

The Use of Outdoor-Based Training Initiatives to Enhance
the Understanding of Creative Problem Solving.

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**The Use of Outdoor-Based Training Initiatives to Enhance
the Understanding of Creative Problem Solving**

**A Project in
Creative Studies**

**By
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Abstract

This project explored the use of outdoor-based training (OBT) techniques to enhance the understanding of creative problem solving (CPS) concepts in a Five Day Course in Facilitating Creative Problem Solving held at Buffalo State College in Buffalo, New York.

The evaluation of the training occurred through the use of self report forms which were completed by program participants. Results indicated that the use of outdoor-based training techniques were helpful in helping participants increase their understanding of CPS. Implications for further development and research are considered.

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Section One

The purpose of this project was to ascertain if outdoor-based training (OBT) initiatives can be used to enhance the understanding of creative problem solving (CPS) methods and techniques. Currently there does not exist a way for CPS practitioners to easily access OBT approaches to be used within CPS programs. This project will seek to identify key principles and objectives of CPS and OBT, and then illustrate how OBT approaches might be used to compliment and enhance CPS programs. A model for selecting OBT initiatives for use in a CPS training programs will also be presented.

This section will outline a rational for the use of OBT initiatives within CPS programs and explore the gap that currently exists for the productive linkage of creative learning, experiential learning, creative problem solving and outdoor-based training.

Why is this important?

The importance of outdoor-based training initiatives and creative problem solving has been evidenced by a growing interest in both the field of creativity and outdoor experiential education among business and educational leaders (Bank 1983; Chapman & Lumsdon 1983; Guilford, 1950; Isaksen, 1987; Long 1987; Sakofs 1987). The use of a wide variety of educational activities in training programs and in-service programs attests to the fact that people learn best in different situations (Dunn & Dunn, 1978). The use of varied teaching strategies also addresses individual learning and personality styles. While a speaker may be extremely good at presenting material verbally those who do not learn best through verbal

communication may fail to grasp key concepts. There is a need for kinesthetic exercises in creative problem-solving programs to balance the learning needs of all participants. Up to this point, work in this blending has been sketchy and sporadic. Activities and warm-ups with clearly identified relationships to creativity concepts and creative problem solving would be very helpful to teachers and CPS facilitators.

Rationale

Currently there is not a great deal of research or experimentation in the overlap between creative problem solving and outdoor-based training.

Considering the area of creativity, Isaksen (1987) stated that “there appears to be a widespread and natural resistance to studying a concept like creativity” (p. 1). Isaksen has described mystery, madness, and magic as three myths that have handicapped study and research into creativity. Mystery is the view that “creativity is a mysterious phenomenon, one which defies systematic analysis” (Isaksen, 1987, p. 2). Madness is the view that creativity is equal to pure novelty, which infers that a creative person must be “...mad, weird, neurotic or at least unusual” (Isaksen, 1987, p. 2). Magic is the view of creativity that it is a special gift and that if studied too closely may vanish. A more productive view of creativity is “...a natural human characteristic that is not ruined, lessened or destroyed by inquiry” (Isaksen, 1987, p. 2). Creativity is not the only area to suffer from thinking that has limited its exploration.

Some experiential educators believe that it is not wise or profitable to examine the inner workings of the experiential education process. There is “...an attraction to keeping the process mysterious. Any codification of the

process tends, by its simplification, to deny access to mystery. Once the idea is delineated, its ability to move out of that mold is decreased.” (Walsh & Golins, 1976, p. 15). With this characterization the authors express one reason why there is relatively little research into outdoor-based training/learning. Wurdinger (1990) characterized the present condition of the field as “experience rich and theory poor” (p.44). Crosby (1988) emphasized:

Some are of the school of thought about E.E. [experiential education] that it is activity, not theory, and second, that nothing should be written about E.E. because it threatens its action-orientation and tends to rigidify it. (p.74)

Even in the light of the perception that these fields cannot be or should not be studied there appears to be an overlap between creative problem solving (CPS) and outdoor-based training (OBT). In both of the fields of CPS and OBT there is a new attitude spreading, to actively and systematically study these areas, (Colan, 1986; Isaksen, 1987; Stien, 1974; Treffinger, 1986; Wagner, Baldwin & Roland 1991; Walsh & Golins, 1976). Anecdotal evidence supports the contention that combining CPS and OBT provides positive results.

In a undergraduate course in Creative Studies conducted in a modified format through the Educational Opportunity Program during the summer of 1990, OBT initiatives were used to reinforce creative problem solving. OBT was also used to help develop a creative climate by providing the students an opportunity to work together in a supportive manner. Students and instructors remarked how well the initiatives complimented the CPS instruction.

OBT initiatives were used to teach CPS concepts like the ground rules for brainstorming and affirmative judgment. Students made connections to the ground rules for brainstorming in initiatives requiring input from all participants.

Reports from participants and practitioners convey the powerful effect that OBT programs have on individuals and groups. A former vice president of Federal Express Roy Yamahiro, expressed in Wagel (1986) how he has observed OBT's effectiveness in increasing motivation in his organization:

I have been involved in the design of these kinds of outdoor experiences for many years. I believe in them because I have not found a better way of helping people add more purpose and meaning and mission to their lives. I have learned that if people are not working toward their own personal mission in life no amount of training or development is going to be effective. (p.6)

Amabile (1989) noted that positive motivation has a tremendous impact on the enhancement of creativity. The essence and the importance that motivation has on personal responsibility and effectiveness, is captured by Frankl (1984) when he stated that, "man's search for meaning is the primary motivation ..." (p.121). The powerful benefit of being motivated by personal mission is dramatic.

According to Hassinger (1982), a common complaint in the world of training, is that "...the training was good, but it wasn't real enough" (p. 38). Hassinger (1982) emphasized that effectiveness can be greatly enhanced by involving people intellectually, physically and emotionally "...true learning not only expands the mind it etches the soul" (p.38).

The value of engaging participants in OBT activities appears to greatly enhance the impact of learning. The effect on individuals and groups seems to be intensified. Gall (1987) quoted a manager from the DuPont corporation:

What you're doing when you participate in one of these programs is developing a bonding in three or four days that could take three or four years to occur in the workplace, given the low frequency of contact and natural barriers to openness and trust that occur in the business environment. (p.56)

OBT compresses the time it takes to reach goals that are associated with learning objectives in an efficient and effective manner.

Creative Problem Solving and Outdoor Based Training, two approaches to enhancing human effectiveness, which have developed independently of each other, may in fact compliment each other very well.

Creativity and creative problem solving

In order to proceed in a meaningful way, an understanding of what is meant by creativity needs to be established. Creativity has many varied meanings. In some circumstances it is meant to mean the full actualization of a person's potentials. In other circumstances it is meant to mean simple problem solving (MacKinnon, 1978). In other definitions (Torrance & Myers, 1970) creativity is seen as more of a process

...becoming sensitive to or aware of problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; bringing together available information; defining the difficulty or identifying the missing element; searching for

solutions, making hypotheses, and modifying and restating them; perfecting them; and finally communicating the results. (p. 22)

Perhaps an accepted truism about creativity is that the concept has no one meaning, but is, in the words of MacKinnon a “multifaceted phenomenon” (1978, p. 46).

Creativity as a human characteristic is often associated with positive mental health (Isaksen, 1987). Rogers (1976) gave voice to this view point when he said, “The mainspring of creativity appears to be the same tendency which we discover so deeply as the curative force in psychotherapy - man's tendency to actualize himself, to become his potentialities” (p. 298). This view of creativity as an essentially self-actualizing forward moving human process is also supported by Maslow (1959):

Self-actualizing creativeness is hard to define because sometimes it seems to be synonymous with health itself. And since self-actualization of health must ultimately be defined as the coming to pass of the fullest humanness, or as the “Being” of the person, it is as if self-actualizing creativity were almost synonymous with or a sine qua non aspect of...essential humanness. (p. 94)

According to Isaksen and Treffinger (1985) creative problem solving is a systematic way of using imaginative and critical thinking in a productive and efficient way. Parnes, Noller and Biondi (1977) observed that people trained in CPS not only produced more ideas but showed actualizing tendencies, “they seemed to become more open to ideas; they seemed to appreciate and have a deeper respect for their own deep well of knowledge, both public and private” (p. 8). Davis (1986) agreed with this viewpoint

when he stated, “It is the self-actualized type of creativeness— the mentally healthy ‘forward-growing’ tendency to approach all aspects of one's life in a more creative fashion— that most clearly may be strengthened” (p. 202).

Creativity then is seen by some to be an important pursuit for a person who is continuing to grow in a healthy and actualizing manner. If learning CPS can be facilitated by the use of OBT techniques then it is worth exploration.

Experiential and outdoor-based training

“A burned child dreads fire. Practice makes perfect.” These are some proverbs which underscore how experiences are very effective teachers. These proverbs are being rediscovered today in the form of experiential education. Chickering (1976) defined experiential education as:

Learning which occurs when changes in judgment, feelings, knowledge or skills result for a particular person from living through an event or events... experiential learning may result from an encounter group or an exam, discussion, work or play, travel or sitting on a stump. (p. 63)

One subset of experiential education is the use of adventure activities. This area of experiential learning is relatively new, yet is growing in popularity (Wagner, Baldwin & Roland, 1991).

The literature provides a bewildering array of terms which identify Outdoor Based Training including: Outward bound, project adventure, adventure-based counseling, adventure-based learning, adventure education, outdoor-adventure education, outdoor-experiential education,

wilderness education, outdoor development, activity-based curriculum, and wilderness learning labs (Bank, 1983).

For the purpose of this project the term Outdoor Based Training (OBT) will be used and defined as: "... a type of educational and/or therapeutic program in which adventure pursuits that are physically and/or psychologically demanding are used within a framework of safety and skills development to promote personal and interpersonal growth" (Bagby & Chavarria, 1980, p. 4).

OBT has roots within the experiential education movement (Wagner, 1991; Kraft, 1988). In fact, it might be useful to imagine OBT as an arm of the body which is experiential education.

Participants do not have to go outside to become involved in OBT. The main criteria is that the activity be done within a social and physical environment unique to the participants (Walsh & Golins 1975; Colorado Outward Bound Instructors Manual, 1988). Comparatively, in the context of a CPS program, a group working under conditions of deferred judgment for the first time would qualify as a unique social environment.

It is important to note that a number of other areas could have been considered in this study. Those areas include social facilitation (Zalesnik & Moment, 1964), Behavior modeling (Decker, 1984), social learning (Bandura, 1977), group development (Bales, 1950), zone of proximal development (Vygotsky, 1978), motivation of creativity (Amabile, 1979), adult learning (Brookfield, 1986; Knowles, 1972), transfer of training (Nielson, 1990; Keller-Mathers, 1990; Lunken, 1990; De Schryver, 1992;), self-actualization (Maslow, 1975), group creativity (Van Gundy, 1984), and organizational change (Lippitt, Langseth, & Mossop, 1989). However for the

purpose of this study the focus explained earlier will be the area that we will explore.

