



# TOP OUTCOMES AND ASSOCIATED MEASUREMENT INSTRUMENTS

## An Analysis for Youth Recreation Programming

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The following list of outcomes was first identified by Duerden, Witt, Fernandez, Bryant, and Theriault (2012) as a way to standardize youth development indicators and compile valid and reliable measurement instruments to assess and measure life skills in youth. This document builds off this work by offering additional definitions and measurement options for these same outcomes. Information pertinent for the implementation of these instruments, such as length (number of items), intended age, reliability and validity data, and more, is also included.

### Communication

Dynamic process by which people exchange thoughts, ideas, and messages” (Mincemoyer, Perkins, & Munyua, 2001). This definition also cites the importance of listening as well as visual components/stimuli in order to make meaning between communicators.

#### Measures for Communication:

- ▶ **Communications Scale from the Youth Life Skills Evaluation (Barkman & Machtmes, 2002)**
  - 23 items
- ▶ **Social Skills Improvement System (SSIS)**
  - 80 items
  - Target age: K-12
  - Student and teacher form – for both reported and observed behavior
  - Also measures: Cooperation, Responsibility, Competing Problem Behaviors, and Academic Competence
- ▶ **Survey of Afterschool Youth Outcomes (SAYO)**
  - About 30 items – dependent on answers
  - Student and teacher form for both reported and observed behavior
  - Target Age: K-12
  - Also measures: Engagement in Learning, Homework, Academic Performance, Program Experiences  
Sense of Competence as a Learner, Future Planning and Expectations.
- ▶ **Youth Outcomes Battery – Series of 12 subscales (American Camping Association, 2013)**
  - Each subscale contains 6-14 questions
  - Target Age: Grades 6th-12
  - Also measures: Family Citizenship, Perceived Competence, Affinity for Nature, Spiritual Well-being, and Camp Connectedness

## Altruism (Community Volunteering)

“Attempt to meet a community needs through uncompensated giving of time and or talents to others.” (Duerden et al., 2012).

When youth volunteer within the community they receive benefits in a variety of personal and interpersonal avenues including understanding more of their identity (who they are in relationship to others in the community or what their role is), feelings of empowerment, development of morals, and a rise in self-efficacy (Youniss, McLellan, Su, & Yates, 1999)

### Measures for Altruism:

- ▶ **Self-Report Altruism Scale (Rushton, Chrisjohn, Fekken, & differences, 1981)**
  - 20 items
  - Duerden et al. (2012) developed a version adapted for children/youth.

## Critical Thinking

“Thinking that evaluates reasons and brings thought and actions in line with evaluations” (Mincemoyer et al., 2001).

It is necessary component and skill of learning throughout one’s life and is a major component to youth education and activity programming.

### Measures of Critical-Thinking:

- ▶ **Critical Thinking in Everyday Life Scale (Perkins & Mincemoyer, 2002)**
  - 20 Items
- ▶ **California Healthy Kids Survey Resilience and Youth Development Module (RYDM)**
  - Target age: Grades 5th-8th
  - Short version (33 items) and long version (56 items)
- ▶ **Devereux Student Strengths Assessment (DESSA) (LeBuffe, Shapiro, & Naglieri, 2009)**
  - Target age: K-8th
  - 72-items
- ▶ **Survey of Afterschool Youth Outcomes (SAYO)**
  - About 30 items – dependent on answers
  - Student and teacher form for both reported and observed behavior
  - Target age: K-12
  - Also measures: Engagement in Learning, Homework, Academic Performance, Program Experiences, Sense of Competence as a Learner, Future Planning and Expectations
- ▶ **Youth Outcomes Battery – Series of 12 subscales (American Camping Association, 2013)**
  - Each subscale contains 6-14 questions
  - Target age: Grades 6th-12
  - Also measures: Family Citizenship, Perceived Competence, Affinity for Nature, Spiritual Well-being, and Camp Connectedness
- ▶ **Youth Outcome Measures Online Toolbox**
  - 44 items for teacher and staff questionnaire, 30 questions for youth
  - Target age: K-8th
  - Also Measures: Aggressive Behavior with Peers, Academic Performance, Misconduct, Reading/English Efficacy, and Math Efficacy

## Decision-Making

The ability to define a problem, choose between alternatives, identify the risk and consequences for each alternative, selection of an alternative, and finally evaluating the situation (Duerden et al., 2012).

