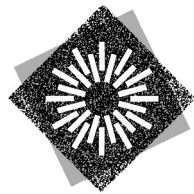


Case Studies

Using the

Perceived Competence of Functioning Inventory (PCFI)

To measure outcomes



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Building Self-Efficacy

There are four primary ways to raise self-efficacy, each of which is utilized in adventure-learning.

- **Success and Mastery:** Experiences that require overcoming obstacles through sustained effort increase a person's perseverance and their willingness to embrace new challenges.
- **Modeling:** Seeing others similar to oneself succeed raises one's beliefs that they too possess the capabilities to succeed.
- **Encouragement and Persuasion:** When others believe in you, you are driven to succeed even in the face of obstacles.
- **Re-Interpret Physical and Emotional States:** Adventure-based learning experiences offer many opportunities for persons to overcome anxiety and fear and thereby enhance their belief that "I can do this" when faced with challenges that take them outside their comfort zone.

PCFI Scales

The PCFI measures four domains of self-efficacy, representing four processes of positive change.

- **Cognitive Competencies** assesses a person's beliefs in their ability to manage their internal experience through appropriate beliefs in self, controlling anger and engaging in healthy, productive thought processes.
- **Relational Competencies** measures a person's beliefs in their ability to function in relationships through trusting others, feeling secure, and having satisfying relationships with family.
- **Affective Competencies** measures a person's beliefs in their ability to be self-accepting and experience satisfaction with their life.
- **Motivational Competencies** measures the person's beliefs in their ability to feel assertive, work toward personal goals and cope without using alcohol or drugs.
- **General Level of Functioning (GLF)** is the aggregate score of all the scales. This is used to assess the overall impact of a program.

Case 1: College Students Caught Drinking!

Dean of students wanted to focus on strengths and empowerment and accountability instead of punitive action. In dealing with this situation, Resident Director had not demonstrated good leadership, a group of students blatantly drinking, almost asking to get caught. Dean believed in these kids.

Primary goal: Critical thinking around boundaries, respect, and use of alcohol/drugs, as well as relationships with this Residential Director (PCFI - motivational competencies)

Intervention involved:

- 1 hour consultation with Dean of Students and RD, followed by:
- Half-day of games/initiatives and debriefing with a facilitator
- PCFI pre and post

Case 2: Aircraft Manufacturer Changing Products

Midwest aircraft manufacturer with 600 employees embarking on a large-scale transition in product line, necessitating major paradigm shifts and with very little margin for failure. High stakes. They anticipated and wanted to prevent two things, 1) fracturing of the team, and 2) inappropriate behavior, stress, loss of control. Thirty participants most closely responsible for implementing the changes participated in 2 days of "team alignment" (20 managers, 6 six-sigma black belts, and 4 external consultants).

Primary Goals:

- 1) team alignment and cohesiveness (PCFI-Relational Competencies)
- 2) self-control, thinking clearly, maintaining creative motivation (PCFI-Cognitive Competencies)
- 3) effective communication, appreciating differences, and motivate self and others (PCFI-Behavioral competencies).