In summary, this section provided a rationale for the use of outdoor-based training to enhance the understanding of creative problem solving methods and techniques. It also outlined the gap that currently exists between creative learning, experiential learning, outdoor-based training, and creative problem solving.

The following section will review the related literature for bridging creative learning, creative problem solving, experiential learning, and outdoor-based training. It will also report a related informal research study that examined the relationship of creative problem solving and outdoor-based training.

Section Two

Collecting and Organizing Information

Section one provided a rationale and reported some of the major issues regarding the use of outdoor-based training initiatives to enhance the understanding of creative problem solving. The purpose of this section will be to report related literature in both creative learning, creative problem solving, experiential learning and outdoor-based training. This section will also explore the relationships among these concepts.

This section describes creative problem solving (CPS) and outdoor-based training (OBT), identifies the outcomes of CPS and OBT, explores models related to CPS and OBT and proposes a way in which CPS and OBT support each other.

Definitions of Creativity

As noted in the previous section, many myths have surrounded research and investigations in the field of creativity. The greatest efforts to understand creativity and to dispel myths surrounding this area were ignited in 1950. In his 1950 presidential address to the American Psychological Association, Guilford emphasized the importance of the need to study creativity. Guilford (1950) reported in 1950 that only 186 of the 121,000 titles listed in *Psychological Abstracts* “were indexed as definitely bearing on the subject of creativity” (p. 445). The number of such works produced between 1967 and 1984 alone were found to be over 5600 (Isaksen, 1987). In the time since Guilford’s address, there has been a significant

increase in our knowledge surrounding creativity. But a single definition of creativity is still elusive. Today there are many definitions that can be found within the literature; some are simple and others are complex.

Perhaps the most concise definition is one from the Center for Creative Leadership, that defines creativity as: “Novel associations that are useful” (Gryskiewicz, 1980).

There have been attempts made to collect and summarize the many definitions within the field in order to bring some clarity. Rhodes (1961) collected more than 50 definitions of creativity and reported:

...I inspected my collection and I observed that the definitions are not mutually exclusive. They overlap and intertwine. When analyzed, as through a prism, the content of the definitions form four strands. Each strand has unique identity academically, but only in unity do the four strands operate functionally. It is this very fact of syntheses that causes fog in talk about creativity. (p.307)

The four organizing strands that Rhodes identified as forming a “syntheses” were: (1) person, which includes all aspects of human characteristics such as self-concept, habits, and personality; (2) process, which incorporate cognitive processes, motivation and communication; (3) press, which is the social and physical environment and the ways in which the individual interacts within that context; and (4) product, the tangible outcome of the creative act.

MacKinnon (1978) also reinforced the multifaceted view of creativity and offered this definition:

One would be ill-advised to seek to choose from among these several meanings the best single definition of creativity, since

creativity properly carries all of these meanings and many more besides. Creativity is, indeed, a multifaceted phenomenon. What I'm suggesting is that we think of creativity, not as a theoretical construct to be precisely defined, but rather as a rubric or a chapter heading under which a number of related concerns quite naturally fall. (p. 46)

The "chapter headings" that MacKinnon used are the same as Rhodes "four P's". Other authors have also reinforced the view of creativity as a multifaceted phenomenon that eludes precise definition. these authors include (Guilford, 1977; Isaksen, 1987; Rhodes, 1961; Treffinger, 1986; Welsh, 1973).

The efforts aimed at categorizing and analyzing creativity have been productive and useful in deepening our understanding of the construct. For the purpose of this study the definition put forth by Isaksen and Treffinger (1985) will be used:

Creativity is making and communicating meaningful new connections to help us think of many possibilities; to help us think and experience in varied ways and using different points of view; to help us think of new and unusual possibilities; to guide us in generating and selecting alternatives. (p. 13)

A question arises: "Can creativity be taught?" Throughout the years, evidence has been produced that creative behavior can be taught and learned, (Feldhusen, Treffinger & Bahlke, 1970; Isaksen & Parnes, 1985; Parnes & Noller, 1972; Stein, 1974; Torrance, 1972; Treffinger, 1980, 1986).

Torrance (1972) responded to the teachability question directly: "...it is possible to teach children to think creatively and that it can be done in a variety of ways" (p.114). In a survey of research on the effectiveness of

various creativity techniques, Torrance in Isaksen, (1987) found that the Osborn-Parnes CPS process or modifications of it were successful in 88% of studies involving adults and in 90% with elementary and high school students.

A benchmark in the empirical research on the effectiveness of specific training and nurturing of creative behavior was the Creative Studies Project conducted at Buffalo State College in the early 1970's. Parnes and Noller (1972) reported that incoming college freshmen were given a four-semester sequence of courses focusing on awareness-development, creative problem solving, synectics, and creative analysis. Throughout the two year study many qualitative and quantitative measures were given to the students and comparable controls in the study. Students who received training showed "significant differences over comparable controls in ability to cope with real-life situational tests, including not only the production of ideas, but also their evaluation and development." (p 165).

Groups trained in CPS exhibit many positive behaviors aside from just generating more ideas. Firestien and McCowan (1988) found that groups trained in CPS exhibited, less criticism of ideas, showed a higher degree of humor (verbally and non-verbally), more group participation, were more satisfied with their participation and supported ideas more.

De Schryver, (1992) summarized published and unpublished studies related to the impact of CPS training and found that creative problem solving, is an effective method for enhancing creative behavior. In his evaluation of structured problem solving techniques VanGundy (1988) emphasized: "... added flexibility gives CPS an advantage over other eclectic approaches that are more fixed in their use and application of different techniques" (p.302).

Creative Problem Solving Development

Given that creativity can be taught, there remains the question of purpose, or “Why teach creativity?” In making a case for the importance of creativity, Einstein stated that imagination is more important than knowledge. He also stated that the important thing is not to stop questioning. With these simple phrases, Einstein cut to the essence of creativity, which is the power of imagination.

The argument for the necessity of studying creativity has been proposed in many different ways by many people. Rothenberg and Hausman (1976) emphasized the fundamental impact that creativity has on society as a whole.

The investigation of creativity is at the forefront of contemporary rational inquiry because it potentially sheds light on crucial areas in the specific fields of behavioral science and philosophy and, more deeply, because it concerns an issue related to man's survival, his understanding and improvement of himself and the world at a time when conventional means of understanding and betterment seem outmoded and ineffective. (p.2)

The poet laureate John Mansfield is quoted by Alex Osborn (1963) on his view of creativity, “Man's body is faulty, his mind untrustworthy, but his imagination has made him remarkable. In some centuries, his imagination has made life on this planet an intense practice of all the lovelier energies” (p.2). Today, with the rapid changes occurring around the world, the need for creative problem solving seems even greater.

As early as 1926 work was being done on the creative process. One process model present at that time was Wallas' four stages of the creative process. This process was based on interviews Wallas conducted with the mathematician Helmholtz. Essentially Wallas' process consisted of (1) preparation, in which the problem solver prepares deeply and gets thoroughly involved with gathering data, (2) incubation, in which the problem solver lets the process “simmer” on the back burner and turns his attention to other matters, (3) illumination, in which the idea presents its self to the problem solver, and (4) verification, in which the idea for solving the problem is verified and tested (Wallas, 1926; Rhodes, 1961). Others who made efforts to describe the creative process include Wertheimer (1945), Guilford (1950, 1959), Taylor (1959), Stein (1967), and Koestler (1964).

In 1953, Alex Osborn outlined the basic techniques involved in creative problem solving in his book *Applied Imagination* (1953). His view of the creative process was that of a seven step process. The steps in this process consisted of (1) orientation, (2) preparation, (3) analysis, (4) ideation, (5) incubation, (6) synthesis, and (7) evaluation (Osborn, 1953). In a later edition of *Applied Imagination* (Osborn, 1963), he had reduced the stages in his process to three. Those stages were: fact finding, idea finding, and solution finding (Osborn, 1963).

Parnes (1967) expanded Osborn's process to five steps. These steps consisted of fact finding, in which information about the problem situation is gathered; problem finding, in which a variety of problem statements are generated to uncover the essence of the problem; idea finding in which many ideas are generated for solving the problem; solution finding in which criteria is developed and ideas are analyzed against that criteria; and acceptance finding in which ideas are generated to help the problem

solver gain acceptance of his solution and a plan of action is developed (Parnes, 1967).

Isaksen and Treffinger (1985) made further modifications. At the beginning of the process they added a step related to problem sensitivity, and named it mess finding. Here, a variety of issues are considered as possible avenues for CPS. They also changed fact finding to data finding in order to more accurately reflect the function of the step.

The most recent view of the process was a modification proposed by Isaksen (1991). The model currently consists of three components with six stages. The components are: understanding the problem, which includes mess finding, data finding, and problem finding; generating ideas, (idea finding); and planning for action, which incorporates solution finding and acceptance finding. Throughout the process there is a balanced mix of divergent (creative) and convergent (critical) thinking. This is the model currently used at the Center for Studies in Creativity at Buffalo State College. This refinement is shown below.

Figure 1. Creative Problem Solving: Three Main Components And Six Specific Steps (Isaksen & Treffinger, 1985).

When teaching CPS, it is important to take into account the different levels of complexity in the information being taught. Treffinger (1980, 1987) Treffinger, Isaksen and Firestien, (1982) developed a model for creative learning. The model consists of three levels showing both the learning and teaching process for CPS. In Level I the learner is taught fundamental skills and tools of CPS. The teacher acts as a teacher, teaching the material to the learner. Level I skills include brainstorming, idea checklists, and various other divergent and convergent techniques. In level II the learner is introduced to and practices using CPS in realistic or simulated problem situations. The teacher acts as a leader coaching and guiding learners to use and master CPS. In level III the learner uses CPS on real challenges and problems. As the language and demands of process become familiar, preparation for a move into real life application is made, and the teacher acts as a facilitator.

Figure 2. Model For Learning Creative Problem Solving (Isaksen, 1992)

Experiential Education and Outdoor-Based Training

John Dewey (1939), the founder of the progressive education movement stated “the central problem of an education based on experience is to select the kind of present experiences that live fruitfully and creatively in subsequent experiences” (p. 16). From this vantage point, all experiences can be used for education. This project will use the definition of Experiential Education offered by Walter and Marks (1981) which is “...a sequence of events with one or more identified learning objectives, requiring active involvement by participants at one or more points in the sequence”(p.1). The central problem, however is which experiences to choose for learning. Chickering (1977) stated, “strictly speaking all learning is experiential”(p.16). Experiential learning is not confined to field trips, encounter groups, travel or work. It also does not exclude any of the more traditional methods of mediated instruction such as lectures, films, print or any other method or medium.

