a 1 to 3 point scale, a range of means from 1.84 to 2.15 tell us that participants were 'sort of' motivated to participate in the OSTPs sampled here. Motivations (future, intrinsic, social, skill development, parent and extrinsic), which were to be controlled for in the regression model, were somewhat less strongly correlated with each other. The most notable correlations were between future and skill development motivation ($r = .42$), and between intrinsic and social motivation ($r = .539$).

Preliminary Individual-Level Analyses: Engagement with Challenge

Qualification of outliers by analysis. Multiple regression analyses were used to evaluate the association of developmental experiences (IVs) with engagement with challenge (DV). Prior to conducting the main analyses, the data were evaluated for outliers. Evaluation of outliers included 1) Studentized deleted residuals, 2) Cook's Distance, 3) Centered Leverage, 4) a plot of regression leverage against regression studentized deleted residuals, and 5) an overlay of outliers classified according to the DFBETA (calculation of difference in residual values if outlier case were omitted) by sub-scales with partial plots for each sub-scale. Calculation of outlier values were as follows: for the studentized deleted residuals, cases with outlier values >2 were identified as outliers; for Cook's distance using the formula $4/n$ outliers were identified as cases with values above .019; for centered leverage analysis, the formula $(2k + 2)/n$ was used and cases with values above 0.06 were deemed outliers; for the sub-scale (partial plot) analysis, a DFBETA value was calculated as $2/\sqrt{n}$ and cases with value above 0.14 were deemed outliers. To qualify as outliers, cases had to be identified as having outlier values in at least 3 or more of these 5 measures.

Ten cases ($< 5\%$), qualified as outliers and were subsequently omitted from the sample before further analysis. The same regression model of developmental experiences with EWC was re-run without the outliers and it was found that the model improved; it now explained 36.2% (adjusted R^2) of the variance in the dependent as opposed to 28.6% when the outliers were included, an increase of 7.6% of explained variance. The data was then tested for normality using the Shapiro-Wilk statistic (.992, $p = .52$) and this statistic indicated the data was normally distributed. In addition, evaluation of histograms and QQ plots also supported normality. Lastly, a plot of the regression standardized residuals against the predicted values supported the

homoscedasticity of the data. Thus, these analyses indicate that normality requirements are met for regression analyses.

Initial model. An initial model that examined the association of the higher-order developmental experiences (IVs) with engagement with challenge (DV), while controlling for gender, grade level, hours of participation and motivations (future, intrinsic, social, skill development, parent, extrinsic), showed serious problems with multicollinearity. Multicollinearity was examined based on the criteria that a Condition Index value greater than 15 indicated slight problems and a value greater than 30 indicated serious problems. Based on correlational results that showed significant relations between early adolescents' grade level and developmental experiences reported, interactions between grade level and developmental experiences were tested in this initial model; however this group of variables amplified problems with multicollinearity, did not significantly increase the effect size of the model, and so were not included in any further models.

Primary Individual-Level Analyses: Engagement with Challenge

Hierarchical multiple regression. To create more concise models, only intrinsic motivation (the one significant control from the initial model) was entered as the control variable in subsequent regression analyses. The sub-scales for developmental experiences were used as independent variables instead of the higher-order scales. These were divided into two separate models: one for sub-scales related to intrapersonal development (emotional regulation, identity exploration, identity reflection, goal setting, effort, problem solving and time management), and one for sub-scales related to interpersonal development (diverse peer relationships, prosocial norms, group process skills, feedback information and leadership). Hierarchical multiple

regressions were evaluated based on the significance of the model and amount of variance explained (R^2 , ΔR^2). The direction of associations, strength, and significance of individual independent variables in the model were also evaluated using standardized beta weights and the unique variances associated with specific variables were evaluated using semi-partial correlations. Variables significant in these two models were then combined into a third, final model.

Intrapersonal developmental experiences. Model 1 examined the association of intrapersonal developmental experiences and engagement with challenge (see Table 4). Intrinsic motivation was entered in step one as a control variable, followed by emotional regulation, identity exploration, identity reflection, goal setting, effort, problem solving and time management as IVs in the second and final step. The model overall explained 34.9% ($\hat{R}^2 = .349$, $R^2 = .377$) of the variance in engagement with challenge, $F(8,174) = 13.18$, $p < .05$. After controlling for intrinsic motivation, intrapersonal developmental experiences explained 28.3% ($\Delta R^2 = .283$) of the variance in engagement with challenge, $\Delta F(7, 174) = 11.30$, $p < .05$. Intrinsic motivation ($b^* = .134$, $p < .05$), problem solving experiences ($b^* = .281$, $p < .05$), and time management experiences ($b^* = .178$, $p < .05$) were significantly associated with engagement with challenge, with all other variables being non-significant. Furthermore, based on semi-partial correlations, problem solving ($r = .227$, $p < .05$) explained 5.2% of the unique variance in engagement with challenge and time management ($r = .136$, $p < .05$) explained 1.8% of the unique variance in engagement with challenge. This time there was only a slight problem with multicollinearity with a final Eigen value of .027 and Condition Index value of 17.85.

Interpersonal developmental experiences. Model 2 examined the association of interpersonal developmental experiences and engagement with challenge, controlling for

intrinsic motivation. Intrinsic motivation was entered into the first step, followed by diverse peer relationships, prosocial norms, group process skills, feedback information and leadership in the second and final step². The model altogether explained 26.5% ($\hat{R}^2 = .265$, $R^2 = .286$) of the variance in engagement with challenge, $F(6, 200) = 13.37$, $p < .05$. Controlling for intrinsic motivation, interpersonal developmental experiences contributed 20% ($\Delta R^2 = .20$) unique variance in engagement with challenge, $\Delta F(5, 200) = 11.24$, $p < .05$. Intrinsic motivation ($b^* = .184$, $p < .05$) prosocial norms ($b^* = .236$, $p < .05$) and group process skills ($b^* = .178$, $p < .05$) were significantly associated with engagement with challenge, all other variables being non-significant. Furthermore, based on semi-partial correlations, prosocial norms ($r = .170$, $p < .05$) contributed to 2.9% of the unique variance in engagement with challenge and group process skills ($r = .134$, $p < .05$) contributed 1.8% of the unique variance in engagement with challenge. Again there was a slight problem with multicollinearity with a final Eigen value of .024 and Condition Index value of 16.85.