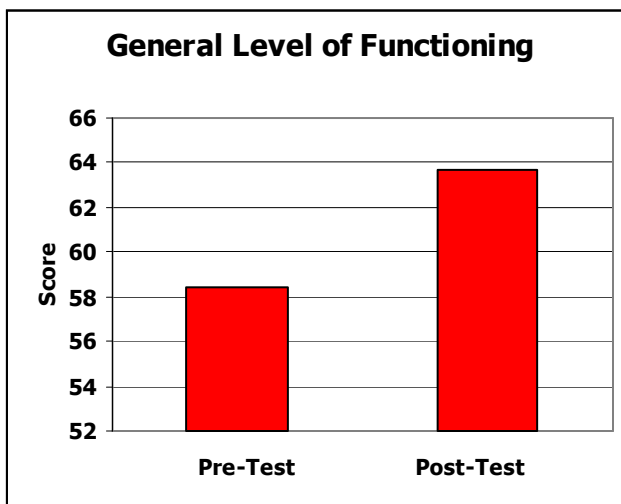
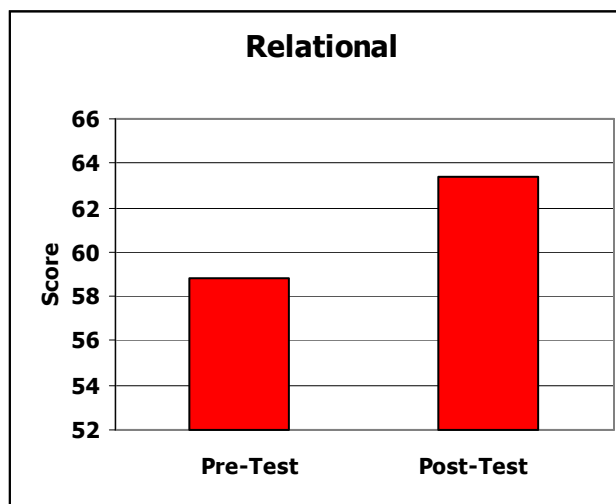
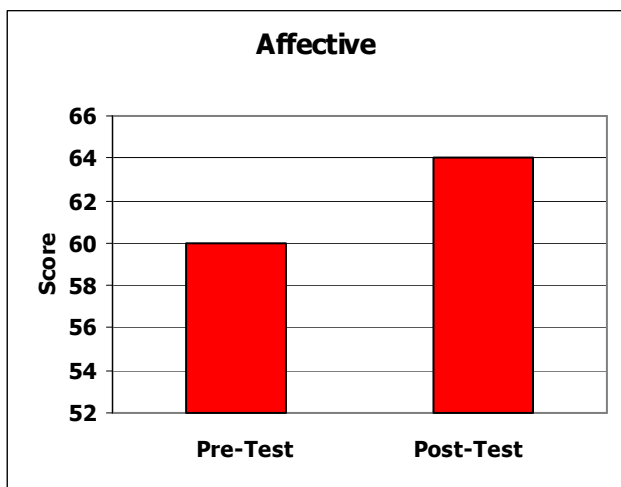
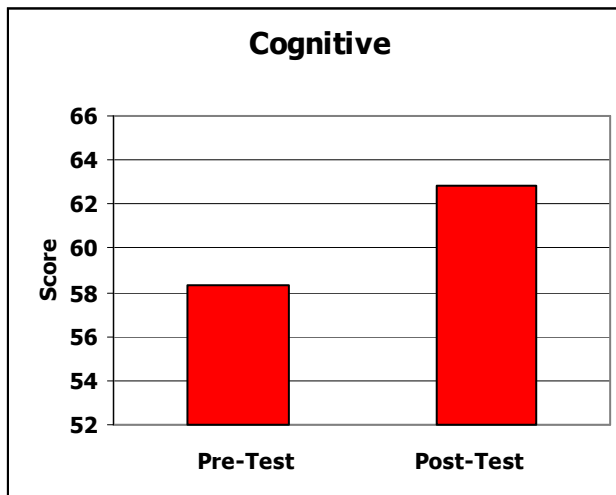
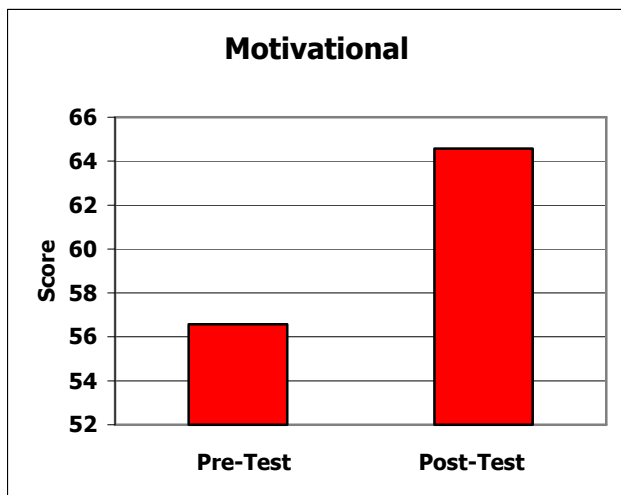
Intervention involved:

- 4-6 hours of consultation and planning prior to event
- 2 days adventures to go with Process Communications Model built in, 3 facilitators

Key points:

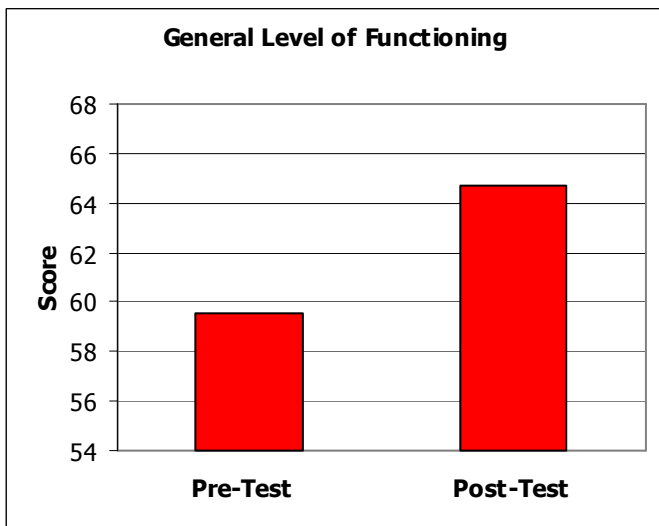
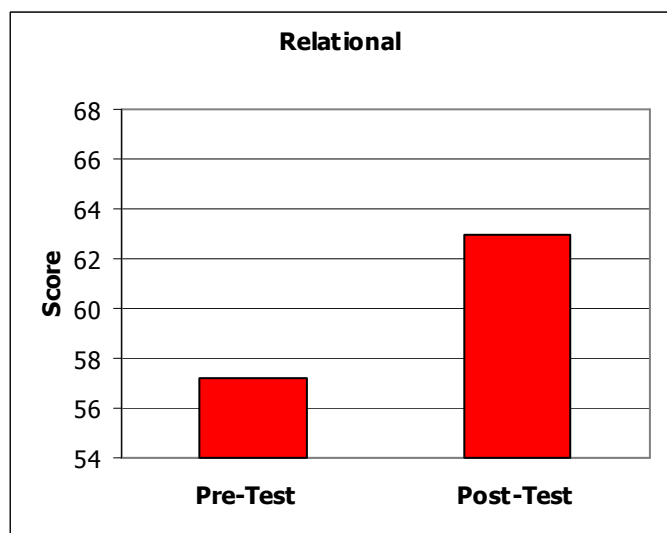
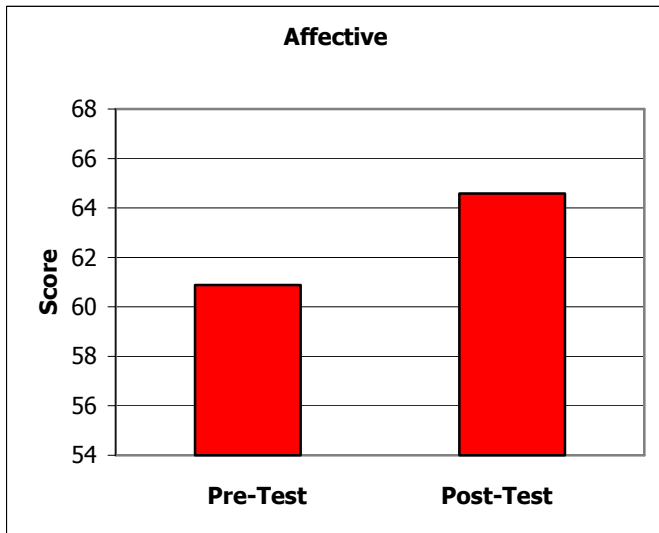
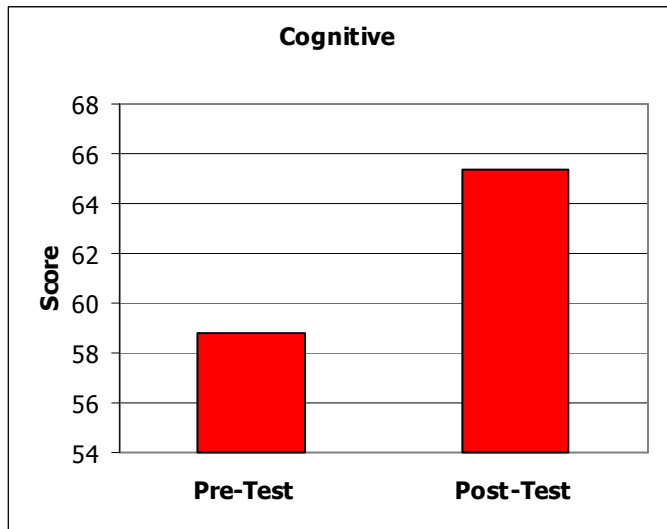
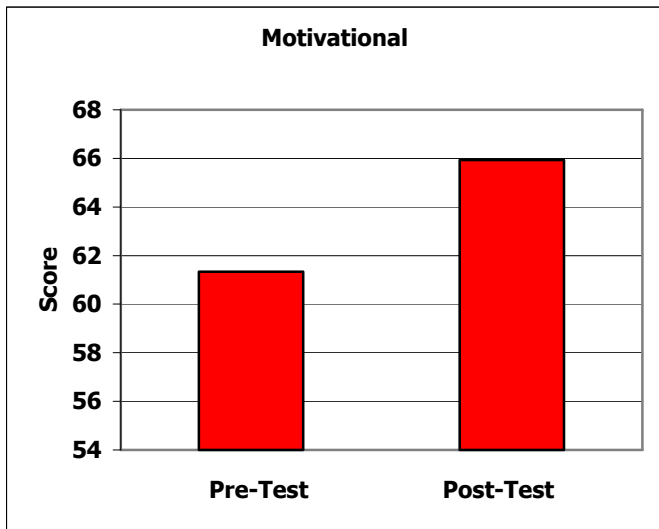
- 1. In both groups, goals were set by third parties.
- 2. In both groups, participation was mandatory, and was met with resistance.
- 3. Both groups began in considerable distress.
- 4. Administration in both groups adopted a "control to empowerment" mindset, took a risk to invest in developing self-efficacy rather than reacting punitively or imposing control as a solution.
- 5. With Case 2, we had prior knowledge from completed Capabilities Awareness Profile and PCM personality profiles for each participant.

Case 1: Outcomes College Students Caught Drinking!