Originally everyone learned through experience. When early humans moved into caves, they learned which caves had bears and which did not, through experience. Houle in Keeton (1976) described the early craft guilds and apprenticeship systems that provided the advanced training through medieval times and into the industrial revolution as an example of learning through experience.

The guilds and apprenticeship systems gave way to the university systems that shunned direct experience in favor of content. In 1939 John Dewey wrote a seminal book entitled *Experience and Education*. While only ninety-one pages long, it has influence even today. Dewey (1939) clearly

defined the fundamental issues regarding experiential learning when he stated:

I take it that the fundamental unity of the newer philosophy is found in the idea that there is an intimate and necessary relation between the processes of actual experience and education... The problem for progressive education is: What is the place and meaning of subject matter and organization within experience... How does the subject matter function: Is there anything inherent in experience which tends toward progressive organization: A philosophy which proceeds on the basis of rejection, of sheer opposition, will neglect these questions. It will tend to suppose that because the old education was based on ready-made organization, therefore it suffices to reject the principle of organization *in toto*, instead of striving to discover what it means and how it is to be attained on the basis of experience... (Dewey, 1939, p.19-20)

These issues are at the root of a serious discussion on the use of experiential education within an educational program. It cannot be assumed that learning has occurred from experience simply because something has been experienced. In order to give some sense of understanding to this process many have proposed various models to help illustrate experiential learning. There are different ways of looking at how learning and education take place. Many see learning as taking place as a sequence. For instance, Coleman in Keeton (1976) saw four steps:

In the first step one carries out an action... and sees the effects of that action... Following the action and the observance of its effects, the second step is understanding this effect in a

particular instance, so that if exactly the same set of circumstances reappeared, one could anticipate what would follow from the action...and the observance of its effects, the second step is understanding these effects in a particular instance, so that if exactly the same set of circumstances reappeared, one could anticipate what would follow from the action... The third step is understanding the general principle under which the particular instance falls... When the general principle is understood, the last step is its application through action in a new circumstance within the range of generalization. Here the distinction from the action of the first step is only that the circumstance in which the action takes place is different, and that the actor anticipates the effect of the action. At this point, the person can be said to have completed the learning so that the experience he has undergone is useful to him in future actions. (p. 51-52)

Kolb and Fry (1975) developed a visual representation of the experiential learning process which follows closely to Coleman's four steps.

Figure 3. The Experiential Learning Model (Kolb & Fry, 1975)

In Kolb's model, concrete experience becomes the material for observation and reflection. Observations are synthesized to form abstract concepts, hypothesis, and generalizations. Possible avenues for action are deduced and testing of hypotheses for implications of concepts in new situations can take place. Kolb's model is not the only representation of the experiential learning cycle. Others have also put forth models: Gaw (1979); Isaksen (1991); Luckner & Nadler (1992). At each step of the experiential learning process questions can be asked to facilitate learning. Gaw (1979) stated the importance of processing to experiential learning this way:

The technique that enables the facilitator to accomplish the objectives of each stage of the learning cycle and promote movement to the subsequent stages is processing. Many educators and facilitators are aware of the importance of processing skills in maximizing participants' learning. The competent facilitator renders the experience more than merely

an exciting and involving one; he or she leads the participant through the cycle so that transfer of learning occurs (Benne, 1976). The skilled facilitator is “tuned in” to the participants (Eiben, 1976); and is responsive to “moment to moment” changes in the group (Phillips, 1976). Because the specific route to transferring learning is determined by the data the participants generate, the facilitator must have a large and flexible repertoire of questions to stimulate, maintain, and complete the cycle. (p. 147)

The application of processing to reach specific program goals is done during or after an experience (Knapp, 1985). With experience, a facilitator uses questioning to promote clear learnings from each experience. Since the learning comes from participants, a facilitator may be at a disadvantage if questions are read from a list of prepared questions for processing. As stated above, the facilitator must be aware of the present learning needs of the individual or group (Gaw, 1979).

One form of experiential education is the use of adventure programming also known as outdoor-based training. As previously stated in Section One, there are many terms used to identify this approach to learning.

The generally accepted goals and outcomes of OBT are positive and actualizing in nature. In reviewing the literature, the following goals for various OBT programs have been identified: Increase trust, improve communication, promote team building, enhance leadership development, enhance self-concept, and internalize locus of control (Bacon, 1983; Bank, 1983; Chapmen & Lumsdon, 1983; Ewert, 1989; Gall, 1987; Long, 1987;

Marsh, Richards, Barns, 1986; Luckner & Nadler, 1992; Priest & Dixon, 1990; Rohnke, 1989; Roland 1981; Wagner, Baldwin, Roland, 1991).

The positive nature of OBT goes back to its roots which began with the German educator Kurt Hahn. The first attempts at creating explicit OBT experiences for group and individual growth are generally attributed to Hahn, a German nobleman. Hahn (in Phillips, 1988) observed that "... The young of today have to be protected against certain poisonous effects inherent in present day civilization." (p. 7). The poisons were a decline in fitness, in initiative, in craftsmanship, in self-discipline due to drug use, and in compassion (Phillips, 1988; Nold, 1988). In order to counter these deleterious effects, Hahn founded a number of schools throughout his lifetime designed to fortify young people and instill in them "...the survival of an enterprising curiosity, an undefeatable spirit, tenacity in pursuit, readiness for sensible self-denial, and above all compassion" (James, 1980, p. 4). In the 1930's Hahn fled Nazi Germany and started the Gordonstoun School in Scotland dedicated to developing in students the aforementioned principle through outdoor experiences. In the summer of 1940 Gordonstoun was moved to Aberdovey, Wales and renamed Outward Bound, a term used by sailors when they journeyed from safe harbor. The new school was dedicated to training young British merchant sailors in basic marine and survival skills for the rigors of battle in the North Atlantic (Wagner, Baldwin, Roland, 1991; Colorado Outward Bound Instructors Manual, 1989).

The first attempt to bring OBT type learning to North America was the Colorado Outward Bound School. One of the founders of the first Outward Bound School in the United States, F. Charles Froelicher (1988), reported that he was influenced as a school master in the early 1960's to

found the first Outward Bound school in the United States, by the story told by a young Air Force cadet who had just returned from a twenty-six day Outward Bound course in Wales. He had “ ...accomplished feats of endurance and discovered reserves of will power and strength that, prior to the course he had not known existed” (p. 39). The Colorado Outward Bound school was opened in the summer of 1962, allowing youth between 16 and 22 the opportunity of self-development in a wilderness setting (Wagner, Baldwin, Roland 1991; Colorado Outward Bound Instructors Manual, 1989).

Originally, it was Hahn’s goal to have the Outward Bound school connected to traditional schools and education. This did not take place until 1971, when the Hamilton-Wenhiem Massachusetts High School instituted Project Adventure. Project Adventure was the first effort to combine Outward Bound techniques into the school curriculum using specially trained public school teachers. The program explored the curricular areas of English, history, science, theater arts, and counseling while being centered in the physical education department. In 1974, an evaluation of the program earned the school an award as a national demonstration site for the U.S. Office of Education’s dissemination project, the National Diffusion Network. Schoel, Prouty, Radcliffe, (1988) found that 90% of all adoptions of Project Adventure programs into school curriculums between 1974 to 1980 were still in place.

OBT activities are divided into different levels or different types. The different types are often categorized as wilderness, high ropes, low ropes and initiatives (Colorado Outward Bound Instructors Manual, 1989; Wagner, Baldwin, Roland, 1991; Webster, 1989).

The following descriptions of wilderness high ropes, low ropes and initiatives are from (Webster, (1989) and Priest & Dixon, (1990). Wilderness

OBT activities involve activities which are often major undertakings in potentially harsh settings, and may involve remote travel.

High ropes are activities high above the ground which require a safety system commonly referred to as a belay system (a system using ropes and anchors to protect participants from falling).

Low ropes are low elements on a ropes course which are unbelayed. The activities focus on challenging individual achievement, while the other members of the group act as spotters and supporters.

Initiatives are problem-solving tasks presented to a group. All members of the group are involved in completing, or attempting completion of a specified task.

A model for targeting OBT initiatives and activities towards different areas of focus was developed by Schoel, Prouty, Radcliffe (1988). This model is called the adventure wave and is shown below:

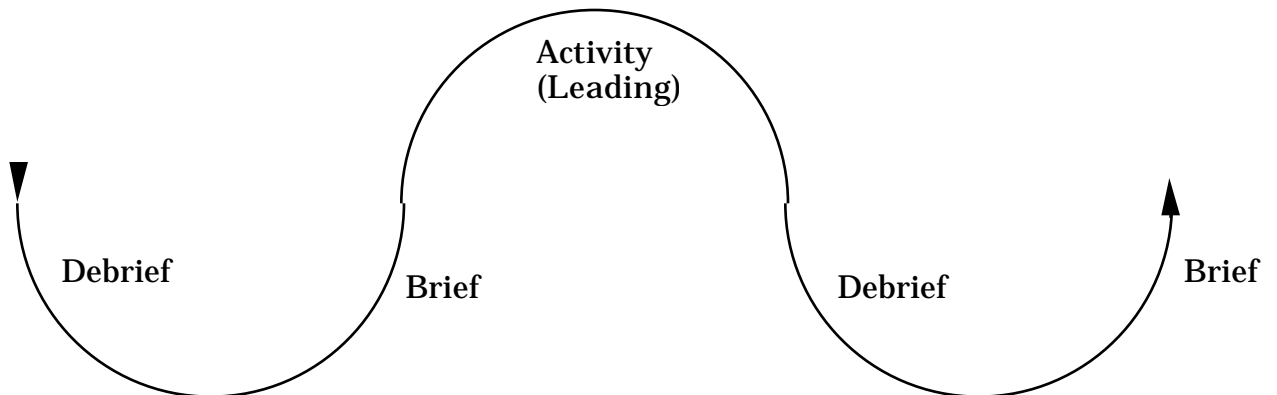


Figure 4. The Adventure Wave

The adventure wave is designed to reflect the movement of a wave. At the peaks are raw experience, and at the valleys reflection and

preparation. As shown in Figure Four, the first valley is briefing. Briefing is where information sharing, goal setting, clarification and framing of the experience occur. At the peak of the wave is where the activity or the actual experience being briefed or debriefed takes place. At the bottom of the second valley is where the debriefing occurs. Debriefing is the evaluating or processing of the activity for key learnings and insights. The debrief then flows into the briefing for the next experience (Schoel, Prouty, Radcliffe, 1988). This model is useful in understanding how OBT can be practiced across many curriculum areas. The following diagram illustrates some possible areas OBT activities might be used or related.