Final model. The final model, Model 3, examined the association of the significant intrapersonal and interpersonal developmental experiences from Models 1 & 2 with engagement with challenge, after controlling for intrinsic motivation. Intrinsic motivation was entered in the first step as a control variable followed by problem, solving, time management, prosocial norms, and group process skills in the second step. This final model explained 35.1% ($\hat{R}^2 = .351$, $R^2 = .367$) of the variance in engagement with challenge $F(5, 192) = 22.31$, $p < .05$. After controlling for intrinsic motivation, developmental experiences explained 27.1% ($\Delta R^2 = .271$) of the variance in engagement with challenge, $\Delta F(4, 192) = 20.59$, $p < .05$. Intrinsic motivation ($b^* = .148$, $p < .05$) problem solving ($b^* = .255$, $p < .05$), and time management ($b^* = .212$, $p < .05$)

² Even though neither teamwork nor positive relationships were significant in the initial model, they were examined further since these two variables were highly correlated ($r = .689$, $p < .01$) and the not-significant results may have been due to the masking effect of collinearity.

were significantly associated with engagement with challenge, all other variables being not significant. Furthermore, based on semi-partial correlations, problem solving experiences ($r = .202, p < .05$) contributed to 4.1% of the unique variance in engagement with challenge and time management experiences ($r = .161, p < .05$) contributed to 2.6% of the unique variance in engagement with challenge. This time multicollinearity was not a problem with a final Eigen value of .026 and Condition Index value of 14.82. This model is seen as presenting the best fit because even though, the R^2 value appears to be .10 less than model 1, when the \hat{R}^2 is examined, this model actually explains slightly more variance (2%) in the dependent variable.

Preliminary Individual-Level Analyses: Disengagement with Challenge

The same process used to identify outliers for engagement with challenge was repeated for disengagement with challenge. Eight cases qualified as outliers and were subsequently omitted from the sample before further analysis. The residuals were then tested for normality using the Shapiro-Wilk statistic (.983, $p = .027$) that did not support the assumption that the data was normally distributed. Generated histograms and QQ plots also confirmed deviations from normality in the data. As a result, plans for multiple regression analyses with disengagement with challenge as a dependent variable were discontinued due to violation of the major assumption of normality. Bivariate correlations among the variables of interest were examined in lieu of multivariate relationships.

Program-Level Analysis

Program data was created by generating descriptive statistics grouped by program. Each program was treated as a separate case for which mean scores on age, hours of participation,

engagement/disengagement with challenge, and developmental experiences were created. From a sample of 23 programs, 17 were included in the final analysis. Programs were excluded based on the fact that they had less than three members total or less than 3 members with valid scores for any of the scales.

Descriptive statistics. The mean age of participants across OST Programs was 12.1 years. On average, early adolescents spent 10.5 hours a week in OSTPs (see Table 5). Youth reported having positive relationship experiences the most ($M = 2.92$, $SD = .22$), especially diverse peer experiences ($M = 3.05$, $SD = .27$). However, youth reported identity work experiences the least ($M = 2.66$, $SD = .28$), particularly identity exploration experiences ($M = 2.58$, $SD = .28$). The mean score for engagement with challenge across programs ($M = 4.06$, $SD = .35$) was higher than disengagement with challenge ($M = 3.12$, $SD = .42$). These results are similar to those of the individual-level analysis.

Bivariate analysis. Pearson's correlation coefficient was used to test for the magnitude and direction of relationships among age, hours of participation, engagement/disengagement with challenge, and developmental experiences (see Table 6). Although the program-aggregated developmental experiences were not statistically significantly correlated with engagement with challenge, a few were significantly and negatively correlated with disengagement with challenge. These were feedback ($r = -.60$), initiative ($r = -.59$), problem solving ($r = -.55$), and identity reflection ($r = -.50$). Unlike patterns seen with grade level in the individual analysis, age was not significantly correlated with either engagement/disengagement with challenge or developmental experiences at the program level.

Hours of participation was significantly and positively correlated with engagement with challenge ($r = .52$). Problem solving experience of the initiative scale had the strongest relationship ($r = .55$) with hours of participation while feedback had the least strong ($r = .54$).

Chapter 5: Discussion

Overview of Significant Findings

The major hypotheses in this study were partially supported. At the individual-level, some of early adolescents' developmental experiences (IVs) in OSTPs were positively associated with their engagement with challenge (DV) after controlling for participants' motivations. In the final model, after controlling for intrinsic motivation (that proved to have a significant, positive association with engagement with challenge), initiative sub-scales of problem-solving and time management were also significantly and positively associated with engagement with challenge. The association of developmental experiences (IVs) and disengagement with challenge (DV) was not examined using regression analysis due to non-normal distribution of residuals for multilevel relationships between the IVs and DV. Nevertheless, all youths' self-reported developmental experiences (except emotional regulation) had significant and negative bivariate correlations with disengagement with challenge.

At the program level, correlational analyses revealed that early adolescents' developmental experiences in OSTPs were not significantly related to engagement with challenge but a few had significant negative relationships with disengagement with challenge. Specifically, the more developmental experiences of problem-solving, feedback and identity reflection that youth had in an OSTP the less likely they were to be disengaged with challenge in that program and vice versa. Additionally, across programs developmental experiences had a positive correlation with the number of hours of participation per week. The more hours per week early adolescents spent in their OSTP, the more problem-solving and feedback experiences they reported.

Engagement with Challenge

Past literature supports the relationship between motivation (especially intrinsic motivation) and engagement (Appleton et al., 2006; Fredericks et al., 2004). However, because both motivation and developmental experiences were significantly associated with engagement with challenge, this current study supports the theory that engagement with challenge is characterized by higher-order linkages between intrinsic motivation and environmental demands (Hansen & Moore, n.d). In OSTPs, developmental experiences are the environmental demands that, whether considered independently or combined with participants' intrinsic motivation, have a significant association with engagement with challenge. Particularly, problem-solving and time management experiences seem to promote individuals' engagement with challenge in OSTPs.

Developmental Experiences

While it was supported that developmental experiences were significantly and positively associated with engagement with challenge at the individual level, the same results did not occur at the program level. Developmental experiences were not correlated with engagement with challenge at the program level. Given the magnitude of the correlations however, the small sample size for the program-level analyses is the most reasonable explanation for non-significant results. This finding, however, is somewhat contrary to findings by Cross et al (2010) who considered engagement to be an indicator of program quality and found that it was positively related to developmental experiences. This disparity may in part be explained by the difference in the conception of engagement as a quality indicator and as a behavioral, observed measure in Cross et al's study from the concept of engagement with challenge, a self-report measure in this present study. Program quality extends beyond participants' level of engagement to include several other factors such as safe and supportive environments, positive interpersonal

interactions, and active reflection (Smith et al, 2010). Previous research also suggests that adult leaders' partnership with youth is an element of program quality related to participants' engagement levels in OSTPs (Shernoff & Vandell, 2007; Vandell, Shernoff, et al., 2005). Thus from a more holistic conception of OSTP quality, it is possible that at the program-level, quality is more closely related to engagement with challenge than is developmental experiences, the latter playing a mediating role.