February 11, 2006				
Program Outcomes for Employees as Measured by the Perceived Competence of Functioning Inventory				
PCFI Scales	Pre	Post	Change Score	Effect Size
Aggregate (N=7)				
Motivational	56.6	64.6	8.0	0.83
Cognitive	58.3	62.9	4.6	0.41
Affective	60.0	64.0	4.0	0.32
Relational	58.9	63.4	4.6	0.45
GLF	58.4	63.7	5.3	0.52

Case 2: Outcomes Aircraft Manufacturer Changing Products



February 7-8, 2006				
Program Outcomes for Participants as Measured by the Perceived Competence of Functioning Inventory				
PCFI Scales	Pre	Post	Change Score	Effect Size
Aggregate (N=27)				
Motivational	61.3	65.9	4.6	0.56
Cognitive	58.8	65.3	6.5	0.88
Affective	60.9	64.6	3.7	0.36
Relational	57.2	63.0	5.8	0.62
GLF	59.6	64.7	5.1	0.70

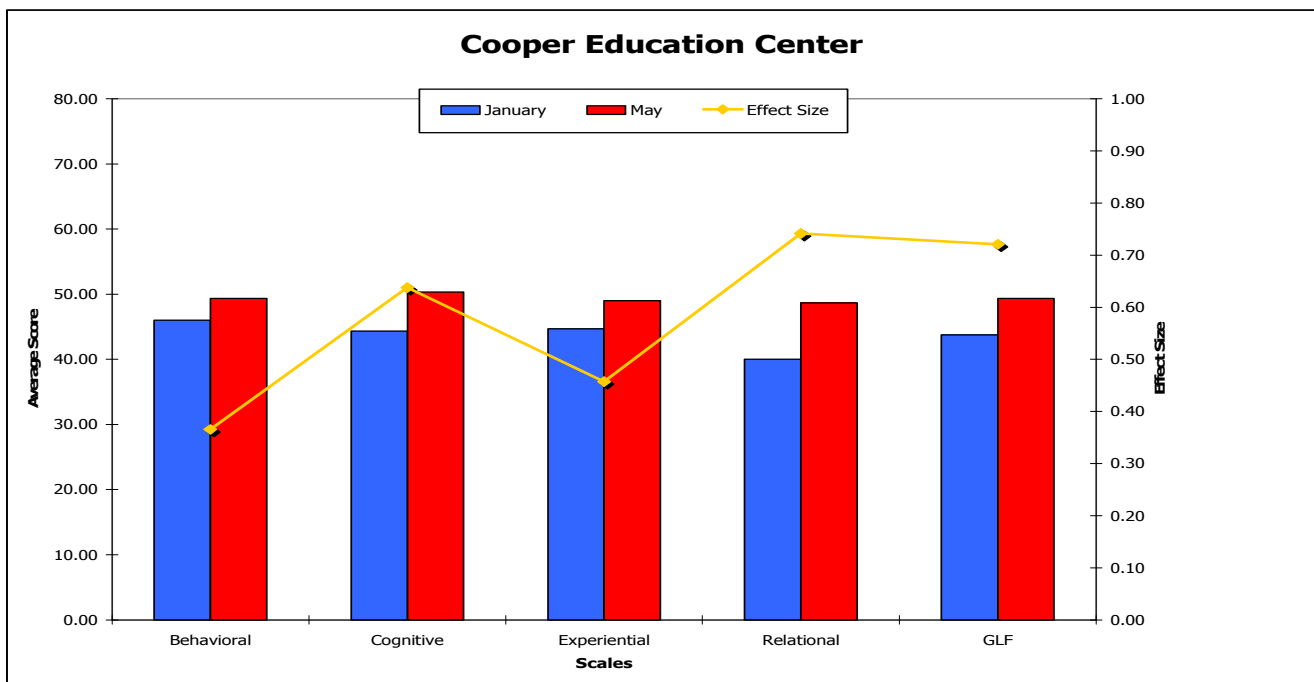
Case 3: LEEP program at a Special Purpose School

Weekly 1-hour on-site adventure-based school group
 Day-long outdoor adventure experience (“rituals and relations”) at conclusion of semester.

Goals:

1. Enhance critical thinking skills (PCFI-Cognitive Competencies)
2. Building relationship skills (PCFI-Relational Competencies)

Note: Behavioral Competencies subscale showed only moderate gains, which is not surprising since the program actually downplayed focus on negative behavior, as this is typically what students are used to hearing, and why they are in this situation in the first place. Instead, focus was on nurturing strengths, finding and developing potentials, and normalizing students’ perspectives and experiences in order to increase self-acceptance and sense of personal control.