### Measures of Decision-Making:

- ▶ **Making Decisions in Everyday Life Scale (C. C. Mincemoyer & Perkins, 2003)**
  - 20 items
  - Designed for adolescents
- ▶ **California Healthy Kids Survey Resilience and Youth Development Module (RYDM)**
  - Target age: Grades 5th-8th
  - Short version (33 items) and long version (56 items)
- ▶ **Devereux Student Strengths Assessment (DESSA) (LeBuffe et al., 2009)**
  - Target age: K-8th
  - 72-items

### ▶ Survey of Afterschool Youth Outcomes (SAYO)

- Around 30 items – dependent on answers
- Student and teacher form for both reported and observed behavior
- Target Age: K-12
- Also measures: Engagement in Learning, Homework, Academic Performance, Program Experiences, Sense of Competence as a Learner, Future Planning and Expectations

### ▶ Youth Outcomes Battery – Series of 12 subscales (American Camping Association, 2013)

- Each subscale contains 6-14 questions
- Target Age: Grades 6th-12
- Also measures: Family Citizenship, Perceived Competence, Affinity for Nature, Spiritual Well-being, and Camp Connectedness

### ▶ Youth Outcome Measures Online Toolbox

- 44 items for teacher and staff questionnaire, 30 questions for youth
- Target age: K-8th
- Also Measures: Aggressive Behavior with Peers, Academic Performance, Misconduct, Reading/English Efficacy, and Math Efficacy

## Leadership

The ability to interact with a group, exercise influence and achieve a common goal (Mills, 2009).

There are literally hundreds of definitions for leadership (Bennis & Nanus, 2003).

### Measures of Leadership:

#### ▶ Leadership Efficacy Scale (Chi, Jastrzab, & Melchior, 2006)\*

- 6 items
- *\*Low reliability scores (.68 boys, .59 for girls)*

#### ▶ Multi-factor Leadership Questionnaire (Bass & Avolio, 1995)

- 45 items – short survey version

#### ▶ San Francisco Beacons Survey\*

- 37 items (from 5 scales – Leadership is one scale)
- Target age: Middle school primarily
- *\*This survey has limited evidence of reliability and validity.*

## Problem-Solving

“The process of using reasoning and analysis to look beyond the surface of the problem to the underlying concepts that need to be part of the solution” (Duerden et al., 2012). One of the key components is that problem solving is self-directed, not implemented, encouraged or rewarded by another.

### Measures of Problem-Solving:

#### ▶ Solving Problems Survey (Barkman & Machtmes, 2002)

- 24 items

#### ▶ California Healthy Kids Survey Resilience and Youth Development Module (RYDM)

- Target age: Grades 5th-8th
- Short version (33 items) and long version (56 items)

#### ▶ Survey of Afterschool Youth Outcomes (SAYO)

- Around 30 items – dependent on answers
- Student and teacher form for both reported and observed behavior
- Target Age: K-12
- Substantial reliability and validity evidence
- Also measures: Engagement in Learning, Homework, Academic Performance, Program Experiences, Sense of Competence as a Learner, Future Planning and Expectations

#### ▶ Youth Outcomes Battery – Series of 12 subscales (American Camping Association, 2013)

- Each subscale contains 6-14 questions
- Target Age: Grades 6th-12
- Limited reliability and validity evidence
- Also measures: Family Citizenship, Perceived Competence, Affinity for Nature, Spiritual Well-being, and Camp Connectedness

## Responsible Citizenship

Responsible citizenry is synonymous in much of the literature with civic engagement (Duerden et al., 2012). There are several ways according to Bobek, Zaff, Li, and Lerner (2009) for one to be civically engaged, for example; 1) One's ability to be involved in civic society and democracy; 2) Having a desire to make positive contributions to community; and 3) Active participation in activities to better community.