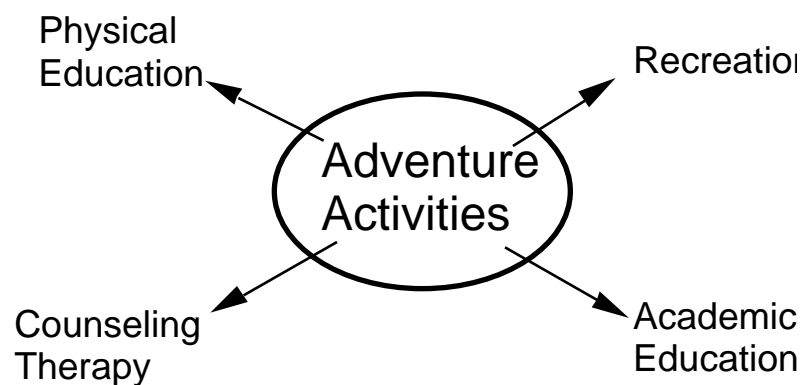


Figure 5. Adventure Activities Diagram

Rohnke (1989) explained this diagram in the following manner: “The inner circle is all the possible adventure activities Each discipline makes use of the same activities from the inner circle, but each discipline frames the activities differently using its own goals and objectives” (p.136). By having clearly defined goals or a clear ‘briefing’ to an OBT activity, and a trained facilitator virtually any discipline can utilize OBT.

Relationship between CPS and OBT

As part of the World War II war effort in the 1940's, a group of psychologists and psychiatrists undertook a series of programs to evaluate men for entry into the Office of Strategic Services (OSS) (OSS Assessment Staff, 1948; MacKinnon, 1978; Stien, 1992). This work was designed to identify agents for the OSS who would be required to have unusual talents related to leadership, problem solving, and loyalty among other traits needed to act as spies and counterespionage agents. Much of the work by the OSS assessment staff was later extended and refined for peacetime purposes by the Institute for Personality Assessment and Research (IPAR) at the University of California Berkeley. IPAR has endeavored to uncover characteristics of creative individuals (MacKinnon, 1978; Stien, 1992). Of special interest to this project is that during the three day assessment sessions sponsored by the OSS assessment staff, were tasks which are related to OBT initiatives (Stien, 1992). These tasks were, "Group situational tests in which groups of four to seven candidates had to solve a problem, sometimes with the leadership of the group assigned to a member, at other times with no leader designated" (MacKinnon, 1978, p. 5). Stien (1992) reported that there were remarkable similarities found between the group situational tests used by the OSS assessment staff and OBT initiatives.

There appears to be an overlap between creative problem solving and outdoor-based training. As noted earlier in Section One, anecdotal evidence supports the contention that there are advantages in combining CPS and OBT. In April of 1991, the Center for Studies in Creativity conducted a large scale CPS facilitator training, the Houston Project, for a major petrochemical company. In this project, kinesthetic warm-up activities and

OBT initiatives were used. Physical warm-up activities prepared participants for upcoming CPS teaching sessions. Each activity was linked directly to the session. The activities served as a vehicle for a great deal of laughter and movement among the participants. Laughter is also a natural outgrowth of an effective CPS session (Firestien, 1987).

In addition, the Houston Project included a half day devoted entirely to OBT programing. The OBT initiatives were used to directly reinforce the key learnings from the CPS program in a kinesthetic manner.

A key feature in the success of mixing these two approaches was the training of CPS facilitators in specific OBT initiatives for safety, appropriateness of the activity, and debriefing techniques. CPS facilitators were also briefed on how to gauge the development of the group and how to assess the potential risks involved in the activities.

The feedback from internal experts, the training team, and participant feedback was extremely positive towards the OBT initiatives. Evaluations of the program indicated that OBT initiatives reinforced the concepts, tools and techniques being taught in the CPS training.

Related Research

CPS training and OBT share a background in experiential education, from which it can be assumed there exist similarities in training. In an effort to acquire data that would help to understand whether or not this was indeed a valid connection, an informal study was conducted to compare these two approaches. This study compared the effects of CPS and OBT training on two groups of individuals participating in separate courses. An analysis showed similarities and differences existed between the effects of

CPS and OBT. Both groups were given a pre-self report survey and a three month post self report survey to complete. The instrument used was developed by Wagner (1990). It measures the variables: Trust, group homogeneity, group clarity, group cohesiveness, and overall group process. Definitions of each variable are found in appendix A. The first group consisted of participants in a course on creative problem solving entitled "Workshop in Nurturing Creative Behavior" presented by the Center for Studies in Creativity at Buffalo State College. The course was taught by Dr. Roger Firestien. In "Workshop in Nurturing Creative Behavior" students practiced basic creative problem solving methods and techniques designed to help them deal innovatively and effectively with problems and challenges they were confronted with in both personal and professional settings. They were introduced to the six stage, three component creative problem solving process, and applied this process to a variety of personal and professional concerns. The participants were also provided with activities designed to increase awareness of cognitive style, and alternative problem solving approaches increasing their effectiveness as individual problem solvers. Students in the course practiced various creative problem solving techniques with colleagues, family, friends, and other members in the class. The class was conducted in a week-end format. It met on Saturday and Sunday for three non-consecutive week-ends in the spring semester of 1991. Twenty-five graduate students participated in this informal study including 23 women and 2 men.

The second group in this study consisted of students in the University of Denver's masters in business administration program who participated in an Outdoor-Based Training event facilitated by Roland and Associates in September of 1990. These students practiced and received instruction in

area's which focused on building trust, enhancing leadership, increasing problem solving and risk-taking abilities, and increasing communication effectiveness. This five day, thirty-four hour program involved participation in initiatives, low ropes, and high ropes elements. For definitions of these terms see Section 2. Forty-one graduate students participated in this informal study including 10 women and 31 men.

Table 1 shows the mean and standard deviation results of a two tailed t test on levels of significance for the Buffalo State CPS study and the University of Denver OBT study.

Table 1
Comparison of CPS and OBT Training

Measure	Pre- CPS Training		Three months after CPS Training			
<u>Buffalo State Creative Problem Solving Study (n=25)</u>						
	M	SD	M	SD	t	P
Faith in peers	5.40	1.09	5.72	1.07	.89	.302
Confidence in peers	5.22	.96	5.41	1.04	.92	.369
Trust	5.31	1.40	5.63	1.07	.93	.364
Overall group process	3.31	1.22	3.98	.67	2.60	<.016*
Group homogeneity	6.07	1.20	7.59	1.79	4.01	<.001*
Group clarity	4.22	1.28	5.65	2.00	5.12	<.001*
Group cohesiveness	5.50	1.27	6.52	1.85	4.40	<.001*
	Pre- OBT Training		Three months after OBT Training			
<u>University of Denver Outdoor Based Training (n=41)</u>						
	M	SD	M	SD	t	P
Faith in peers	4.78	1.10	5.39	1.15	2.82	<.008*
Confidence in peers	4.76	.96	5.10	1.05	2.31	<.028*
Trust	4.77	1.02	5.25	1.10	2.57	<.011*
Overall group process	3.36	.78	3.52	.48	1.02	.317
Group homogeneity	5.66	.90	7.80	1.47	9.96	<.001*
Group clarity	4.60	.98	5.90	1.17	7.75	<.001*
Group cohesiveness	5.00	1.27	7.52	1.59	11.40	<.001*

Note. * Means significant beyond the .05 level. For an explanation of terms see 'Definition of Terms' in appendix A

As shown in Table 1 in the areas of perceived trust and group process, differences were found. Yet, in the group measures of homogeneity, clarity, cohesiveness, and awareness, similarities in impact were found.

The group that participated in the CPS training showed a significant positive change in their group process while the group that experienced the OBT showed a greatly enhanced sense of faith and confidence in their peers (this is translated into trust). Both of these attributes are desirable for groups involved in CPS programs. As this research indicated, there is some evidence that adding an OBT component to CPS programs can be beneficial. It is important to note that these are two different sample groups and that drawing a strong inference from this data cannot be made. This preliminary study indicated that CPS and OBT both have positive, yet different, effects on groups. The CPS practitioner could potentially begin to use this information in developing programs.

CPS training has positive effects on group communication (Firestien & McCowan, 1988). Both CPS and OBT appear to value and foster the expansion of human potential. OBT stresses this as an explicit goal and CPS as a desirable side effect.

Outdoor-based training initiatives that are properly debriefed provide an excellent kinesthetic way for illustrating the CPS process. Initiatives can be used to provide concrete avenues for understanding otherwise abstract concepts associated with creativity, problem solving, and leadership.

With this in mind it seemed that it would be beneficial to have a method for CPS practitioners to easily access OBT activities to be utilized for reinforcing concepts being introduced in their CPS programs. At present

there is no readily available resource for practitioners and students in the field of creativity to access and apply the useful aspects of OBT initiatives in CPS programs. The practitioner must rely on first hand experience with activities or locate books, which, while available and for the most part well written, offer no guidelines on appropriateness for integration of OBT initiatives into particular CPS programming.

In summary, this section reviewed the related literature on definitions of creativity, creative problem solving development, experiential education, and outdoor-based training, and the relationship between CPS and OBT. Additionally a related informal research study was also reported. As this section reported there are many historical and conceptual connections between creative problem solving and outdoor-based training.

The following section will report the methods and procedures used to determine the use of OBT initiatives to be placed into creative problem solving programs to enhance participants' understanding of creative problem solving. The models presented in this section will be used to illustrate the ways in which OBT initiatives might be selected for use in creative problem solving programs.

Section Three

Documenting Project Activity

The preceding section provided a summary of the related literature on models of creative learning, creative problem solving, experiential learning and outdoor-based training. Conceptual linkages were made between CPS and OBT through the use of related literature and an informal study designed to explore some of the connections between CPS and OBT.

This section will review the methods and procedures utilized in this study, provide a description of the program participants, provide a description of the Five-Day Course in Facilitating Creative Problem Solving, describe the method for OBT initiative selection, and overview the procedures for evaluation of the initiatives within the context of the Five-Day Course in Facilitating Creative Problem Solving.

Participants

A total of 29 participants were involved in the program “Five Day Course in Facilitating Creative Problem Solving.” This course was held at Buffalo State College in Buffalo, New York from April 6 through 10, 1992. Fourteen men and fifteen women attended the program. Fifteen participants were from a large bank, six from assorted large international corporations, four were from a variety of other companies, three individuals were from education, and one was a psychologist. Participants were from New York, Alabama, Pennsylvania, New Jersey, Delaware, Indiana and the United Kingdom.

Program Design

The five-day course in facilitating creative problem solving was designed and delivered by the faculty and staff of the Center for Studies in Creativity. The following is an overview of the program goals and the objectives of each day. Initiatives used for each day are also listed. A complete description of the initiatives are found in appendix C.

Five Day Course in Facilitating Creative Problem Solving Program Design

Goal

To develop Creative Problem Solving (CPS) facilitation skills by:

- Stimulating the creative potential of the participants and developing skills in applying Creative Problem Solving techniques; and
- Providing depth of knowledge regarding CPS and its facilitation, leadership and group development.