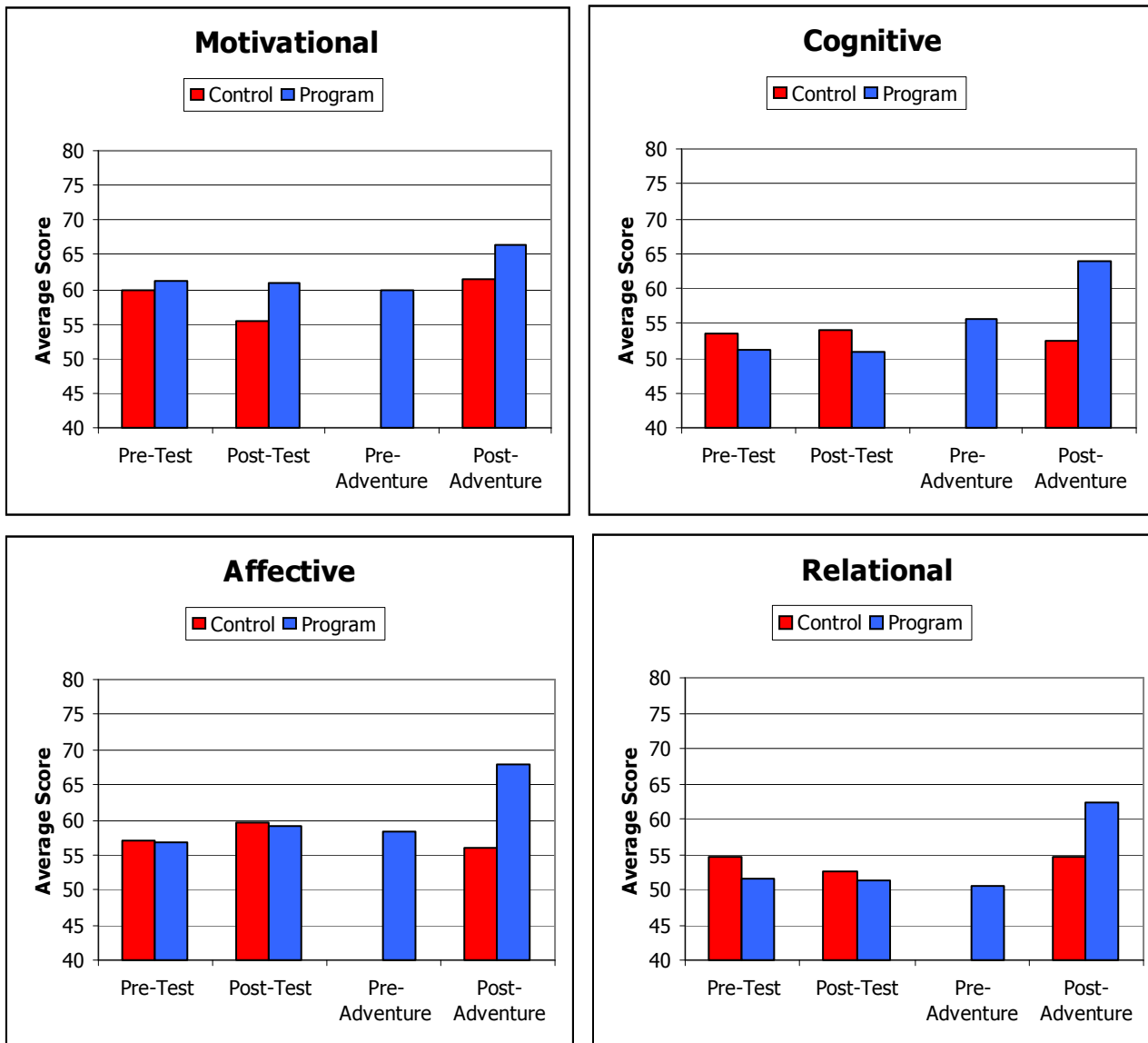


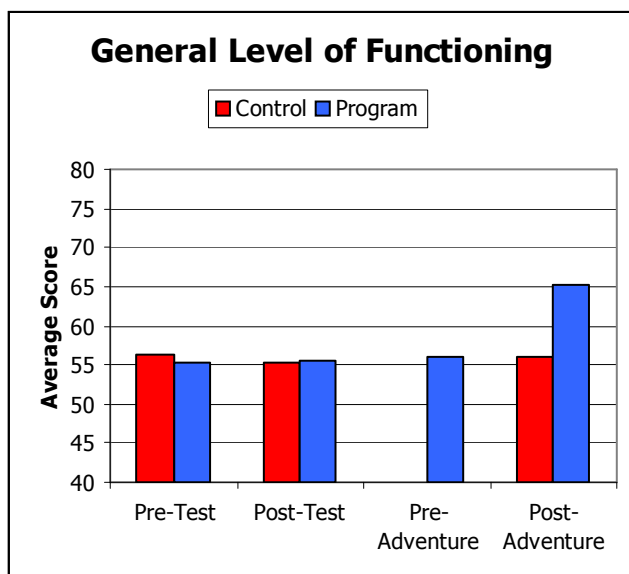
Cooper Education Center					
January – May 2006					
PCFI Scales	January	May	Change Score	Standard Deviation	Effect Size
Aggregate (N=12)					
Motivational	46.00	49.33	3.33	9.11	0.37
Cognitive	44.33	50.33	6.00	9.41	0.64
Affective	44.67	49.00	4.33	9.47	0.46
Relational	40.00	48.67	8.67	11.69	0.74
GLF	43.75	49.33	5.58	7.74	0.72