An alternative explanation is that at the program-level developmental experiences are more pertinent to safe guarding against disengagement. The correlational relationships observed here between disengagement with challenge and developmental experiences infer that if you don't want early adolescents to be disengaged in OSTPs then provide them with lots of developmental experiences. This finding could also signify more of a preventative approach than a positive youth development approach among programs sampled (Lerner et al., 2005). Yet, preventing disengagement among program youth still may not be enough to facilitate engagement with challenge. In addition to developmental experiences, engagement with challenge may require an intrinsic motivational climate, as evidenced by the significant and positive associations of intrinsic motivation and engagement with challenge in individual-level analyses.

Another possible explanation is that individual participants involved in the same program had different developmental experiences and varying levels of engagement based on the type of activities they participated in (Larson et al., 2006; Shernoff & Vandell, 2007). Furthermore, even within the same activity youth that assume different roles may report different developmental experiences. According to Hansen and Larson (2007) youth in lead roles tend to report more developmental experiences even after controlling for the type of activity. Therefore, it is possible

that these individual differences in developmental experiences and engagement with challenge precluded significant relations between the two at the program level.

Initiative experiences. Of all the developmental experiences, initiative was the only experience with sub-scales that had individual significant relationships with engagement with challenge in the final model. Previous studies have also identified initiative as a key developmental experience for youth in OSTPs (Hansen & Larson, 2007; Hansen et al., 2003; Larson, 2000; Larson et al., 2006, Larson et al., 2005). In this study it was found that early adolescents were likely to be engaged with challenge in OSTP programs that offer high rates of problem-solving and time management experiences. The association of problem-solving and time management with engagement with challenge highlights developmental experiences with agentic properties and paints a picture of active engagement. Connell's (1990) theoretical model of student engagement proposed that flexible problem solving and an independent work style (which requires time management skills) are both elements of cognitive engagement.

Although engagement with challenge was presented in this study as a multidimensional concept encompassing not just cognitive elements but behavioral and affective elements as well, results seem to indicate that for early adolescent participants in OSTPs, developmental experiences that expand and hone their cognitive skills have the strongest association with engagement with challenge. This finding is not surprising as the onset of puberty in early adolescence signals neurological reorganization of the brain resulting in increased cognitive capacities for information processing and self-regulatory skills, such as executive functioning (Blakemore & Choudhury, 2006; Eccles, et al., 2003; Kuhn, 2006; Luria, 1966).

Problem-solving, in particular is also associated with other positive development outcomes. The development of problem solving skills in OSTPs has also been linked to

resilience among adolescents in 7th - 11th grade, especially in those programs that present a challenging context including planning and feedback as well (Fredericks & Eccles, 2008). This current study also has implications in support of ideas that problem-solving experiences (an aspect of cognitive engagement) could be indicative of intrinsic motivational states such as self-determination, and mastery goal-orientations (Eccles & Wigfield, 2002; Fredricks et al., 2004) because both intrinsic motivation and problem-solving were positively associated with engagement with challenge in the final model.

The time management sub-scale of initiative was also significantly associated with engagement with challenge at the individual-level. This scale had low reliability and may not produce similar results in another sample, so care has to be taken in interpreting this result. For example, issues of reliability could explain why only problem solving but not time management shares a relationship with disengagement with challenge at the program level.

Identity work experiences. Apart from moderate problems with multicollinearity, Model 1 with intrapersonal developmental experiences explained more variance than Model 2 with interpersonal developmental experiences, as well as more than both combined (Model 3). Nevertheless, the identity work scale comprising both identity exploration and identity reflection failed to reach significance in any of the regression models at the individual level. This finding is contrary to previous research that regarded identity development as a key task of adolescence, linking it to a number of positive outcomes such as psychological adjustment and educational attainment of OSTP participants (Barber et al., 2001; Barber, Stone et al., 2005; Eccles & Barber, 1999; McIntosh et al., 2005). Such studies have posited that extra-curricular activities play a major role in identity affirmation and clarity but these findings were mostly for an older population of adolescents than was studied here. According to Kroger (2003), this could be an

indication that early adolescents in the current sample have identity statuses that are either formed prior to experiential exploration and reflection, e.g. based on parental values (in a state of foreclosure) or lacking commitment to exploration of /reflection on suitable personally expressive identities (in a state of diffusion). Alternatively, it could be that the concepts of identity affirmation and clarity as measured in relation to peer contexts in previous studies are qualitatively different from identity work experiences as conceptualized in the present study. The former is likely driven by social influences while the latter is more internally based.

At the program-level, the identity reflection sub-scale produced significant results. A negative relationship between identity reflection and disengagement with challenge across programs could indicate that in as early as fifth grade, the more adolescents' reflect on their identity, the less likely they are to be disengaged with challenge in an OSTP and vice versa. It is possible that these findings, if extended to the classroom, could support the need for academic material to bear relevance to students' lives so that they are not disengaged. Student disengagement from as early as elementary school has been linked to high dropout rates later in high school (Christenson, 2004; Fredricks et al., 2004). The middle school years (early adolescence) may represent a prime period for interventions to help disengaged students become engaged in learning. More importantly, it has implications for the role of OSTPs in providing this key developmental experience of identity reflection, thereby complementing and bolstering students' academic learning (Mahoney et al., 2004).

Emotional Regulation. Results concerning emotional regulation were mixed. Emotional regulation was not significantly associated with engagement with challenge in the regression model but it did have a significant and positive, though moderate, correlation with engagement with challenge at the individual-level, yet not the program-level. The positive association

between OSTP participation and SEL as evidenced in the literature (Bohnert & Garber, 2007; Darling, 2005; Durlak et al., 2010; Mahoney et al., 2004) is thus probably more complex than a function of emotional regulation experiences as was proposed in this study. The scale meets standards of reliability and so results are probably due to actual relationships between variables within the sample; for example, emotional regulation was more strongly correlated with the other developmental scales than it was with engagement with challenge. It also had the weakest correlation with engagement with challenge of all the developmental experiences.

