

How measuring non-academic outcomes can guide school practice: What makes a difference?

Jennifer Fredricks

Benefits of participation in non-academic domains

A growing body of research demonstrates the academic and non-academic benefits of involvement in non-academic domains (i.e., extracurricular activities, after-school programs, youth development programs) (see Bohnert, Fredricks, & Randall, 2010; Feldman & Matjasko, 2005, for review). This research is primarily based on cross-sectional and short-term longitudinal survey studies. Participation has been correlated with higher grades, higher standardized test scores, higher motivation and school engagement, and greater school belonging and attachment to school. Youth who participate in non-academic contexts also have been found to have higher rates of college attendance, higher educational attainment, and higher occupational attainment. In addition, youth who are involved in non-academic domains report higher self-esteem, higher resiliency, and lower levels of depression than youth who do not participate in these domains. Furthermore, youth who are involved in non-academic domains report higher social skills, are more likely to report associating with an academically-oriented and prosocial peer group, and report lower levels of loneliness. Finally, participation in non-academic domains has been shown to be associated with a reduction in risk behaviors, including lower problem behaviors, lower levels of drug and alcohol use, and lower levels of delinquency.

One challenge with assessing the outcomes of involvement in non-academic domains is accounting for self-selection. Since participation in these activities tends to be voluntary, individuals self-select themselves into activities and differences in the outcomes between participants and non-participants may reflect preexisting differences between the two groups. For example, youth who participate in non-academic activities tend to have higher income, higher grades, and greater parental support than their peers (Feldman & Matjasko, 2005). Since these selection factors are also associated with positive developmental outcomes, failing to control for these variables likely overstates the benefits of extracurricular participation (Fredricks & Eccles, 2006; Larson, 2000).

Motivation and non-academic activities

Because of the potential benefits of involvement in non-academic domains (i.e., extracurricular activities, after-school programs, youth development programs), a central question is how to get youth to choose to participate in these domains. Youth who perceive that they have high competence or high ability in sports and the arts are more likely to continue participating in these domains. An individual's goals, or the reasons for engaging in a task, can also impact on participation. The goal theory literature has focused primarily on two contrasting goals that have been shown to lead to different motivation and learning outcomes. A mastery or task orientation reflects a focus on learning and understanding while a performance or ego goal orientation reflects a focus on demonstrating one's ability or competence, often in relation to others (Ames, 1992). Other research has focused on the role that values play in participation decisions (Wigfield & Eccles, 2000). Prior research has shown that youth who have high perceptions of the utility value of an activity (i.e., believe that an activity is valuable for future), are more likely to participate in the activity. In addition, intrinsic value (enjoyment of activity for own sake) has been associated with choice behaviors.

There also are a variety of external factors that are related to participation in non-academic domains. First, parents play an important role in getting their children involved in activities and supporting their continued involvement (see Fredricks & Eccles, 2004, for review). Parents often provide their children with the first exposure to sports, music, and the arts. Parents' expectations and parents' perceptions of the value of activity have also been shown to be associated with youths'

motivation (Fredricks & Eccles, 2005). Peers also play an important role in both the initial decision to participate and on-going involvement (Patrick et al. 1999).

Challenges in assessing non-academic domains

Since participation in many non-academic activities is voluntary, participation can be sporadic. This is very different than traditional academic contexts where students are required to attend. If evaluators do not take into account variations in the level of participation, it can lead to misleading findings about the effects of involvement on outcomes. Several recent evaluations of after-school programs in the United States have come to different conclusions about the effects of involvement on achievement, with some studies showing beneficial effects of involvement and others showing no relationship between involvement and academic performance (see United States Department of Education, 2003; Vandell, Reisner, & Pierce, 2007, for examples). One reason these evaluations may have come to different conclusions is that the benefits of participation can vary depending on level of involvement, with the benefits being greatest for youth who attend programs consistently over time (Bohnert et al., 2010; Fredricks & Simpkins, 2010). There is also large variation in the type of non-academic contexts and quality of these contexts. Non-academic activities encompasses a wide range of activities that differ in focus (i.e., academic, sports, arts, youth development). Much of the prior research has failed to link outcome measures to the specific type of program. Researchers have found that participation in high-quality programs and programs with a strong academic emphasis is more strongly associated with academic outcomes than is participation in programs that are lower in quality and have a less strong academic emphasis (Vandell et al., 2007).