Case 4: LEEP program at a High School – at risk students

6 weekly 1-hour on-site adventure-based school groups
 Day-long outdoor adventure experience at conclusion of semester
 Matched control group of students from same classes
 PCFI administered at 4 intervals, 90-day follow-up interval still pending

Figure 1: Average Scale Scores





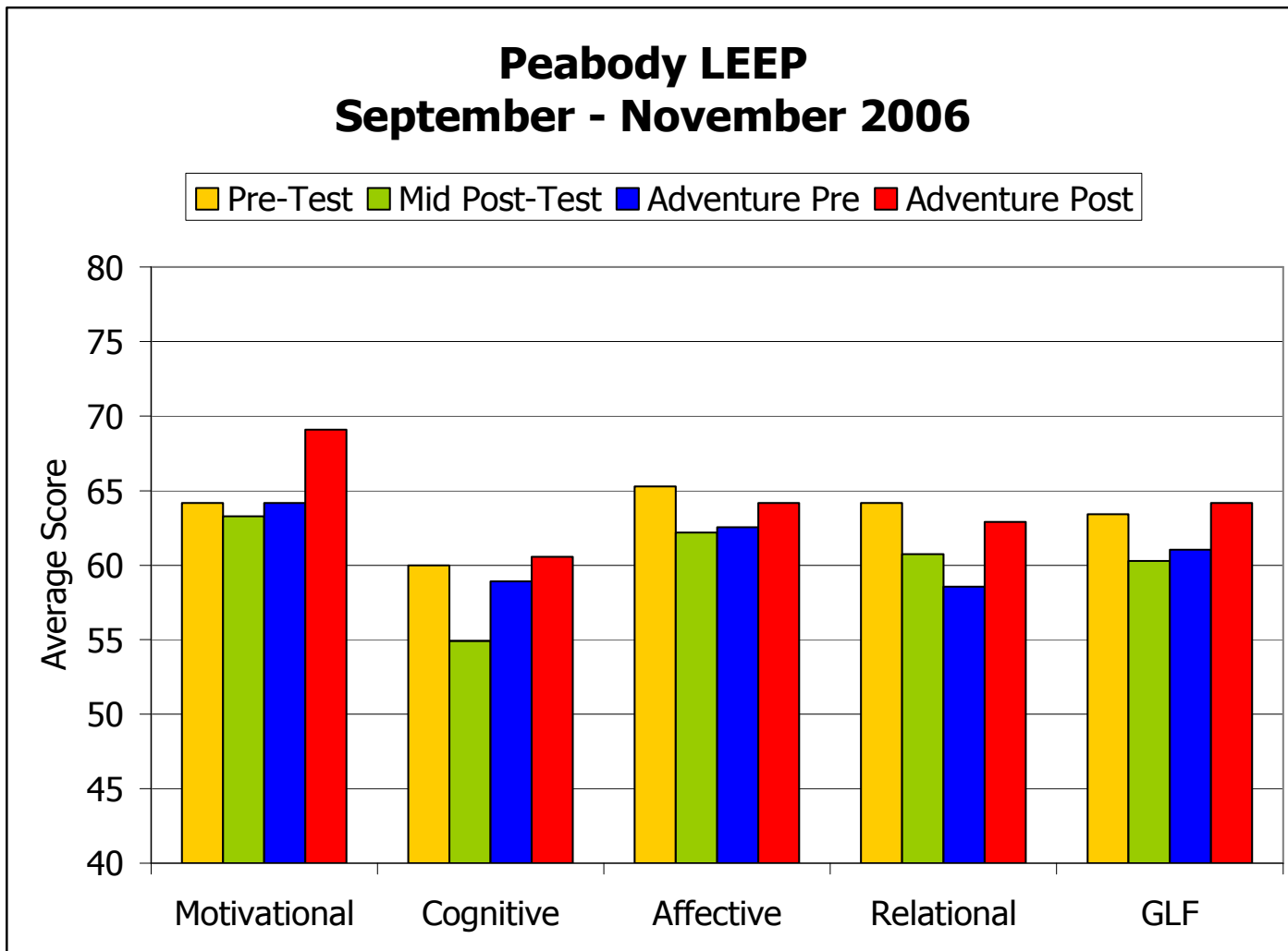
Experimental Group								
PCFI Scales	Week 1	Week 6	Change Score	Effect Size	Pre-Adv.	Post-Adv.	Change Score	Effect Size
Aggregate (N=10)								
Motivational	61.2	60.8	-0.4	-0.04	60.0	66.4	6.4	0.61
Cognitive	51.2	50.8	-0.4	-0.03	55.6	64.0	8.4	0.49
Affective	56.8	59.2	2.4	0.19	58.4	68.0	9.6	0.62
Relational	51.6	51.2	-0.4	-0.03	50.4	62.4	12.0	0.73
GLF	55.2	55.5	0.3	0.03	56.1	65.2	9.1	0.67