Although early adolescents who reported more emotional regulation experiences in OSTPs were also more likely to be engaged with challenge, this relationship did not explain any more of the variance in engagement with challenge than that explained by the other developmental experiences. The problem with emotional regulation at the program-level might be that the amount of emotional regulation experiences these early adolescents had varied considerably from program to program. At the program-level, emotional regulation had the strongest correlation with the diverse peers subscale (from the positive relationship experiences scale). This might suggest that another program-level variable at OSTPs such as diversity or lack thereof, could have a more direct relationship with emotional regulation experiences, precluding significant correlations with psychological variables such as engagement/disengagement with challenge. Additionally, based on Elias and Gordan's (2009) definition of emotional competence as an active creation and integration of one's cognitive developmental functioning and social experience, emotional regulation could be as much an interpersonal developmental experience as an intrapersonal one and this may explain some of the confounding effects.

Positive relationships. Results for the importance of positive relationships to engagement with challenge were mixed. The prosocial norms sub-scale in particular, was

significant in Model 2, where only interpersonal developmental experience sub-scales were entered but not in the final model when combined with problem-solving and time management. Previous studies that found prosocial peers (Barber et al., 2005; Fredricks & Eccles, 2005) and diverse peers (Larson et al, 2006) to be important for adolescent development in OSTPs were based on older samples of adolescents from 8th grade up. It could be that the elements of interpersonal interaction examined here (diverse peers and prosocial norms) were not as important for early adolescents as were initiative experiences, like problem-solving and time management.

An alternative explanation is that youths' experiences of positive relationships with staff specifically (which was not directly addressed here), are most imperative to any benefits gained from OSTP participation. Adult-youth ratios (Hansen & Larson, 2007), the prevalence of youth-adult partnerships, e.g. how much time youth spend working with adults in OSTPs (Shernoff & Vandell, 2007) , and the quality of adult-youth relationships (Cross, et al., 2010) might have more direct and stronger associations with engagement with challenge.

Teamwork. Teamwork also produced mixed results in the regression models. It is important to note here that teamwork and positive relationships were highly correlated with each other, making multicollinearity a problem. Teamwork followed a similar pattern to positive relationships in that one of its sub-scales (group process skills) was significant in Model 2 but not in Model 3 when the initiative sub-scales were introduced. It could be that, due to these variables explaining the same portion of variance in engagement with challenge, neither emerged as a contributor of unique variance. On the balance, teamwork might be more important in sport related activities (Danish, et al., 2003; R Larson, et al., 2006) and none of the OSTPs sampled here were sports programs.

Grade Level

Grade level was significantly correlated with both engagement and disengagement with challenge at the individual-level. However, it had a negative relationship with the former and a positive with the latter, suggesting a developmental trajectory. Older adolescents were less likely to engage with challenge and more likely to disengage with challenge in OSTPs. Similar patterns have been noted in the formal educational setting where previous studies found a steady decline in academic motivation during early adolescence (Eccles & Midgley, 1989, 1990; Eccles, et al., 1993). Grade level was not significant in the initial regression model even though participants in higher grades consistently reported having less developmental experiences in OSTPs.

Age

At the program level, grade level was not used in calculating correlations because it would be based on an average that had little meaning. Instead, age was used but it was not significantly correlated with engagement/disengagement with challenge, developmental experiences or any of the other variables.

Hours of Participation

Hours of participation also did not emerge as significant in the regression model even though it was correlated with engagement with challenge and developmental experiences at both the individual-level and program-level. This makes sense because grade level was also significantly and negatively correlated with hours of participation, and they were entered together into the same step. This result suggests that both grade level and hours of participation explain the same variance in engagement with challenge; neither contributed to unique variance in the model. Participants in higher grades may have reported having less developmental

experiences because they attended programs less often (less hours per week). An alternative explanation would be that OSTPs are less likely to engage participants in higher grades with challenge, who then attend the programs less often.

Gender

There were no significant correlations between gender and engagement/disengagement or developmental experiences in either the regression or correlational analyses at the individual-level. Gender (dummy coded male = 0, female = 1) was also not used in program-level analysis. A follow-up to the results revealed that males tended to have higher mean scores than females on developmental experiences and engagement/disengagement with challenge but these differences were not significant and were probably due a larger number of females than males in the sample.

Limitations

This study is not without its limitations. Perhaps the greatest limitation was that multilevel relationships between developmental experiences and disengagement with challenge did not satisfy requirements of normality, precluding the use of hierarchical multiple regression to infer associations between these variables. Additionally, low reliability of some scales like time management that yielded significant results calls for caution in interpretation of results. Random sampling was not used and thus results cannot be generalized to the population. Potential differences between programs/offerings other than developmental experiences were not examined here and even though a number of extraneous variables were controlled for statistically, there was no control group to allow for comparison of participants and non-participants on the dependent variable, which limits the extent to which it can be claimed that developmental experiences are really having an effect on engagement/disengagement with

challenge in OSTPs. Moreover, cross-sectional data does not allow for examination of change in developmental factors as they unfold in a setting.

Recommendations for Further Research

Use of more robust statistical procedures like SEM, given that the data is ‘nested’ looking at individuals within programs and the number of variables involved, would enhance the understanding of multilevel relationships seen here. Addition of a control group or comparison group not exposed to developmental experiences OSTPs to the design would ascertain whether relationships observed here were in fact due to OSTP participation. In this study, developmental experiences were not significantly correlated with engagement with challenge at the program level, therefore, one might want to explore how other program factors such as quality of staff relationships with youth and training level of staff are related to early adolescents’ engagement with challenge in OSTPs. Participants’ motivations were used as controls and not as variables of major interest in this study but intrinsic motivation had a significant and positive relationship with engagement with challenge in all four models. Future research can develop a conceptual framework where motivations play a major role together with developmental experiences. For example, examination of the association of motivational concepts such as expectancy-value, self-determination, and achievement goal orientations with developmental experiences and engagement/disengagement with challenge could give insight into how important an individual’s motivational state or a program’s motivational climate is to development and learning of early adolescents in OSTPs. Lastly, the results presented here hint at the fact that engagement/disengagement with challenge is a complex process that varies in its significance among individuals and across programs; longitudinal data is necessary to fully understand how these variances unfold over time.