### Measures of Responsible Citizenship:

- ▶ **Civic Responsibility Survey Level 2 (Furco, Muller, & Ammon, 1998)**
  - 10 items
  - Good Reliability and validity scores ( $\alpha=.84$ )

## Self-Esteem

"A construct resulting from the degree of congruence between perceptions of their ideal and real selves, perceptions based upon comparisons and with feedback from others."

Self-Esteem used to be mostly influenced by adults and peers of importance (Butler & Gasson, 2005), however in this technological era, youth are continually influenced by comparisons made via social media and pressure to meet or achieve certain expectations.

### Measures of Self-Esteem:

- ▶ **Rosenberg Self-Esteem Scale (Rosenberg, 1965)**
  - 10 items
- ▶ **Single-Item Self Esteem Scale (Robins, Hendin, & Trzesniewski, 2001)**
  - One item, "I have high self Esteem"
  - Found to have acceptable reliability and validity measures ( $\alpha = .74$ )

## Self-Responsibility

One's ability to own and accept consequences or corrections of personal actions (Ellis & Sibthorp, 2006).

### Measures of Self-Responsibility:

- ▶ **Self-Responsibility Measure (American Camping Association, 2013)**
  - 6 items
  - Target Age: 10-17 years
- ▶ **Devereux Student Strengths Assessment (DESSA) (LeBuffe et al., 2009)**
  - Target age: K-8th
  - 72 items
- ▶ **Student Personal Responsibility Scale (SPRS-10) (Singg & Ader, 2001)**
  - 10 items

## Teamwork

"Knowledge, skills, attitudes, or behaviors that increase the likelihood that an individual can be an effective member of a team" (Duerden et al., 2012).

### Measures of Teamwork:

- ▶ **Teamwork Scale (American Camping Association, 2013)**
  - 8 items
  - Target Age: 10-17 years
- ▶ **Youth Outcomes Battery – Series of 12 subscales (American Camping Association, 2013)**
  - Each subscale contains 6-14 questions
  - Target Age: Grades 6th-12
  - Also measures: Family Citizenship, Perceived Competence, Affinity for Nature, Spiritual Well-being, and Camp Connectedness
- ▶ **Teamwork Scale for Youth (Lower, Newman, & Anderson-Butcher, 2017)**
  - 10 items
  - Youth (unspecified age)

## Physical Activity

Physical activity is defined as any bodily movement produced by skeletal muscles that requires energy expenditure (World Health Organization, 2018).

Sirard and Pate (2001), suggest that direct observation is the most effective, practical and accurate measure for Physical Activity estimation. However, this is not practical for many researchers, let alone organizations that do not have funding or available personal to collect these data.

Accelerometers and pedometers (i.e. activity trackers) have been widely used in physical activity evaluation. Again, these are not feasible for many organizations for several reasons including, not having the money available to obtain the devices in the first place, inability to encourage consistent use of the devices by program participants, or do not have the time and resources to extract and analyze these data. Surveys and questionnaires are still the most accessible and usable data collection tools for estimating physical activity.