What to assess in non-academic domains

Since many non-academic programs are organized around youth development principles, it is important to measure indicators of positive youth development. In addition, a goal of a large number of youth development programs is to help youth to develop life skills that they can transfer to other areas of their lives (i.e., school, family, community). Researchers and practitioners may also want to assess an individual's motivation for attending a program. At the organizational level, one may want to assess program features and program quality. A community may also want to assess the availability of affordances for youth development and the number of developmental assets in the community. In the next sections, I will describe some of the challenges in measuring each of these domains and describe one or two examples of survey measures that have been used in previous research and have evidence to support the psychometric properties of the measure.

Challenges in measuring positive youth development

Positive youth development is broadly defined as a process that helps youth meet the challenges of adolescence through a series of experiences that help them to become socially, morally, emotionally, physically, and cognitively competent (Benson et al., 2006). One of the challenges with this field is there is no overarching consensus on the behaviors and characteristics that make up positive development, which is a multidimensional construct that encompasses a variety of domains including educational commitment, psychological, social, and emotional development. Another concern is that many of these measures within each of these domains lack conceptual clarity. For many constructs, there is a lack of agreement within the research community about how to define and measure the construct. This contributes to skepticism by some policy makers that positive outcomes can't be measured as rigorously as achievement or problem behaviors (Moore et al., 2004). Another challenge is that these constructs often lack face validity. While there are problems with IQ measures, there is common agreement about what a 100 or 115 means. It is less clear what a 5 means on a 1 to 7 scale and what is a valid and meaningful cut point

for each measure. Finally, there are few examples of indicators that have been systematically examined across diverse populations.

Positive youth development: Lerner's 5 C's

Based on the experiences of practitioners and a review of the adolescent development literature, Richard Lerner at Tufts University developed the Five Cs- Competence, Confidence, Character, and Caring, as a way to conceptualize positive youth development. He developed a survey to measure the five C's as part of the 4-H study of Positive Youth Development, a longitudinal study of about 4,000 youth with varying levels of involvement in community-based non-academic programs (see Lerner et al., 2005, for more details). The purpose of this research was to identify characteristics (i.e, individual, family, and peer) related to positive youth development. Lerner and his colleagues have demonstrated empirical support for the five C's model (see Lerner et al., 2005, for more information). The scales have been found to have strong psychometric properties.

Positive youth development: Life Skills

The construct of life skills has been poorly defined, which has made assessment difficult. Life skills encompasses a range of skills in areas such as problem solving, time management, developing and nurturing social relationships, decision making, critical thinking, goal setting, leadership, and managing emotions. The limited research that has been conducted on life skills has been largely theoretical (Gould & Carson, 2008). Furthermore, the assumption is that the life skills developed in youth development settings transfer to other settings. This assumption has rarely been tested (Gould & Carson, 2008).

One example of an attempt to improve assessment of life skills is the National Life Skills Evaluation System(www.humanservicereserach.com/youthlifeskillevaluation), which was developed by Daniel Perkins at Pennsylvania State University. This is an on-line website that includes instruments for evaluating life skills in the areas of decision making, critical thinking, problem solving, goal setting, communication, and leadership (Mincemoyer, & Perkins, 2005). Each evaluation instrument was developed by conducting a comprehensive review of research literature, though the extent of psychometric support for each instrument is not clear.

Another measure to assess life skills is the Youth Experience Scale 2.0 (YES), a self-report measure developed by Reed Larson and David Hansen at the University of Illinois from interviews with youth who participated in a variety of non-academic contexts (<http://www.youthdev.illinois.edu/yesinstrument.htm>). YES includes scales for eight general areas of positive and negative experiences in non-academic contexts, as well as a number of subscales including identity experiences, initiative experiences (goal setting, effort, problem solving and time management), basic skills (emotional regulation, cognitive skills and physical skills), interpersonal relations, teamwork and social skills (group processes, feedback, leadership and responsibility), adult networks and social capital , and negative experiences (stress, negative peer influences, social exclusion, negative group dynamics, and inappropriate adult behaviors). There is some evidence to support the psychometric properties of this instrument.

Motivation: Expectancy-value models

A proliferation of motivational constructs (e.g., expectancy value, goal theory, intrinsic motivation) have been developed to answer two broad questions "Can I do this task" and "Do I want to do this task and why?" One example of a motivational theory that has been applied to research in non-academic activities is the expectancy-value model (Eccles et al., 1983). This model was developed by Jacquelynne Eccles at University of Michigan to explain individuals' choice behavior in

both academic and non-academic domains. According to this model, choice behavior is a function of children's perceptions of expectancies for success and task value. Expectancies for success are defined as individuals' perceptions of ability and beliefs about how well they will do in the future. Task value is a function of four components: intrinsic and interest value (enjoyment of the activity), attainment value (importance of doing well on the task for confirming aspects of one's identity), utility value/importance (importance of the task for future goals), and cost (negative aspects of engaging in task). Eccles and her colleagues (see Eccles, Wigfield, Harold, & Blumenfeld, 1993) have developed a survey to test the expectancy-value model in both childhood and adolescence. The survey includes questions about children's expectancies for success and task value in math, reading, sports, and music. Eccles and her colleagues have conducted a series of studies that support the model and provide empirical support for the psychometric properties of the survey items (Wigfield & Eccles, 2000).