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Tables

Table 1

Summary of Sample Items, Reliability Estimates and Descriptive Statistics for Engagement/Disengagement with Challenge, Developmental Experiences and Participants' Motivations

Scale/sub-scale	Sample Items	α	M	SD
Dependent Variables				
Engagement with Challenge	I feel challenged in a good way in this program	.73	3.99	.18
Disengagement with Challenge	I am not working toward anything in this program	.61	3.07	.18
Intrapersonal Developmental Experiences				
Initiative		.88	2.72	.15
Goal setting	I set goals for myself in this activity	.81	2.74	.12
Effort	I put all my energy into this activity	.82	2.75	.12
Problem Solving	I developed plans for solving a problem	.75	2.64	.08
Time Management	I set priorities for how to use my time	.51	2.74	.21
Identity Work		.81	2.57	.18
Identity Exploration	I tried doing new things	.65	2.49	.24
Identity Reflection	I started thinking about who I am	.82	2.66	.19
Emotional Regulation	I dealt with fear and anxiety	.70	2.73	.22
Interpersonal Developmental Experiences				
Interpersonal Relationships		.84	2.89	.27
Diverse Peers	I got to know someone from a different racial group	.77	3.04	.16
Prosocial Norms	I talked about morals and values	.75	2.75	.27
Teamwork		.89	2.76	.15
Group Process Skills	I worked together with others	.81	2.83	.14
Feedback	I got feedback from group members to help me get better	.78	2.69	.17
Leadership	I had a chance to be in charge of a group	.72	2.68	.17
Participants' Motivations				
Future Motivation	I can develop skills that I can use later in life	.75	1.99	.31
Intrinsic Motivation	I like the activities we do here	.84	2.15	.05
Social Motivation	I had friends who were also participating	.69	1.86	.29
Parent Motivation	To develop my abilities	.56	1.88	.40
Skill Development Motivation	Parents wanted me to participate	.50	1.91	.21
Extrinsic Motivation	I want to earn rewards, medals, trophies or certificates	.66	1.84	.09

Table 2
Summary of Individual Level Correlations for Engagement/Disengagement with Challenge, Developmental Experiences Sub-scales, Grade Level, Hours of Participation, and Gender

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1 Engagement with Challenge	-																					
2 Disengagement with Challenge	-.287**	-																				
3 Initiative	.494**	-.333**	-																			
4 Goal Setting	.322**	-.363**	.731**	-																		
5 Effort	.368**	-.278**	.752**	.701**	-																	
6 Problem Solving	.381**	-.216**	.703**	.357**	.318**	-																
7 Time Management	.397**	-.266**	.839**	.469**	.446**	.576**	-															
8 Identity Work	.360**	-.322**	.656**	.691**	.626**	.405**	.455**	-														
9 Identity Exploration	.284**	-.266**	.490**	.507**	.443**	.347**	.353**	.810**	-													
10 Identity Reflection	.337**	-.317**	.628**	.672**	.614**	.359**	.422**	.905**	.482**	-												
11 Positive Relationships	.402**	-.201**	.532**	.443**	.440**	.391**	.461**	.451**	.344**	.435**	-											
12 Diverse Peers	.329**	-.085	.447**	.345**	.382**	.314**	.376**	.388**	.295**	.373**	.899**	-										
13 Prosocial Norms	.398**	-.272**	.520**	.464**	.402**	.390**	.462**	.419**	.335**	.395**	.888**	.604**	-									
14 Teamwork	.423**	-.169**	.572**	.386**	.427**	.501**	.511**	.441**	.322**	.425**	.689**	.593**	.661**	-								
15 Group Process Skills	.403**	-.185**	.511**	.359**	.395**	.427**	.469**	.391**	.306**	.363**	.589**	.491**	.581**	.891**	-							
16 Feedback	.352**	-.113	.477**	.284**	.338**	.458**	.399**	.369**	.254**	.363**	.539**	.479**	.490**	.821**	.576**	-						
17 Leadership	.253**	-.155*	.424**	.319**	.284**	.366**	.358**	.311**	.204**	.315**	.537**	.474**	.508**	.760**	.497**	.526**	-					
18 Emotional Regulation	.290**	-.114	.496**	.487**	.414**	.276**	.398**	.460**	.341**	.435**	.537**	.478**	.468**	.536**	.521**	.429**	.358**	-				
19 Grade	-.224**	.139*	-.216**	-.136*	-.238**	-.030	-.246**	-.175**	-.147*	-.156*	-.187**	-.160*	-.211**	-.172**	-.184**	-.127*	-.077	-.149*	-			
20 Hours of participation	-.006	-.024	.148*	.238**	.188**	.062	.072	.114	.079	.122	.145*	.139*	.126	.114	.120	.044	.102	.027	-.162*	-		
21 Gender	-.056	-.077	-.085	-.054	-.013	-.003	-.065	.007	.018	.009	.003	-.028	.016	-.059	-.052	-.041	-.054	-.028	-.059	-.055	-	

* $p < .05$, ** $p < .01$

Table 3

Summary of Individual-level Correlations for Engagement/Disengagement with Challenge, Developmental Experiences Higher-order Scales, Motivations to Participate, Hours of Participation, Grade Level and Gender.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Engagement with Challenge	-															
2 Disengagement with Challenge	-	-														
3 Initiative ^a	-	-	-													
4 Identity Work ^a	-	-	-	-												
5 Positive relationships ^a	-	-	-	-	-											
6 Teamwork ^a	-	-	-	-	-	-										
7 Emotional Regulation ^a	-	-	-	-	-	-	-									
8 Future Motivation	.184**	-.083	.287**	.386**	.279**	.217**	.271**	-								
9 Intrinsic Motivation	.306**	-.193**	.318**	.346**	.287**	.229**	.246**	.109	-							
10 Social Motivation	.223**	-.066	.291**	.378**	.342**	.235**	.275**	.261**	.584**	-						
11 Parent Motivation	.171**	.061	.098	.144*	.100	.098	.094	.263**	.099	.178**	-					
12 Skill Development Motivation	.210**	-.173**	.363**	.386**	.229**	.157*	.263**	.418**	.349**	.355**	.235**	-				
13 Extrinsic Motivation	.194**	.008	.251**	.325**	.229**	.185**	.241**	.289**	.297**	.326**	.380**	.463**	-			
14 Hours of Participation	-.006	-.024	.148*	.114	.145*	.114	.027	-.056	.057	.176**	.029	.028	.176**	-		
15 Grade Level	-.224**	.139*	-.216**	-.175**	-.187**	-.172**	-.149*	.038	-.120	-.081	-.081	-.111	-.060	-.162*	-	
16 Gender	-.056	-.077	-.085	.007	.003	-.059	-.028	-.121	.021	-.034	-.028	.052	-.092	-.055	-.059	-

* $p < .05$, ** $p < .01$

^a Omitted values for higher-order developmental experiences scales already presented in previous table

Table 4
Hierarchical Multiple Regression Analyses of Associations between Developmental Experiences and Engagement with Challenge