This program examined both basic and advanced approaches to CPS. It was designed to help participants develop personal understanding and application of CPS, as well as to experience CPS facilitation in a group setting.

The focus of the first day was to provide the participants with an overview of CPS and an opportunity to begin working with the CPS process.

The objectives of the day were to:

- Examine participants' personal creative problem-solving process;

- Identify and explain non-productive mythology associated with creativity;
- Recognize four basic productive approaches for understanding creativity;
- Identify and explain model for effective facilitation of CPS;
- Know participants personal style of creativity and its implications for productivity; and
- Practice the roles and responsibilities involved in a client/facilitator planning meeting.

The focus of the second day of the program was to examine the dynamic balance in CPS and to focus on the first component of the process “Understanding the Problem” and the second component of the process “Generating Ideas”.

The objectives of the day were to:

- Learn and apply four guidelines and two techniques for generating options;
- Learn and apply four guidelines and one technique for analyzing, developing and refining options;
- Identify a model for targeting idea generation; and
- Complete the components Understanding the Problem and Generating Ideas on a real challenge.

On the second day the “Hand Cuffs” initiative was used to enhance participants understanding of Mess Finding, Data Finding and Problem Finding (component I understanding the problem). The object of the “Hand Cuffs” is to separate two loosely connected individuals from a seemingly impossible, but engagingly simple, intertwinement of ropes.

The “Warp Speed” initiative was also used on the second day of the program. It was designed to enhance participants understanding of deferred judgment, striving for many idea’s and the difference between adaptive and innovative ideas. The object of the “Warp Speed” is to have every one touch a ball in a sequence in the shortest possible time. A complete description of the initiatives “Hand-Cuffs” and “Warp Speed” are found in appendix C.

The focus of the third day of the program was to complete the Planning for Action component of CPS and investigate the relationship between leadership and teaming.

The objectives of the day were to:

- Learn three techniques for analyzing, developing and refining options;
- Complete Component Three on participants challenge.

The initiative “Blind Polygon” was used to enhance participants understanding of the importance of planning for action. The object of “Blind Polygon” is for a group of any size, wearing blindfolds, to form a perfect square, triangle, or pentagon, using a 75-150' piece of rope. A complete description of “Blind Polygon” is found in appendix C.

The focus of the fourth day of the program was to examine the relationship between CPS facilitation, leadership and group development.

The objectives of the day were to:

- Examine a model for learning CPS;
- Broaden and deepen participants knowledge of CPS process and techniques;
- Identify participants personal leadership style and its implications for facilitating CPS;

- Identify the stages of group development;
- Practice Component analysis and CPS session planning;
- Facilitate CPS groups using real challenges.

The “Circle the Circle” initiative was used to enhance participants understanding of roles in CPS. The object of “Circle the Circle”: To pass two hoops around a circle of participants in the shortest possible time. For a complete description of “Circle the Circle” see appendix C.

The focus of the fifth day of the program was to complete the practice CPS facilitation session and conclude the program.

The objectives of the day were to:

- Facilitate CPS on a real personal/professional challenge or opportunity;
- Debrief and evaluate the program.

Method of Initiative Selection

As a result of the work of Prouty, Schoel, Radcliff (1988); Bacon, (1983); Gass, (1991), who have proposed models for the selection, integration and sequencing of OBT activities, insights into how one might utilize OBT activities for reinforcing CPS concepts were made. One of the methods used for OBT initiative selection was the GRABBS Modality Check List Schoel, Prouty, Radcliffe (1988). This check list is used for matching appropriate activities to particular group and individual needs. The GRABBS Modality Check List (Schoel, Prouty, Radcliffe, 1988) helps a facilitator assess a groups goals, their readiness for the activity, affect, behavior, body and stage.

The following is a brief description of the six dimensions of the GRABBS Modality Check List (Schoel, Prouty, Radcliffe, 1988). The first dimension, “goals” is an accounting of how the activity relates to the group and individual goals that have been set for the experience. The second dimension is readiness, which involves taking into account the levels of instruction (skills) and safety capabilities of the group and facilitators. The third dimension affect, is the level of observable empathy or caring the group is displaying. The fourth dimension, behavior, is an assessment of how the group is acting (i.e. are they being cooperative or resistive). Body is the fifth dimension and relates to the kind of physical shape the group is in. Stage is the sixth dimension and is an assessment of what developmental stage the group is at.

The GRABBS Modality Checklist was used as part of the OBT initiative selection process. CPS and OBT objectives were also part of this selection process and are described next.

In order to properly match CPS and OBT objectives two sources were consulted. For CPS objectives, *Creative Problem Solving the Basic Course*, by Isaksen & Treffinger (1985) and the Five Day Course in Facilitating Creative Problem Solving Guidebook: *Current Approaches and Applications of Creative Problem Solving* by Isaksen (1991) was relied upon. For OBT objectives, *Islands of Healing: A Guide to Adventure Based Counseling* by Schoel, Prouty, and Radcliffe (1988) was consulted. Following are the OBT objectives considered in this study.

Goals and Objectives of OBT Activities

The included OBT goals and objectives serve as broad categories into which specific OBT initiatives and activities fall. The type of activity is listed in bold followed by the objective of that activity and features of that activity. These categories guided selection of initiatives in the Five Day Course in Facilitating Creative Problem Solving.

Ice breaker/ Acquaintance.

Objective :

To provide opportunities for group members to get to know each other and to begin feeling comfortable with each other through activities, initiatives and games that are primarily fun, non-threatening and group-based.

Features :

- Fun is a major component
- Group members interact in a non-threatening manner.
- Success-oriented: Tasks can be easily accomplished with minimal amount of frustration.
- Requires minimal verbal interaction and decision-making skills. (Schoal, Prouty, Radcliffe, 1988, p. 280)

De-Inhibitizer.

Objectives :

To provide a setting wherein group participants are able to take some risks as well as make improvement in commitment and a willingness to appear inept in front of others.

Features :

- Activities involve some emotional and physical risk which may arouse some discomfort and frustration.
- Success and failure are less important than trying and making a good effort.
- Fun activities allow participants to view themselves as more capable and confident in front of others.
- A cooperative and supportive atmosphere tends to encourage participation and increase confidence for all members in the group. (Schoal, Prouty, Radcliffe, 1988, p. 282)

Trust and Empathy.**Objectives :**

To provide an opportunity for group members to trust their physical and emotional safety with others by attempting a graduated series of activities which involve taking some physical and emotional risks.

Features :

- Involves group interaction both physically and verbally.
 - Generally involve fun, but some fear as well.
 - Involves the support and cooperation of group members to care for the safety of others.
 - Risk taking occurs at many levels in most of the trust activities.
 - The development of trust occurs within the group gradually.
- (Schoal, Prouty, Radcliffe, 1988, p. 284)

Communication.

Objectives :

To provide an opportunity for group members to enhance their ability and skill to communicate thoughts, feelings, and behaviors more appropriately through activities which emphasize listening, verbal, and physical skills in the group decision-making process.

Features :

- Physical activity, verbal interaction and discussion are major components in the sharing of ideas.
- The solving of the problem is the established goal.
- Some frustration is generally evident in the solving of the problem.
- Leadership abilities and skills usually evolve from participants within the group. (Schoal, Prouty, Radcliffe, 1988, p. 286)

Problem-Solving.

Objectives:

To provide an opportunity for group members to effectively communicate, cooperate, and compromise with each other through trial-and-error participation in a graduated series of problem-solving activities which range from the more simply solved to the more complex.

Features:

- Physical activity and verbal communication are involved in order to solve stated problems.

- Activities demand that group members can demonstrate an ability to listen, cooperate and compromise.
 - Leadership roles evolve in the attempt to solve the stated problem or reach the stated goal.
 - Trial-and-error approach to learning is most often employed by the group in the problem solving/decision-making process.
- (Schoal, Prouty, Radcliffe, 1988, p. 288)

Creative Problem Solving Objectives

The following will list the creative problem solving objectives as delineated under the three components of the CPS process: Understanding the Problem, Generating Ideas and Planning for Action. The book *Creative Problem Solving the Basic Course*, by Isaksen & Treffinger (1985) and the *Five Day Course in Facilitating Creative Problem Solving Guidebook: Current Approaches and Applications of Creative Problem Solving* by Isaksen (1991) were consulted.

Component I: Understanding the Problem

Mess Finding

The participant will be able to:

Define problem sensitivity.

Identify the meaning of ownership and outlook in CPS and give examples of each.

Use specific criteria when choosing Mess-statements.

Data Finding

The participant will understand:

Different kinds of data: Information, feelings, impressions, observations, and questions.

The participant will distinguish between two kinds of data: Known and unknown, wanted and needed.

The participant will use:

All senses in data finding.

A variety of methods and techniques in Data gathering.

Problem Finding

The participant will identify:

The essential elements of problem statements.

Many different problem statements for a given situation.

The participant will change the level of abstractness to a given problem statement.

Component II: Generating Ideas

Idea Finding

The participant will understand fluency, flexibility, originality, and elaboration.

The participant will increase their awareness and understanding of Affirmative judgment.

The participant will increase their awareness and understanding of the value of deferred judgment and striving for a quantity of ideas in brainstorming.

The participant will increase their awareness and understanding of aspects of a creative environment for creative thinking.

The participant will use:

Tools and techniques for generating ideas.

Methods and techniques for recognizing promising ideas.

Component III: Planning for Action

Solution Finding

The participant will:

Use criteria in selecting a solution.

Screen, select and support promising ideas using affirmative judgment.

Participants will increase their understanding of the use of criteria to evaluate ideas.

Acceptance Finding

The participant will:

Formulate a plan for implementation.

Identify potential obstacles to the plan.

Participants will increase their understanding of the use of criteria to evaluate ideas.

Framework of Initiative Selection

To establish the framework of initiative selection that was used in determining initiatives for the Five Day Course in Facilitating Creative Problem Solving. The following models were used 1) the Model for Creative Learning (Treffinger, 1980, 1987; Treffinger, Isaksen and Firestien, 1982), 2) Adventure Wave (Schoel, Prouty, Radcliffe, 1988), 3) Experiential Learning Cycle (Kolb & Fry, 1975) and, 4) GRABBS Modality Checklist (Schoel, Prouty, Radcliffe, 1988) presented in Section Two and Three of this paper.

Initiatives were selected by first establishing which CPS objectives were to be emphasized. Next, an assessment of the group was made using the GRABBS modality checklist as a guide. The goals of the group were checked by reviewing the stated goals of the Five Day Course in Facilitating Creative Problem Solving. Readiness, affect, behavior, body and stage were checked by reviewing similar participant groups from past Five Day Courses in Facilitating Creative Problem Solving.