### Measures of Physical Activity:

- ▶ **Physical Activity Questionnaire for Older Children (PAQ-C) (Crocker, Bailey, Faulkner, Kowalski, & McGrath, 1997; Kowalski, Crocker, & Faulkner, 1997)**
    - 9 items
    - Target Age: 9-15 years
    - Validity data within areas of sport, recreation and school participants
    - Specifically measuring moderate to vigorous physical activity levels
  - ▶ **Girls Health Enrichment Multisite Study Activity Questionnaire (GAQ) (Treuth et al., 2003).**
    - 41 items
    - Target Population and Age: African American Girls (8-10 years old)
    - Reliability and validity data shows generalizability across settings
    - Specifically measuring physical activity
  - ▶ **Children's Leisure Activity Questionnaire (CLASS) (Telford, Salmon, Jolley, & Crawford, 2004)**
    - 30 activities (items) + 6 questions
    - Target Age: Elementary aged children
    - Reliable and valid with the target age
    - Measuring average daily physical activity
  - ▶ **Physical Activity Questionnaire for Parents and Teachers (Harro, 1997)**
    - 12 items for parents, 15 and 16 items for teachers
    - Target Age: 4-8 years
    - Valid for target age across settings
    - Measures daily amount of moderate to vigorous physical activity levels
  - ▶ **Oxford Physical Activity Questionnaire (OPAQ) (Lubans, Sylva, & Osborn, 2008)**
    - Uses a timesheet format
    - Target Age: Middle School students (age 11-16 years)
    - Reliability and validity data across settings for this age population
    - Measures amount of moderate to vigorous physical activity levels from the previous week specifically measuring duration and frequency of these activity levels
- \*Important to note that studies using this questionnaire have participants use activity trackers.

## Appendix: Links and Cost

### Communications Scale from the Youth Life Skills Evaluation

- Link: <http://www.humanserviceresearch.com/youthlifeskillevaluation/>

### Social Skills Improvement System (SSIS)

- Link: <https://www.pearsonclinical.com/feature/ssis/index.html>
- Cost: \$334.00-\$534.00 depending on package.

### Survey of Afterschool Youth Outcomes (SAYO) – (around 30 items – dependent on answers)

- Link: <https://www.niost.org/Training-Descriptions/survey-of-afterschool-youth-outcomes-youth-survey-sayo-y>
- Cost: Contact for an estimate for your group size.

### Youth Outcomes Battery – Series of 12 subscales (focusing on a variety of outcomes)

- Cost: \$225-250

### California Healthy Kids Survey Resilience and Youth Development Module (RYDM)

- Link: <https://calschls.org/>
- Cost: \$150 set up fee, \$.40 per student enrolled

### Youth Outcome Measures Online Toolbox

- Link: <http://www.afterschooloutcomes.org/>
- Cost: Contact for an estimate for your group size.