Independent variables	Engagement with Challenge								
	Model 1			Model 2			Model 3		
	Intrapersonal			Interpersonal			Final		
	ΔR^2	β	r	ΔR^2	β	r	ΔR^2	β	r
Step 1 (Control)	.094**			.086**			.096**		
Intrinsic Motivation		.134*	.121*		.147*	.139*		.148*	.140*
Step 2 (Developmental Experiences)	.283**			.270**			.271**		
Initiative									
Goal Setting		.072	.045						
Effort		.156	.106						
Problem Solving		.281**	.227**				.255**	.202**	
Time Management		.178*	.136*				.212**	.161**	
Identity Work									
Identity Exploration		.000	.000						
Identity Reflection		.041	.028						
Emotional Regulation		-.014	-.011						
Positive Relationships									
Diverse Peers				.079	.058				
Prosocial Norms				.236**	.170**		.075	.057	
Teamwork									
Group Process Skills				.184*	.134*		.130	.099	
Feedback				.089	.067				
Leadership				-.025	-.020				
Total R^2	.377**			.286**			.367**		
Total adjusted \hat{R}^2	.349**			.265**			.351**		

* $p < .05$, ** $p < .01$

Table 5
Program-Level Descriptive Statistics for Engagement/Disengagement with Challenge, Developmental Experiences, Age and Hours of Participation

	<i>M</i>	<i>SD</i>	<i>N</i>
Engagement with Challenge	4.06	.35	17
Disengagement with Challenge	3.12	.42	17
Initiative	2.74	.22	17
Goal Setting	2.75	.30	17
Effort	2.81	.35	17
Problem Solving	2.62	.35	17
Time Management	2.72	.20	17
Identity Work	2.66	.28	17
Identity Exploration	2.58	.28	17
Identity Reflection	2.72	.36	17
Positive Relationships	2.92	.28	17
Diverse Peers	3.05	.27	17
Prosocial Norms	2.78	.32	17
Teamwork	2.80	.20	17
Group Process Skills	2.89	.23	17
Feedback	2.71	.26	17
Leadership	2.71	.28	17
Emotional Regulation	2.74	.30	17
Age	12.05	.52	17
Hours	10.53	4.10	16

Table 6
Summary of Program-Level Correlations for Engagement/Disengagement with Challenge, Developmental Experiences Hours of Participation and Age

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1 Engagement with Challenge	-																				
2 Disengagement with Challenge	-.316	-																			
3 Initiative	.372	-.594*	-																		
4 Goal Setting	.134	-.464	.685**	-																	
5 Effort	.210	-.432	.765**	.636**	-																
6 Problem Solving	.410	-.582*	.334	.157	-.065	-															
7 Time Management	-.003	-.394	.678**	.516*	.429	.156	-														
8 Identity Work	.042	-.405	.716**	.828**	.756*	.018	.706**	-													
9 Identity Exploration	.212	-.071	.480	.597*	.379	.021	.599*	.728**	-												
10 Identity Reflection	-.018	-.503*	.706**	.786**	.817**	.033	.600*	.922**	.415	-											
11 Positive relationships	.097	-.104	.272	.211	.063	.342	.276	.338	.519*	.150	-										
12 Diverse Peers	-.027	.022	.069	.002	-.108	.194	.034	.099	.388	-.121	.886**	-									
13 Prosocial Norms	.203	-.221	.375	.284	.167	.383	.445	.456	.528*	.312	.933**	.690**	-								
14 Teamwork	.216	-.402	.501*	.134	.159	.552*	.651**	.372	.468	.234	.748**	.550*	.827**	-							
15 Group Process Skills	.177	-.206	.275	-.146	-.016	.392	.503*	.115	.379	-.065	.623**	.547*	.654**	.907**	-						
16 Feedback	.403	-.604*	.413	.186	.104	.728**	.460	.317	.344	.227	.587*	.420	.685**	.840**	.693**	-					
17 Leadership	-.104	-.213	.589*	.351	.346	.214	.707**	.559*	.420	.509*	.572*	.326	.673**	.690**	.454	.384	-				
18 Emotional Regulation	-.166	.151	.375	.438	.100	.048	.364	.379	.493*	.206	.553*	.574*	.393	.289	.170	.081	.468	-			
19 Age	.049	-.025	-.121	-.014	-.193	.439	-.418	-.220	-.326	-.068	-.124	-.229	-.160	-.234	-.380	-.080	-.156	-.106	-		
20 Hours of Participation	.523*	-.395	.501*	.199	.473	.547*	.135	.198	.130	.218	.461	.332	.484	.504*	.415	.539*	.205	.171	.060	-	

* $p < .05$, ** $p < .01$

Appendices

Appendix 1 – The Youth Experience Survey (YES) of Developmental Experiences

The Youth Experiences Survey (YES) 2.0

Instructions: Based on your current or recent involvement please indicate how much you did the following behaviors in [name of activity]

		Considering Your Experiences In [Activity],			
		How Much Did You...			
		Yes, a Lot!	Quite a Bit	A Little	Not At All
IDENTITY EXPERIENCES					
Identity Exploration (In this activity...)					
1.	I tried doing new things	1	2	3	4
2.	I tried a new way of acting around people	1	2	3	4
3.	I did things here I didn't get to do anywhere else	1	2	3	4
Identity Reflection (In this activity...)					
4.	I thought about my future	1	2	3	4
5.	I started thinking about who I am	1	2	3	4
6.	This activity has been a positive turning point in my life	1	2	3	4
7.	I thought about the direction of my life	1	2	3	4

INITIATIVE EXPERIENCES

Goal Setting (In this activity...)					
8.	I set goals for myself in this activity	1	2	3	4
9.	I found ways to achieve my goals	1	2	3	4
10.	I considered possible obstacles when making plans	1	2	3	4

Effort (In this activity...)					
11.	I put all my energy into this activity	1	2	3	4
12.	I pushed myself	1	2	3	4
13.	I focused my attention	1	2	3	4

Problem Solving (In this activity...)					
14.	I observed how others solved problems and learned from them	1	2	3	4
15.	I developed plans for solving a problem	1	2	3	4
16.	I used my imagination to solve a problem	1	2	3	4

Time Management (In this activity...)					
17.	I organized my time to get things done	1	2	3	4
18.	I did not put things off 'til later	1	2	3	4
19.	I set priorities for how to use my time	1	2	3	4
20.	I stuck to my schedule	1	2	3	4
21.	I used my time wisely	1	2	3	4