Using information gathered from the CPS objectives and the group assessment, appropriate OBT goals were reviewed. Each OBT goal (ie. Ice Breaker/Acquaintance, De-Inhibitizer, Communication, Problem Solving,

Trust/Empathy) served as categories under which particular initiatives and activities are associated. Several initiatives were selected and experimented with for fit and match with CPS objectives and group assessment information. Once an initiative was selected, appropriate modifications were made to the initiative in order to make it fit the needs of the “Five Day Course in Facilitating Creative Problem Solving.” The fit was enhanced by using the Adventure Wave model (Schoel, Prouty, Radcliffe, 1988). The Adventure Wave was utilized for each initiative by providing an appropriate “briefing” to the participants for the intended goals of the initiative. The actual “activity” was then introduced to participants and the initiative was then “debriefed” using the Experiential Learning Cycle (Kolb & Fry, 1975).

Criteria for the selection of initiatives were further developed to take into account the needs of CPS facilitators who often have to travel to distant sites to deliver CPS programs. The initiatives chosen needed to have a high degree of portability, require few props, and be flexible enough to be done in a wide range of locations indoors and outdoors.

The following are the initiatives used in this project. Column one shows the CPS objective. Column two shows the broad OBT goals. Column three shows the revised initiative. This information is presented using the Adventure Wave model. This model uses (1) brief, (2) activity, (3) debrief as an organizing framework. In column two the same OBT goal is used for more than one initiative. This was done because some of the most appropriate OBT goals matched more than one set of CPS objectives.

Hand-Cuffs		
<p>CPS Objectives</p> <p>The participants will increase their awareness and understanding of Mess-Finding, Data-Finding, and Problem-Finding.</p> <p>The participants will increase their understanding of how Mess-Finding, Data-Finding and Problem Finding relate to each other.</p>	<p>OBT Objectives</p> <p><u>Communication activities Objectives:</u></p> <p>To provide an opportunity for group members to enhance their ability and skill to communicate thoughts, feelings, and behaviors more appropriately through activities which emphasize listening, verbal, and physical skills in the group decision-making process.</p> <p><u>Problem-Solving Objectives:</u></p> <p>To provide an opportunity for group members to effectively communicate, cooperate, and compromise with each other through trial-and-error participation in a graduated series of problem-solving activities which range from the more simply solved to the more complex.</p>	<p>Revised Initiative</p> <p>Brief: Give a short review of Component I, Understanding the Problem, also review Data-Finding and Problem Finding.</p> <p>Activity: For a complete description of Hand-Cuffs see appendix C. After the obvious attempts have been made, and the group has had the realization that the answer is going to be harder than anticipated call a time out. Ask/tell the group “How many circles (loops) are they working with? Ask for participants to list the attributes of the ropes. After this data has been brought forward continue with the activity.</p> <p>Debrief: Use the Experiential Learning Cycle and summarize the influence that new data had on their definition of the problem.</p>

Warp Speed		
<p>CPS Objectives</p> <p>Participants will increase their awareness and understanding of generating ideas.</p> <p>Participants will increase their awareness and understanding of deferred judgment, striving for quantity, and various aspects of adaptive and innovative cognitive styles.</p>	<p>OBT Objectives</p> <p><u>Communication activities Objectives:</u></p> <p>To provide an opportunity for group members to enhance their ability and skill to communicate thoughts, feelings, and behaviors more appropriately through activities which emphasize listening, verbal, and physical skills in the group decision-making process.</p> <p><u>Problem-Solving Objectives:</u></p> <p>To provide an opportunity for group members to effectively communicate, cooperate, and compromise with each other through trial-and-error participation in a graduated series of problem-solving activities which range from the more simply solved to the more complex.</p>	<p>Revised Initiative</p> <p>Brief: Emphasize the importance of deferred judgement and striving for many ideas when generating new ideas. Review the Kirton Adaption and Innovation theory.</p> <p>Activity: For a complete description of Warp Speed see appendix C. During the activity have a co-facilitator surreptitiously record comments being made by the group during the initiative. Record the time and trial number.</p> <p>Debrief: Use the Experiential Learning Cycle. As the facilitator is leading the initial debrief, graph the results and use the information to illustrate the effect that novelty had on the process. Summarize for the group the effects of deferred judgment, striving for quantity, and the relative value of adaptive and innovative ideas.</p>

Blind Polygon		
<p>CPS Objectives</p> <p>The participants will increase their awareness and understanding of the value of communicating a Plan for Action.</p> <p>Participants will increase their understanding of the use of criteria to evaluate ideas.</p> <p>Participants will increase their understanding of the importance of identifying sources of assistance and resistance.</p>	<p>OBT Objectives</p> <p><u>Trust and Empathy activities Objectives:</u></p> <p>To provide an opportunity for group members to trust their physical and emotional safety with others by attempting a graduated series of activities which involve taking some physical and emotional risks.</p> <p><u>Communication activities Objectives:</u></p> <p>To provide an opportunity for group members to enhance their ability and skill to communicate thoughts, feelings, and behaviors more appropriately through activities which emphasize listening, verbal, and physical skills in the group decision-making process.</p> <p><u>Problem-Solving Objectives:</u></p> <p>To provide an opportunity for group members to effectively communicate, cooperate, and compromise with each other through trial-and-error participation in a graduated series of problem-solving activities which range from the more simply solved to the more complex.</p>	<p>Revised Initiative</p> <p>Brief: Introduce component three of the CPS process to the participants. Highlight the use of criteria, sources of assistance and resistance and the value of communicating a plan of action when solving a problem.</p> <p>Activity: For a complete description of Blind Polygon see appendix C. Set up the initiative normally.</p> <p>Debrief: Use the Experiential Learning Cycle. Summarize the use of criteria, effect of communicating (or not communicating) the plan of action. Also emphasize how the sources of assistance and resistance to the plan were utilized in improving the plan of action.</p>

Circle the Circle		
<p>CPS Objectives</p> <p>The participants will increase their awareness and understanding of role of a facilitator in creative problem solving.</p> <p>The participants will increase their awareness and understanding of the role of client in creative problem solving.</p> <p>The participants will increase their awareness and understanding of the role of the resource group in creative problem solving.</p>	<p>OBT Objectives</p> <p><u>Ice breaker/ acquaintance activities</u> <u>Objective:</u></p> <p>To provide opportunities for group members to get to know each other and to begin feeling comfortable with each other through activities, initiatives and games that are primarily fun, non-threatening and group-based.</p>	<p>Revised Initiative</p> <p>Brief: Review the roles needed in a CPS session including the roles of facilitator, client and resource group.</p> <p>Activity: For a complete description of Circle the Circle see appendix C. Start with only one Hula Hoop and time this first try, then introduce the next hoop and ask the group to identify what new challenge is presented by having another Hoop in the circle. Ask participants to identify the roles in the initiative so far.</p> <p>Debrief: Use the Experiential Learning Cycle. Summarize on the roles necessary to accomplish the task that is client, facilitator and resource group member.</p>

Evaluation Procedures

At the end of each day, participants were given an evaluation form to fill out. The forms were designed to gather participant feedback on the day's activities. Two types of responses were elicited, one type of response requested the participant to complete a Likert type numerical scale. The second type requested the participants to respond to open-ended questions. Included on the evaluation form for days two, three, and four were quantitative questions designed to give feedback on the day's OBT initiatives. Participants were asked to rate the extent to which the initiatives increased their understanding of specific CPS concepts on a 1 to 5 scale. On this scale one indicated that the OBT activity helped to a small extent to increase the understanding of CPS. A five indicated the OBT activity helped to understand CPS to a great extent. On the fifth and final day of the program, participants were asked to give brief written reactions for each of the OBT initiatives in which they participated.

Each day's evaluation form was designed to fit on one 8.5 inch by 11 inch page, and to be able to be completed within five minutes. Along with the feedback on the OBT initiatives, feedback on other aspects of the day's programming was also collected.

Plan for Data Analysis

All data reported by the participants on the evaluation form was reviewed. Both the quantitative responses and open-ended responses were analyzed. The mean, standard deviation, and range are reported for all quantitative information. The responses of the open-ended questions are

reported in themes which became apparent to the author from the evaluations gathered throughout the program.

In summary, this section reviewed the methods and procedures employed in this study. Additionally the program participants, the Five-Day Course in Facilitation Creative Problem Solving, the method of initiative selection, the evaluation procedures and plan for data analysis were described.

The following section will report the results of the evaluation study described above. Two types of data will be presented, quantitative data and information from the open-ended questions.

Section Four

Documenting Project Activity

The purpose of this section is to present the results of the previously described evaluation method. This data was obtained from evaluation forms distributed to participants in the 5-Day Course in Facilitating Creative Problem Solving on the second, third, fourth and fifth days of the program.

In this section, quantitative data collected on each of the initiatives, will be reported first. A thematic summary of comments made to open-ended questions, collected primarily from the fifth day of the program, will follow the presentation of the quantitative data. The information presented here will serve as a basis for the discussion of findings in Section Five.

Method for Data Collection

At the end of each day, participants were requested to complete a one page evaluation form. These forms were reviewed and used to change modify or make improvements for the next day of the program.

Quantitative Data

In the next section quantitative data will be presented. First, questions that were asked on the feedback forms will be presented. Second, a summary table showing the number of participant responses, the mean, range, and standard deviations of the scores will be presented. Finally,

figures showing the frequency distribution of responses for each question from the feedback forms will be provided.

Table 2 reports the quantitative data collected from the evaluation forms. The one page evaluation forms distributed at the end of each day of the program included questions designed to assess the value participants found in specific activities and their level of enjoyment in those activities (the evaluation forms are found in appendix D). As the scales indicate one is a small increase in understanding of CPS through the use of OBT techniques and five represents a great increase in understanding of CPS through the use of OBT techniques.

Table 2
Participant evaluation results.
Number of participants, Mean, Range, and Standard Deviations of Scores.

Evaluation Questions	<u>N</u>	<u>M</u>	<u>R</u>	<u>SD</u>
To what extent did Hand-Cuffs help you understand how Mess Finding, Data Finding, and Problem Finding relate to each other?	28	4.04	2-5	.79
To what extent did Hand-Cuffs help you understand the importance of data finding?	28	4.18	1-5	1.02
To what extent did Hand-Cuffs help you understand Problem Finding?	28	4.07	2-5	.90
To what extent did Warp Speed help you understand the difference between adaptive and innovative ideas?	28	4.46	3-5	.69
To what extent did Warp Speed help you understand deferred judgment?	28	4.29	3-5	.90
To what extent did Warp Speed help you understand the need for striving for many ideas?	28	4.36	3-5	.83
To what extent did Blind Polygon help you understand the importance of considering sources of assistance and resistance in developing a Plan for Action?	29	3.52	1-5	1.24
To what extent did Blind Polygon help you understand the importance of generating criteria to evaluate ideas?	28	3.61	1-5	1.17
To what extent did Blind Polygon help you understand the importance of clearly communicating a plan for action?	29	4.21	1-5	1.24
To what extent did Circle the Circle help you understand the role of the facilitator in CPS ?	27	3.56	2-5	.85
To what extent did Circle the Circle help you understand the role of the client in CPS ?	27	3.56	2-5	.85
To what extent did Circle the Circle help you understand the role of the resource group in CPS ?	27	3.74	3-5	.76

The following figures give the frequency distribution of participant responses for each question from the evaluation forms.