### Self-Responsibility Measure (American Camping Association, 2013)

- Cost: \$30

## References

- American Camping Association, I. (2013). Camp youth outcomes battery: Measuring developmental outcomes in youth programs. 2. Retrieved from <https://www.acacamps.org/resource-library/research/aca-youth-outcomes-battery>
- Barkman, S., & Machtmes, K. (2002). Communication evaluation scale.
- Bass, B., & Avolio, B. (1995). *MLQ multifactor leadership questionnaire*: Mind Garden.
- Bennis, W., & Nanus, B. N. Y. H. R. (2003). *Leaders: The strategies for taking charge*. New York: Harper Row.
- Bobek, D., Zaff, J., Li, Y., & Lerner, R. M. J. J. o. A. D. P. (2009). Cognitive, emotional, and behavioral components of civic action: Towards an integrated measure of civic engagement. *30*(5), 615-627.
- Butler, R. J., & Gasson, S. (2005). Self esteem/self concept scales for children and adolescents: A review. *Child Adolescent mental health, 10*(4), 190-201.
- Chi, B., Jastrzab, J., & Melchior, A. (2006). *Developing Indicators and Measures of Civic Outcomes for Elementary School Students. CIRCLE Working Paper 47*. Retrieved from Center for Information Research on Civic Learning Engagement:
- Crocker, P., Bailey, D. A., Faulkner, R. A., Kowalski, K. C., & McGrath, R. (1997). Measuring general levels of physical activity: preliminary evidence for the Physical Activity Questionnaire for Older Children. *Medicine science in sports exercise, 29*(10), 1344-1349.
- Duerden, M. D., Witt, P. A., Fernandez, M., Bryant, M. J., & Theriault, D. (2012). Measuring life skills: Standardizing the assessment of youth development indicators. *Journal of Youth Development, 7*(1), 99-117.
- Ellis, G., & Sibthorp, J. (2006). *Development and validation of a battery of age appropriate measures for camper outcomes*. Retrieved from
- Furco, A., Muller, P., & Ammon, M. S. (1998). *The civic responsibility survey*. Retrieved from Service-Learning Research Center, University of California, Berkley.
- Harro, M. (1997). Validation of a questionnaire to assess physical activity of children ages 4–8 years. *Research quarterly for exercise Sports Technology, 68*(4), 259-268.
- Kowalski, K. C., Crocker, P. R., & Faulkner, R. A. (1997). Validation of the physical activity questionnaire for older children. *Pediatric exercise science, 9*(2), 174-186.
- LeBuffle, P. A., Shapiro, V. B., & Naglieri, J. A. (2009). *The devereux student strengths assessment (DESSA)*. Retrieved from Lewisville, North Carolina: Kaplan.
- Lower, L. M., Newman, T. J., & Anderson-Butcher, D. (2017). Validity and reliability of the teamwork scale for youth. *Research on Social Work Practice, 27*(6), 716-725.
- Lubans, D. R., Sylva, K., & Osborn, Z. J. B. C. (2008). Convergent validity and test–retest reliability of the oxford physical activity questionnaire for secondary school students. *25*(1), 23-34.
- Mills, L. (2009). A meta-analysis of the relationship between emotional intelligence and effective leadership. *Journal of Curriculum Instruction, 3*(2), 22.
- Mincemoyer, Perkins, & Munyua. (2001). Youth Life skills evaluation. Retrieved from <http://www.humanserviceresearch.com/youthlifekillsevaluation/>
- Mincemoyer, C. C., & Perkins, D. F. (2003). *Assessing decision-making skills of youth*. Paper presented at the The Forum for Family and Consumer Issues.
- Perkins, D., & Mincemoyer, C. J. U. P., PA: The Pennsylvania State University. (2002). Skills for everyday living.
- Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality social psychology bulletin, 27*(2), 151-161.
- Rosenberg, M. (1965). Rosenberg self-esteem scale (RSE). *Acceptance commitment therapy. Measures package, 61, 52*.
- Rushton, J. P., Chrisjohn, R. D., Fekken, G. C. J. P., & differences, i. (1981). The altruistic personality and the self-report altruism scale. *2*(4), 293-302.
- Singg, S., & Ader, J. A. (2001). Development of the Student Personal Responsibility Scale-10. *Social Behavior Personality: an international journal, 29*(4).
- Sirard, J. R., & Pate, R. R. J. S. m. (2001). Physical activity assessment in children and adolescents. *31*(6), 439-454.
- Telford, A., Salmon, J., Jolley, D., & Crawford, D. (2004). Reliability and validity of physical activity questionnaires for children: the Children's Leisure Activities Study Survey (CLASS). *Pediatric exercise science, 16*(1), 64-78.
- Treuth, M. S., Sherwood, N. E., Butte, N. F., Mcclanahan, B., Obarzanek, E., Zhou, A., . . . Jacobs, D. R. (2003). Validity and reliability of activity measures in African-American girls for GEMS. *Medicine science in sports exercise, 35*(3), 532-539.
- World Health Organization. (2018). Global Strategy on Diet, Physical Activity and Health Retrieved from <https://www.who.int/dietphysicalactivity/pa/en/>
- Youniss, J., McLellan, J. A., Su, Y., & Yates, M. J. J. o. A. R. (1999). The role of community service in identity development: Normative, unconventional, and deviant orientations. *14*(2), 248-261.