EMOTIONAL REGULATION EXPERIENCES

Emotional Regulation (In this activity...)					
22. I controlled my temper		1	2	3	4
23. I dealt with fear and anxiety		1	2	3	4
24. I handled stress		1	2	3	4
25. I learned that my emotions affect how I perform		1	2	3	4

POSITIVE RELATIONSHIPS EXPERIENCES

Diverse Peer Relationships (In this activity...)					
26. I made friends with someone of the opposite gender (boy/girl)		1	2	3	4
27. I noticed I had a lot in common with people different from me (people from different backgrounds)		1	2	3	4
28. I got to know someone from a different racial group (black, white, hispanic, other)		1	2	3	4
29. I made friends with someone from a different social class (someone richer or poorer)		1	2	3	4

Prosocial Norms (In this activity...)					
30. I helped others (like volunteering, serving food, picking up trash)		1	2	3	4
31. I changed my school or community for the better		1	2	3	4
32. I stood up for something I believed was right		1	2	3	4
33. I talked about morals and values (like honesty or respect)		1	2	3	4

TEAM WORK EXPERIENCES

Group Process Skills (In this activity...)					
34. I worked together with others		1	2	3	4
35. I compromised in order to get things done					
36. I shared responsibility for getting things done		1	2	3	4
37. I was patient with other group members (calm, didn't lose my temper)		1	2	3	4
38. I didn't let my emotions affect others		1	2	3	4
39. I didn't let my attitude (mood) affect others		1	2	3	4
40. I worked with people who I didn't always like		1	2	3	4

Feedback (In this activity...)					
41. Given feedback to others (not adult) to help them get better		1	2	3	4
42. Gotten feedback from others (not adult) to help you get better		1	2	3	4
43. Received feedback about your performance from the adult supervisor		1	2	3	4
44. Received feedback about your performance in the program from other adults (like parents)		1	2	3	4
Leadership and Responsibility (In this activity...)					
45. I felt the pressure of being a leader		1	2	3	4
46. Others counted on me		1	2	3	4
47. I had a chance to be in charge of a group		1	2	3	4

Appendix 2 - The Quality Matters Project Student Survey

The Quality Matters Project

(Student Survey)

TELL US ABOUT YOU

What grade are you in? (circle one) 5th 6th 7th 8th
9th 10th 11th 12th

What is your age? (give number) _____

Are you? Female Male

HOW MUCH TIME DO YOU SPEND IN [NAME OF PROGRAM]?

About how many hours each week are you at [Name of Program]?

Give a number, such as 5 hours (no numbers higher than 40).

About _____ Hours each week

How often are you at [Name of Program] (check one)?

- | | | | | |
|---------------------------|--------------|---------------------------|-------------------------|------------------|
| 1 | 2 | 3 | 4 | 5 |
| Less than once a
month | Once a month | A few of times a
month | A couple days a
week | Almost every day |

How many years you have been going to [Name of Program]? Give number, such as 2 years:

_____ Years

Why Do You Attend [Name of Program]?

Tell us <i>why</i> you participate in [Name of Program] by circling the appropriate number.	Not A Reason	Sort Of A Reason	A Big Reason
1. To help on my college application	1	2	3
2. To help me towards a job or career	1	2	3
3. I can develop skills that I can use later in life	1	2	3
4. To have fun	1	2	3
5. For enjoyment	1	2	3
6. I like the activities we do here	1	2	3
7. I had friends who were also participating	1	2	3
8. My friends wanted me to participate	1	2	3
9. To make new friends	1	2	3
10. To be part of the group	1	2	3

YOUR EXPERIENCES IN [NAME OF PROGRAM]

IN [NAME OF PROGRAM] HOW MUCH HAVE YOU (circle one)	Yes, A Lot!	Quite A Bit	A Little	Not At All
48. Tried doing new things	1	2	3	4
49. Tried a new way of acting around people	1	2	3	4
50. Done things here you don't get to do anywhere else	1	2	3	4
51. Thought about your future	1	2	3	4
52. Started thinking about who you are	1	2	3	4
53. This activity has been a positive turning point in my life	1	2	3	4
54. Thought about the direction of your life	1	2	3	4
55. Set goals for yourself in this activity	1	2	3	4
56. Found ways to achieve your goals	1	2	3	4

57.	Considered possible obstacles when making plans	1	2	3	4
58.	Put all your energy into this activity	1	2	3	4
59.	Pushed yourself	1	2	3	4
60.	Focused your attention	1	2	3	4

QUESTIONS ABOUT YOURSELF AS A STUDENT

(circle number that best describes what you think)

1. It's important to me that I learn a lot of new concepts (ideas) this year.				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE
2. One of my goals in class is to learn as much as I can.				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE
3. One of my goals is to master a lot of new skills this year.				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE
4. It's important to me that I thoroughly understand my class work.				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE
5. It's important to me that I improve my skills this year.				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE

PROJECTS

A **project** is anything that requires planning and then doing tasks over time to make the plan happen.

Examples:

- **work on term paper,**
- **work on play or drama that ends in performance,**
- **planning project one week and then doing it another week.**

Since the start of the school year:

1. How many *projects* in [Name of Program] have you worked on that took at least 2 weeks to finish?

Give number, such as 1 or 0.

_____ Projects

2. How many *projects* in School have you worked on that took at least 2 weeks to finish?

Give number, such as 1 or 0.

_____ Projects

PLANNING

In Projects you work on that happen over time (like over weeks or a semester), **How much do you...**(circle one)

1. **Plan ahead?**

1

2

3

4

5

Little

Some

A lot

I figure things out as I go
along

I make a couple specific
plans before starting—figure
out the rest as I go along

I make a pretty complete plan
of what to do before starting

2. **Put things off until the last minute?**

1

2

3

4

5

A lot

Some

Not at all

I wait until the end to start
working on things

I start working on things
about a week before

I start early and work over
time until things were done

3. Plan when to do things?				
1	2	3	4	5
<i>Little</i>		<i>Some</i>		<i>A lot</i>
Others plan out most priorities and the order in which things are done		I plan out some priorities and the order—others do the rest		I plan out priorities and the order in which things need to be done
4. Make back-up plans?				
1	2	3	4	5
<i>Little</i>		<i>Some</i>		<i>A lot</i>
I do not think much about making a back-up plan		I give some thought to what I would do if things don't work out		I have specific back-up plans in case things do not work out
5. Evaluate/Check on how plans are going?				
1	2	3	4	5
<i>Little</i>		<i>Some</i>		<i>A lot</i>
I just keep going		I stop every now and then to check on progress		I regularly check on progress to see if there are any problems

Your Grades in School

Which of the following best describes your grades in school (choose one)?

