Ropes course programs may provide numerous benefits, but few studies have supplied principle-based information that distinguishes effective programs from ineffective ones (Doherty, 1995). Comparing different treatments—either different types of programs or similar programs with systematically varied attributes (Hamilton, 1980)—enables researchers to connect program design and delivery with the mediating variables that ultimately contribute to program outcomes (Rogers, 2000). This approach provides a complete chain of information for improving program effectiveness.

The purpose of the study was to: (a) compare Challenge by Choice (CbC) and Inviting Optimum Participation (I-OPt) ropes course programs in their provision of meaningful involvement opportunities, and (b) identify and compare the linkages among program attributes, outcomes, and values under each programming approach.

Challenge by Choice programs sequenced activities to create an atmosphere of support, trust, and encouragement for taking risks. Participants agreed to value group members, allow individuals to step back and try again later, focus on effort rather than performance, and respect people’s choices and ideas (Schoel, Prouty, & Radcliffe, 1988).

Inviting Optimum Participation programs provided all participants with multiple options and levels of challenge within a single, inclusive activity design. Instructors ensured all group members could contribute to each activity’s central task by deliberately balancing participant characteristics with the challenge environment (Haras, 2003).
Meaningful involvement is a mediating variable that describes active participation in a voluntarily chosen activity where an individual's deliberate conduct leads to demonstrable effects, influences important decisions, and leads to the achievement of desired outcomes (Checkoway, 1998). Rohnke, Wall, Tait, and Rogers (2002) suggest participants are meaningfully involved in ropes course programs when their role in an activity enables them to contribute toward the group's goals.

Study participants were 360 young adolescents (ages 10–15) who took part in a full-day ropes course program provided by one of four organizations in Ontario, Canada. Average age was 12.7 years and 47% had ropes course experience. Organizations provided either CbC or I-OPt programs based on experience with a particular approach.

Experience sampling and means-end analysis provided a multi-dimensional approach. In order for the study not to interfere with the ropes course experience, participants completed either: (a) experience sampling forms (ESFs) related to meaningful involvement, or (b) a means-end laddering survey related to program attributes, outcomes, and values.

Immediately after four, pre-selected activities, 151 participants completed ESFs. Multivariate analysis of variance (MANOVA) was used to determine if CbC participants differed from I-OPt participants. The dependent variables were meaningful involvement during high (belayed) and low (nonbelayed) activities. Meaningful involvement consisted of three areas: engagement, choice, and view of self. The independent variables were program type, sex, and ropes course experience. Program type had a significant effect ($\lambda [3,158] = 0.937, p < 0.05$) on the degree of meaningful involvement experienced during high activities. Follow-up ANOVAs indicated that choice ($F [1, 160] = 6.127, p < 0.05$) was significantly higher in I-OPt programs (ES 0.26). Differences between the programs in engagement (ES 0.06), and view of self (ES 0.22), were not significant for high activities at $p = 0.05$. There was no significant effect for low activities.

At the end of their program, 209 participants completed a means-end survey asking them to identify linkages among program attributes, outcomes, and values. Participants' responses were coded, entered into the LadderMap software program, and organized into Hierarchical Value Maps (HVMs). Overall, I-OPt program participants identified different concepts and linkages than CbC program participants. I-OPt participants were more likely to mention attributes relating to low activities, e.g., "low ropes," "trust exercises," and "communication activities." I-OPt participants also reported the outcome "group efficacy" as significant, and were less likely to mention the outcome "anxiety." CbC participants were less likely to mention attributes related to low activities and the outcome "group efficacy," and more likely to mention the outcome "anxiety."

This study found that participant experiences of meaningful
involvement are affected by program design and delivery attributes. To create ropes course programs that increase opportunities for meaningful involvement, practitioners should:

- Ensure that all options include challenge, uncertainty, risk, novelty, and fun.
- Provide a minimum of two different action opportunities for all aspects of high activities (i.e. access, order, degree of completion, additional challenge options).
- Offer at least two different action opportunities associated with the central task during all low activities.
- Allow participants to self-select roles that contribute to the activity's central task and are congruent with their skills and abilities.
- Create activities with an increased number and variety of challenge options that offer simultaneous opportunities for purposeful engagement.

To further inform program design and delivery, future studies should explore how meaningful involvement affects specific outcomes such as self-efficacy and group cohesion.

Kathy Haras, Ph.D., Adventureworks! Associates Inc.  
E-mail: kathy@adventureworks.org

Camille J. Bunting, Ph.D., Texas A&M. E-mail: cbunting@tamu.edu

References