Control Group								
PCFI Scales	Week 1	Week 6	Change Score	Effect Size	Pre-Test*	Post-Adv.	Change Score	Effect Size
Aggregate (N=8)								
Motivational	60.0	55.5	-4.5	-0.43	60.0	61.5	1.5	0.14
Cognitive	53.5	54.0	0.5	0.04	53.5	52.5	-1.0	-0.09
Affective	57.0	59.5	2.5	0.33	57.0	56.0	-1.0	-0.13
Relational	54.5	52.5	-2.0	-0.13	54.5	54.5	0.0	0.0
GLF	56.3	55.4	-0.9	-0.09	56.3	56.1	-0.2	-0.02

* Control Group did not take a Pre-PCFI on the Adventure Course. The Effect Size was determined using Week 1 vs. Post-Adventure data.

Case 5: Mainstream high school students

6 weekly 1-hour on-site adventure-based school groups
Day-long outdoor adventure experience at conclusion of semester
Outcomes assessed at week 1, week 4, week 6 prior to adventure course, and post adventure course.



These outcomes demonstrate a commonly seen pattern of reduction in PCFI scores from first to second administration, then steady increases over the remainder of the program. One explanation is that an initial desirability bias is followed by more realistic self-reporting resulting from insight and feeling comfortable/safe as people move from pre-contemplation to contemplation stage of change.

Peabody LEEP

September - November 2006

PCFI Scales	Pre-Test	Wk 4	Wk 1-4 Change score	Effect Size	Wk 6 pre-Adventure course	Wk 6 post-Adventure course	Adv. Course change score	Effect Size
Aggregate (N=22)								
Motivational	64.18	63.27	-0.91	-0.11	64.18	69.09	4.91	0.57
Cognitive	60.00	54.91	-5.09	-0.48	58.91	60.55	0.55	0.05
Affective	65.27	62.18	-3.09	-0.23	62.55	64.18	-1.09	-0.08
Relational	64.18	60.73	-3.45	-0.25	58.55	62.91	-1.27	-0.09
GLF	63.41	60.27	-3.14	-0.31	61.05	64.18	0.77	0.08

Another interpretation of the changes that occurred during the LEEP program is as individuals move through a meaningful experience; they first recognize a perceived risk in change that could occur. This brings about awkwardness in the new situation as they master the skill. A paradigm shift begins to occur as they see themselves in a different light. There is a subsequent restructuring of the self perception through growth. The increase in the Motivational scale could indicate a readiness to continue learning new competencies that were a part of the LEEP program.