This question asked participants to evaluate how well the initiative Hand-Cuffs enhanced their understanding of Mess Finding, Data Finding and Problem Finding.

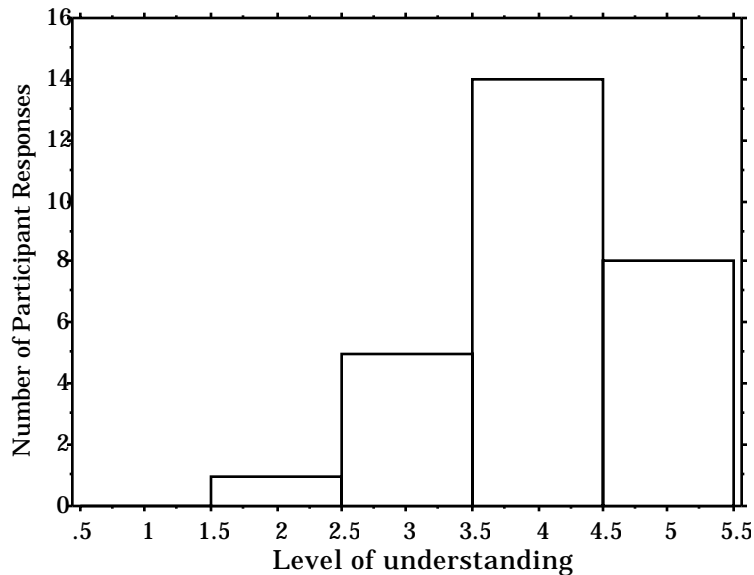


Figure 6. Frequency Distribution for the question: To what extent did Hand-Cuffs help you understand how Mess Finding, Data Finding, and Problem Finding relate to each other?

As the frequency distribution reported in Figure 6 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of Mess Finding, Data Finding and Problem Finding. As previously reported in Table Two, 28 participants responded to this question with a mean of 4.04 a range of 2-5 and a standard deviation of .79.

This question asked participants to evaluate how well the initiative Hand-Cuffs enhanced their understanding of Data Finding.

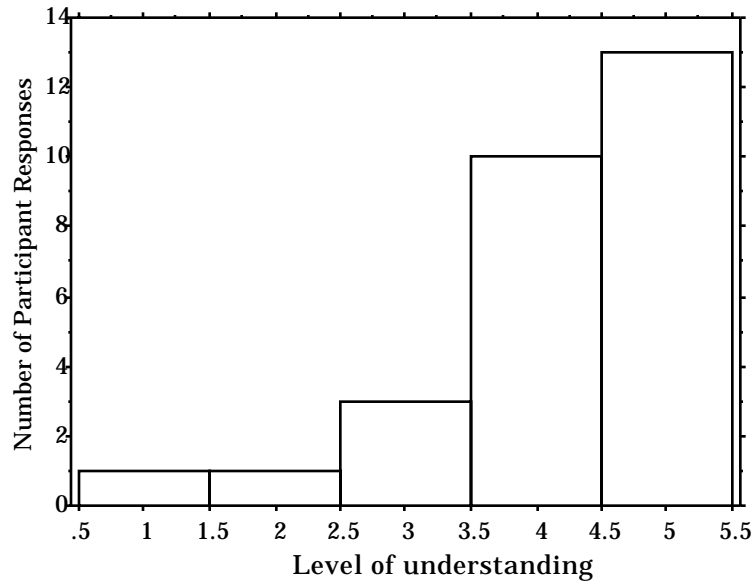


Figure 7. Frequency Distribution for the question: To what extent did Hand-Cuffs help you understand the importance of Data Finding?

As the frequency distribution reported in Figure 7 above shows generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of Data Finding. As previously reported in Table Two, 28 participants responded to this question with a mean of 4.18 a range of 1-5 and a standard deviation of 1.02.

This question asked participants to evaluate how well the initiative Hand-Cuffs enhanced their understanding of Problem Finding.

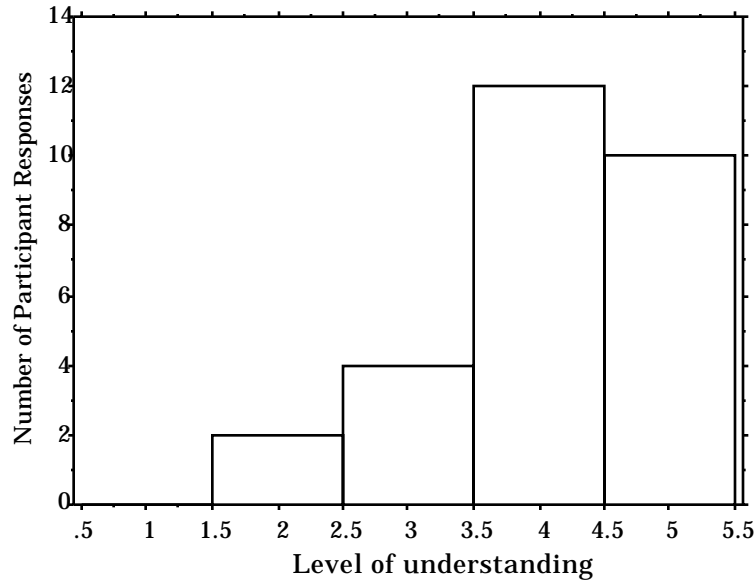


Figure 8. Frequency Distribution for the question: To what extent did Hand-Cuffs help you understand Problem Finding?

As the frequency distribution reported in Figure 8 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of Problem Finding. As previously reported in Table Two, 28 participants responded to this question with a mean of 4.07 a range of 2-5 and a standard deviation of .9.

This question asked participants to evaluate how well the initiative Warp Speed enhanced their understanding of the difference between adaptive and innovative ideas.

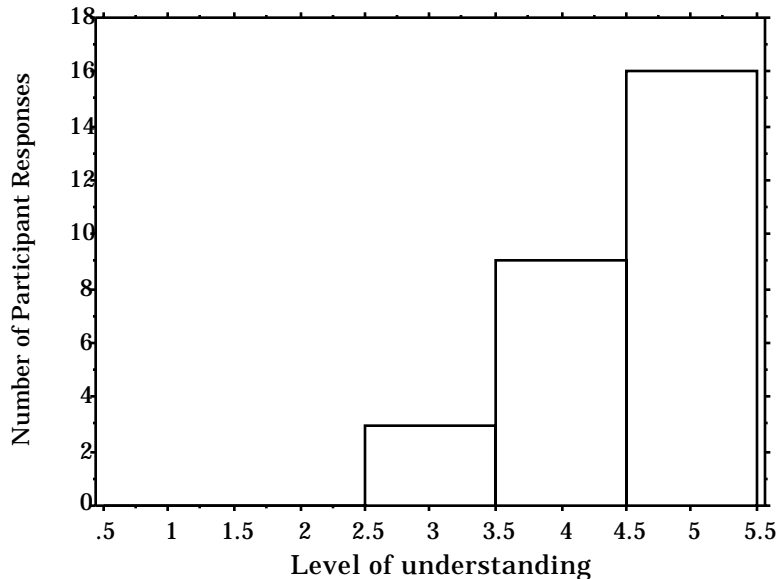


Figure 9. Frequency Distribution for the question: To what extent did Warp Speed help you understand the difference between adaptive and innovative ideas?

As the frequency distribution reported in Figure 9 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of the difference between adaptive and innovative ideas. As previously reported in Table Two, 28 participants responded to this question with a mean of 4.46 a range of 3-5 and a standard deviation of .69.

This question asked participants to evaluate how well the initiative Warp Speed enhanced their understanding of deferred judgment.

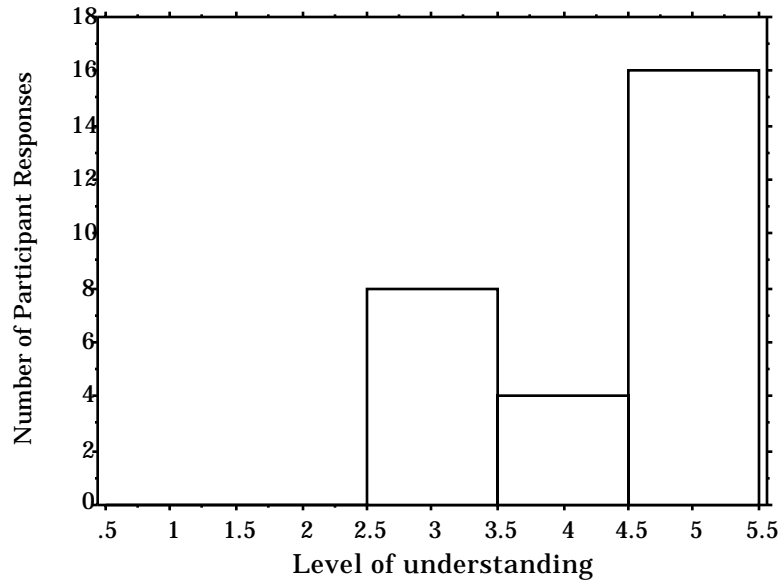


Figure 10. Frequency Distribution for the question: To what extent did Warp Speed help you understand deferred judgment?

As the frequency distribution reported in Figure 10 above shows generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of deferred judgment. As previously reported in Table Two, 28 participants responded to this question with a mean of 4.29 a range of 3-5 and a standard deviation of .9.

This question asked participants to evaluate how well the initiative Warp Speed enhanced their understanding of the need for striving for many ideas.

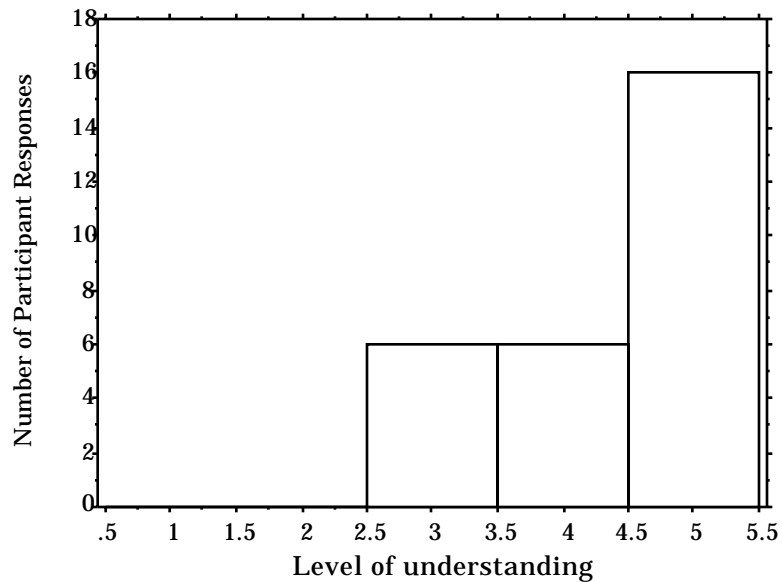


Figure 11. Frequency Distribution for the question: To what extent did Warp Speed help you understand the need for striving for many ideas?