- | | |
|---|---|
| <input type="checkbox"/> Mostly A's | <input type="checkbox"/> Mostly C's |
| <input type="checkbox"/> Mostly A's and B's | <input type="checkbox"/> Mostly C's and D's |
| <input type="checkbox"/> Mostly B's | <input type="checkbox"/> Mostly D's |
| <input type="checkbox"/> Mostly B's and C's | <input type="checkbox"/> Mostly F's |

Your Experiences in [Name of Program]

HOW MUCH HAVE YOU (circle one)	Yes,	Quite	A	Not
	A Lot!	A Bit	Little	At All
1. Controlled you temper	1	2	3	4
2. Dealt with fear and anxiety	1	2	3	4
3. Handled stress	1	2	3	4
4. Learned that your emotions affect how you perform	1	2	3	4
5. Made friends with someone of the opposite gender (boy/girl)	1	2	3	4
6. Noticed you had a lot in common with people different from you (people from different backgrounds)	1	2	3	4
7. Gotten to know someone from a different racial group (black, white, hispanic, other)	1	2	3	4
8. Made friends with someone from a different social class (someone richer or poorer)	1	2	3	4
9. Helped others (like volunteering, serving food, picking up trash)	1	2	3	4
10. Changed your school or community for the better	1	2	3	4
11. Stood up for something you believed was right	1	2	3	4
12. Talked about morals and values (like honesty or respect)	1	2	3	4

How “into” [Name of Program] Are You?

Circle the number that is most correct about your participation in [Name of Program].	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. There are always things I’m trying to work on and achieve in this program	1	2	3	4	5	6
2. I feel challenged in a good way in this program	1	2	3	4	5	6
3. The activities in this program are boring	1	2	3	4	5	6
4. I’m not working toward anything in this program	1	2	3	4	5	6
5. What we do in this program is both difficult and enjoyable	1	2	3	4	5	6
6. The goals people are working on in this program are not important to me	1	2	3	4	5	6

YOUR IDEAS ABOUT EDUCATION

(circle number that best describes what you think)

1. It's important to me that I don't look stupid in class.

1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE

2. One of my goals is to keep others from thinking I'm *not* smart in class.

1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE

3. It's important to me that my teacher doesn't think that I know less than others in class.

1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE

4. One of my goals in class is to avoid looking like I have trouble doing the work.

1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE

Your Grades in Math and English

Which of the following best describes your grades in **Math** (choose one)?

- | | |
|---|---|
| <input type="checkbox"/> Mostly A's | <input type="checkbox"/> Mostly C's |
| <input type="checkbox"/> Mostly A's and B's | <input type="checkbox"/> Mostly C's and D's |
| <input type="checkbox"/> Mostly B's | <input type="checkbox"/> Mostly D's |
| <input type="checkbox"/> Mostly B's and C's | <input type="checkbox"/> Mostly F's |

Which of the following best describes your grades **English** (choose one)?

- | | |
|---|---|
| <input type="checkbox"/> Mostly A's | <input type="checkbox"/> Mostly C's |
| <input type="checkbox"/> Mostly A's and B's | <input type="checkbox"/> Mostly C's and D's |
| <input type="checkbox"/> Mostly B's | <input type="checkbox"/> Mostly D's |
| <input type="checkbox"/> Mostly B's and C's | <input type="checkbox"/> Mostly F's |

Your Experiences in [Name of Program]

HOW MUCH HAVE YOU (circle one)	Yes, A Lot!	Quite A Bit	A Little	Not At All
1. Observed how others solved problems and learned from them	1	2	3	4
2. Developed plans for solving a problem	1	2	3	4
3. Used your imagination to solve a problem	1	2	3	4
4. Organized your time to get things done	1	2	3	4
5. Not put things off 'til later	1	2	3	4
6. Set priorities for how to use your time	1	2	3	4
7. Stuck to your schedule	1	2	3	4
8. Used your time wisely	1	2	3	4

Why Do You Attend [Name of Program]? (

Tell us <i>why</i> you participate in [Name of Program] by circling the appropriate number.	Not A Reason	Sort Of A Reason	A Big Reason
1. Parents wanted me to participate	1	2	3
2. Family members have done this activity in the past	1	2	3
3. My parents expect me to	1	2	3
4. I am good at this activity	1	2	3
5. I wanted to try out a leadership role	1	2	3
6. To develop my abilities	1	2	3
7. I like competition	1	2	3
8. I want to earn rewards, medals, trophies or certificates	1	2	3
9. An adult leader wanted me to participate	1	2	3

Your Experiences in [Name of Program]

HOW MUCH HAVE YOU (circle one)	Yes, A Lot!	Quite A Bit	A Little	Not At All
1. Worked together with others	1	2	3	4
2. Compromised in order to get things done				
3. Shared responsibility for getting things done	1	2	3	4
4. Been patient with other group members (calm, didn't lose my temper)	1	2	3	4
5. Not let your <i>emotions</i> affect others	1	2	3	4
6. Not let your <i>attitude</i> (mood) affect others	1	2	3	4
7. Worked with people you didn't always like	1	2	3	4
8. Given feedback to others (not adult) to help them get better	1	2	3	4
9. Gotten feedback from others (not adult) to help you get better	1	2	3	4
10. Received feedback about your performance from the adult <i>supervisor</i>	1	2	3	4

11. Received feedback about your performance in program from <i>other</i> adults (like parents)	1	2	3	4
12. Felt the pressure of being a leader	1	2	3	4
13. Had others count on you	1	2	3	4
14. Had a chance to be in charge of a group	1	2	3	4

HOW YOU SEE YOURSELF AS A STUDENT

(circle number that best describes what you think)

1. It's important to me that other students in my class think I am good at my class work				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE
2. One of my goals is to show others that I'm good at my class work				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE
3. One of my goals is to show others that class work is easy for me				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE
4. One of my goals is to look smart in comparison to the other students in my class				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE
5. It's important to me that I look smart compared to others in my class				
1	2	3	4	5
NOT AT ALL TRUE		SOMEWHAT TRUE		VERY TRUE

Tell Us A Little More About Yourself

Are you (Check all that apply):

- American Indian or Alaska Native
- Native Hawaiian or Other Pacific
- Black or African American
- Asian
- Hispanic or Latino/Latina
- White or European American
- 6. Other _____

Who do you live with? (Check all that apply)

- Mother
- Step Mother
- Father
- Step Father
- Other Relative (aunt) or Grandparent
- Guardian or Foster Parent

YOU ARE DONE!

THANK YOU