Motivation: Goal Theory

A student is described as task-involved when he/she is interested in a task for the sake of learning. Youth who endorse task goals are less threatened by failure because their ego is not tied up in the success of the task. In contrast, youth who are ego-involved will perform the task to boost their own ego, and focus on how their performance compares relative to their peers. In general, mastery/task goals are associated with adaptive patterns of socio-emotional and learning outcomes and performance or ego goals have been linked with negative outcomes (Linnenbrink & Pintrich, 2000). Although goal theory has been examined primarily in relation to academic contexts, some scholars have tested this theory in sport contexts (see Duda, 2007). Joan Duda at the University of Birmingham developed the Task and Ego Orientation in Sports Questionnaire (TEOSQ) to tap individual differences in task and ego orientation. Empirical research in sport settings shows that holding task goals is related to greater learning strategies and skill development. Support for the construct validity of the TEOSQ has been documented across several languages (Duda, 2007).

Features of contexts that promote youth development

Although the prior research has tended to show beneficial effects of participation in non-academic activities (i.e., extracurricular contexts, youth development programs), an important question is what aspects of the setting help to explain these beneficial outcomes. To address this question, the National Research Council and Institute of Medicine in the United States (see Eccles & Gootman, 2002) evaluated community-level programs for youth to determine what features of these contexts promote positive development. This review resulted in a list of 8 features that have been shown to facilitate positive growth including: 1) physical and psychological safety, 2) appropriate structure, 3) supportive relationships, 4) opportunities for belonging, 5) positive social norms, 6) support for efficacy and mattering, 7) opportunities for skill building, and 8) integration of family, school & community efforts.

This list was developed from a review of the existing literature on youth programs and an important question is how to assess each of the features. In addition, it is not clear how applicable these features are cross-culturally as they were developed from the research which has been primarily conducted in the United States. There is also likely to be overlap among the 8 features, as the boundaries are not as clear as the list implies. Finally, each of these describes features of a young person's interaction with the setting as opposed to be features of the setting itself. This is important because it suggests there may not always be objective standards for each feature and what matters is an individual's perception or subjective interpretation of the context.

Program quality

Policy makers and researchers may also want to assess the quality of a non-academic program. There has been surprisingly little work on quality. One exception is The Youth Program Quality Assessment (PQA), which was developed by High Scope Research to assess best practices in youth programs (see www.highscope.org). Many of the indicators of quality were adapted from the measures developed to assess the quality of day care and early childhood settings. The Youth PQA consists of seven subscales related to positive youth development including: 1) safe environment, 2) supportive environment, 3) interaction, 4) engagement, 5) youth centered policies and practices, 6) high expectations, and 7) access. The first four scales are assessed through direct observation and the remaining three scales are assessed through interviews with the program director (Smith & Hohmann, 2005). Notes, observations, and interview data are used as evidence to score items. These item scores are combined to create an overall program quality profile. High scope conducted an extensive four year validation study of the Youth PQA (see Smith & Hohmann, 2005, for more details). In general, findings from the study demonstrate that the Youth PQA is a valid and reliable measure of youth program quality.

Affordances for youth development: Developmental assets

Finally, schools and communities may want to assess the number of development assets in a community. Developmental assets are the relationships, opportunities, skills, values, and commitments children and adolescents need to grow up and become healthy, caring, and responsible adults (Benson, 2006). The more assets an individual experiences, the less likely there are to engage in high-risk behavior and the more likely they are to engage in positive behaviors (Benson, 2006). The Profiles of Student Life: Attitudes and Behaviors (PSL: AB) survey was developed by the Search Institute in the United States to measure 40 developmental assets (www.search-institute.org). More than 2 million students in grades 6th through 12th grade across the United States have responded to the survey. The 40 assets include positive developmental outcomes, or internal assets, and positive social settings, external assets. Examples of internal assets include commitment to learning, positive values, social competencies, and positive identity. Examples of external assets include promoting support, empowerment, boundaries and expectations, and constructive use of time. Users of the PSL-AB are given a report of the percentage of students in their community (overall and by race and gender) that indicated each asset. The Search Institute has conducted research demonstrating the psychometric properties of the measure (Leffert et al., 1998).