Case 6: At-risk students take Outward Bound trip

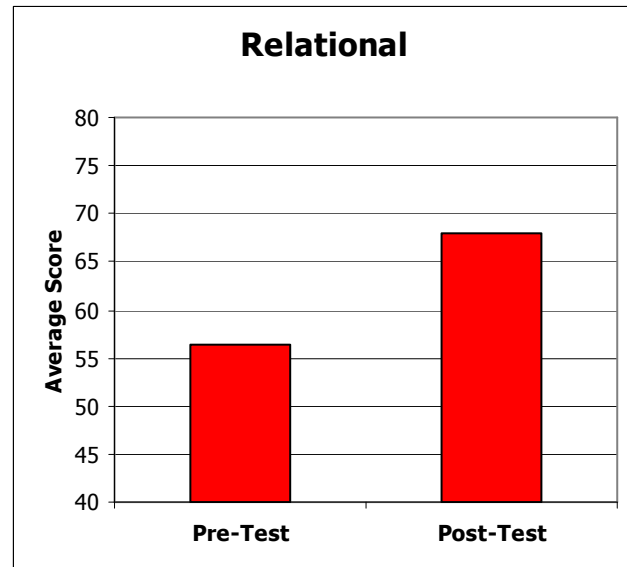
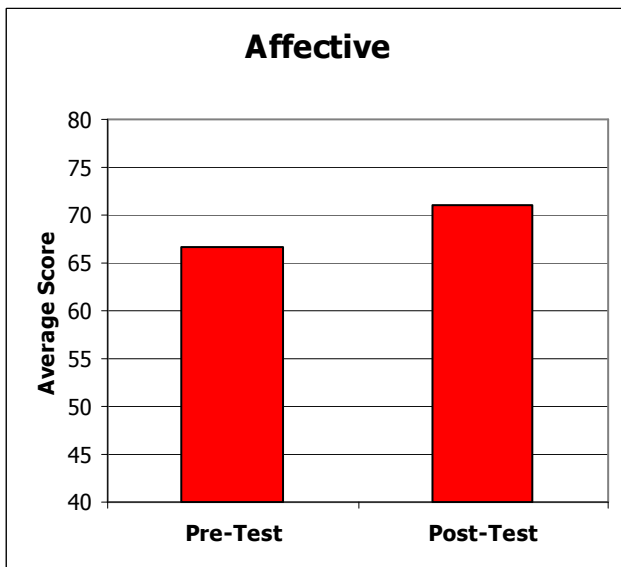
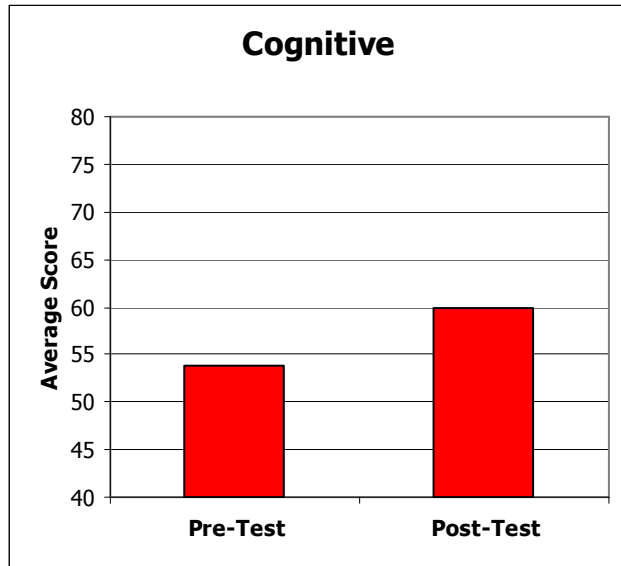
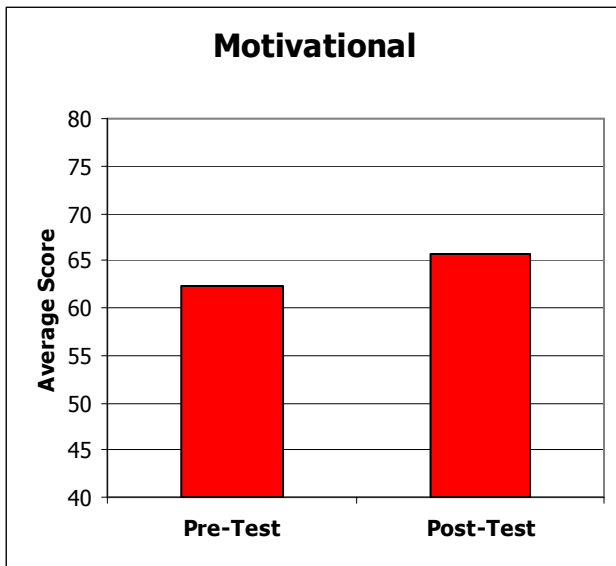
5-day trip from Kansas to Leadville, CO

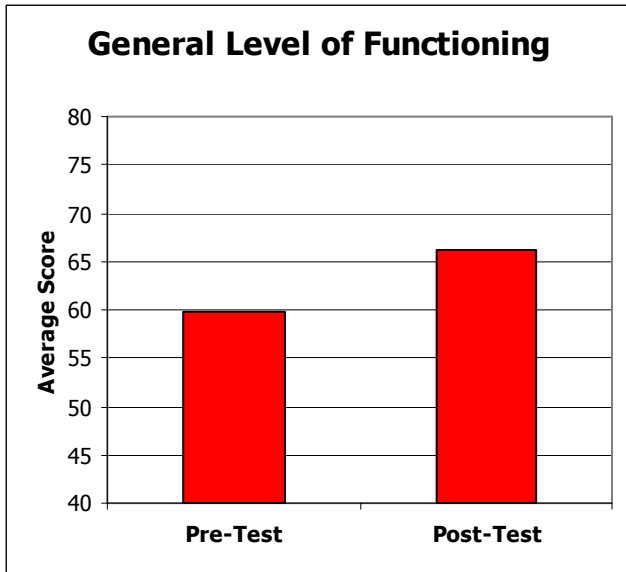
9 students, two facilitators who had been working with the group throughout semester

Most students had never been out of Kansas

All 9 students signed media and information releases

A feature story of this trip made the front page of our local paper.





Outward Bound Trip				
October 18-21, 2006				
Program Outcomes for Students as Measured by the Perceived Competence of Functioning Inventory				
PCFI Scales	Pre	Post	Change Score	Effect Size
Aggregate (N=9)				
Motivational	62.22	65.78	3.56	0.30
Cognitive	53.78	60.00	6.22	0.60
Affective	66.67	71.11	4.44	0.43
Relational	56.44	68.00	11.56	1.47
GLF	59.78	66.22	6.44	0.80

Note: Average change in GLF is about 3-4 points for students during a 1-day adventure experience. Effect sizes above 1.0 are usually only seen in inpatient treatment.

For a group this small, changes must be extremely large, and consistent from person to person (i.e. small standard deviation) to achieve effect sizes this large.