As the frequency distribution reported in Figure 11 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of the need for striving for many ideas. As previously reported in Table Two, 28 participants responded to this question with a mean of 4.36 a range of 3-5 and a standard deviation of .83.

This question asked participants to evaluate how well the initiative Blind Polygon enhanced their understanding of the importance of considering sources of assistance and resistance in developing a plan of action.

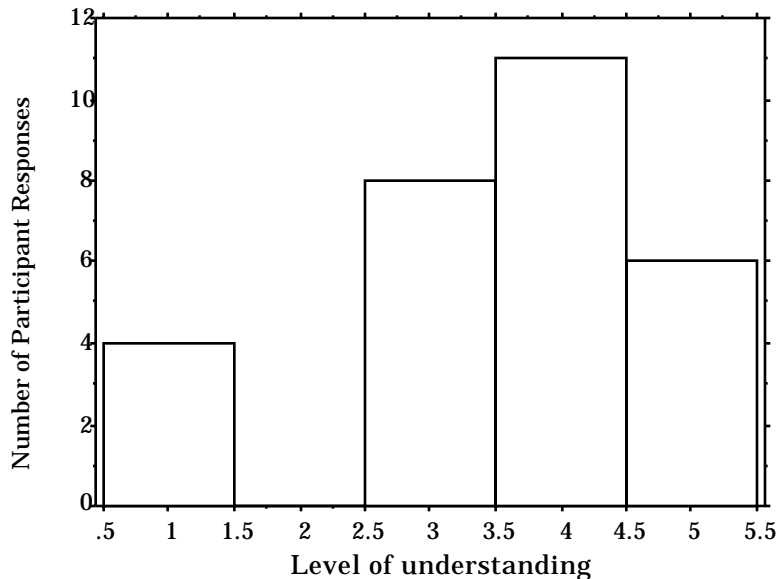


Figure 12. Frequency Distribution for the question: To what extent did Blind Polygon help you understand the importance of considering sources of assistance and resistance in developing a Plan for Action?

As the frequency distribution reported in Figure 12 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of the importance of considering sources of assistance and resistance in developing a plan of action. As previously reported in Table Two, 29 participants responded to this question with a mean of 3.52 a range of 1-5 and a standard deviation of 1.24. Due to external circumstances the structure of the Blind Polygon initiative served as a vehicle for internal group competitions to surface in the group, resulting in

one participant becoming reluctant to participate. This had an effect on several other aspects of Blind Polygon.

This question asked participants to evaluate how well the initiative Blind Polygon enhanced their understanding of the importance of generating criteria to evaluate ideas.

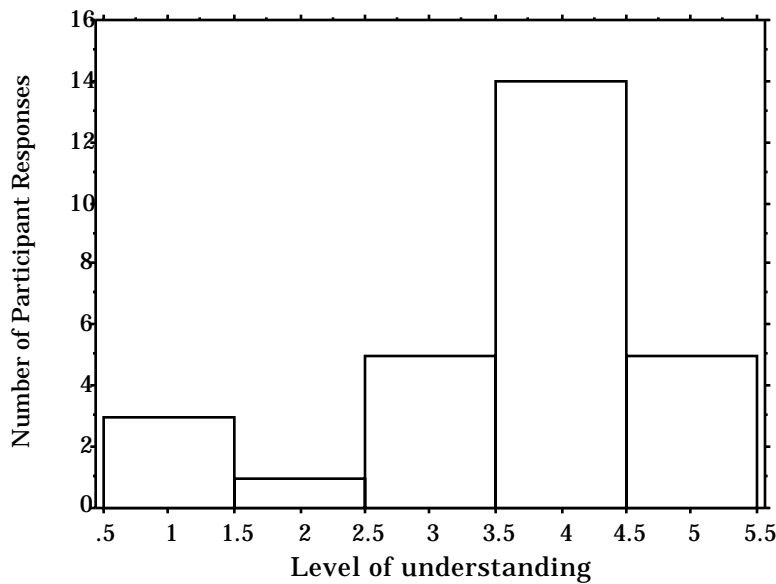


Figure 13. Frequency Distribution for the question: To what extent did Blind Polygon help you understand the importance of generating criteria to evaluate ideas?

As the frequency distribution reported in Figure 13 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding the importance of generating criteria to evaluate ideas. As previously reported in Table Two, 29 participants responded to this question with a mean of 3.61 a range of 1-5 and a standard deviation of 1.17.

This question asked participants to evaluate how well the initiative Blind Polygon enhanced their understanding the importance of clearly communicating a plan for action.

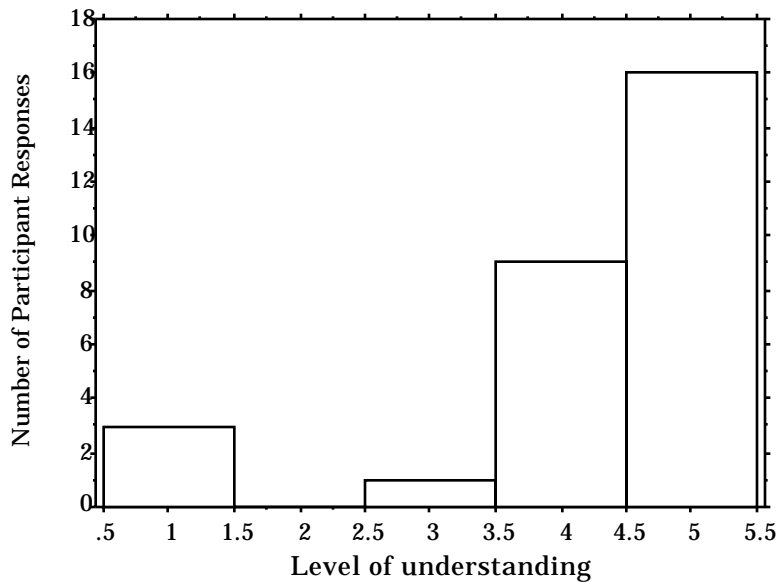


Figure 14. Frequency Distribution for the question: To what extent did Blind Polygon help you understand the importance of clearly communicating a plan for action?

As the frequency distribution reported in Figure 14 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of the importance of clearly communicating a plan for action. As previously reported in Table Two, 29 participants responded to this question with a mean of 4.21 a range of 1-5 and a standard deviation of 1.24.

This question asked participants to evaluate how well the initiative Circle the Circle enhanced their understanding the role of the facilitator in creative problem solving.

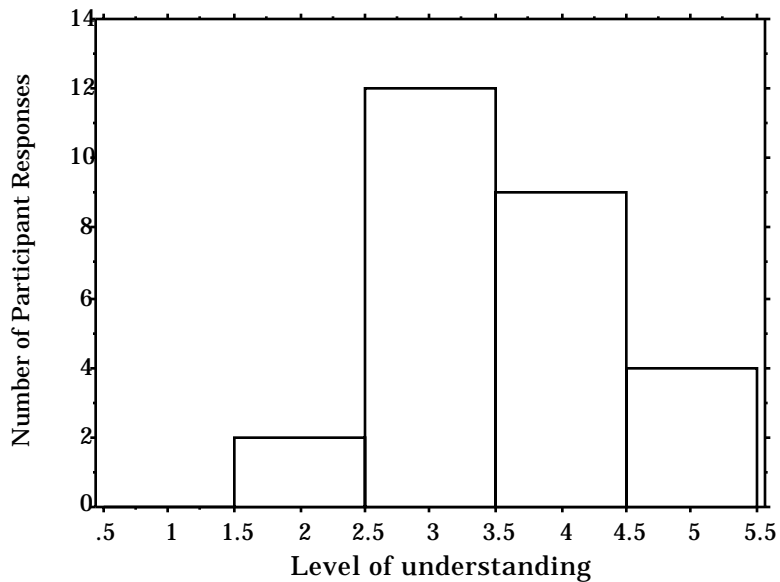


Figure 15. Frequency Distribution for the question: To what extent did Circle the Circle help you understand the role of the facilitator in CPS ?

As the frequency distribution reported in Figure 15 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of the role of the facilitator in creative problem solving. As previously reported in Table Two, 27 participants responded to this question with a mean of 3.56 a range of 2-5 and a standard deviation of .85.

This question asked participants to evaluate how well the initiative Circle the Circle enhanced their understanding the role of the client in CPS.

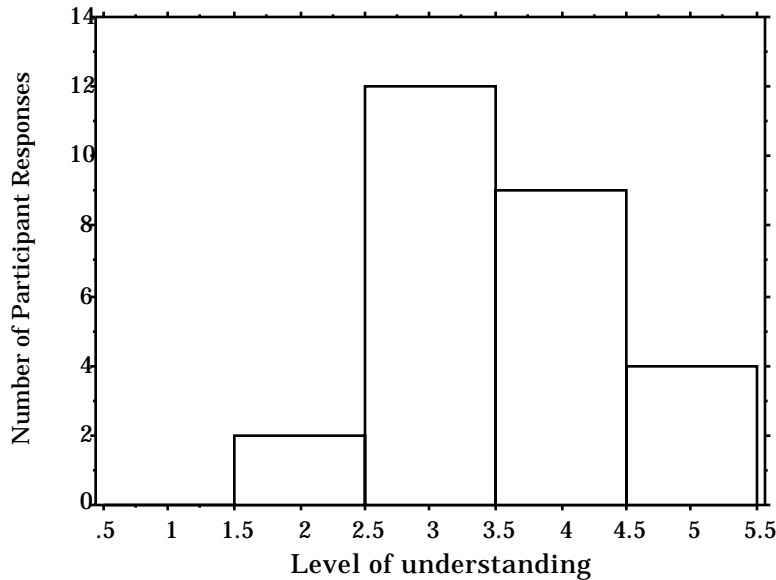


Figure 16. Frequency Distribution for the question: To what extent did Circle the Circle help you understand the role of the client in CPS ?

As the frequency distribution reported in Figure 16 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of the role of the client in creative problem solving. As previously reported in Table Two, 27 participants responded to this question with a mean of 3.56 a range of 2-5 and a standard deviation of .85.

This question asked participants to evaluate how well the initiative Circle the Circle enhanced their understanding of the role of the resource group in creative problem solving.

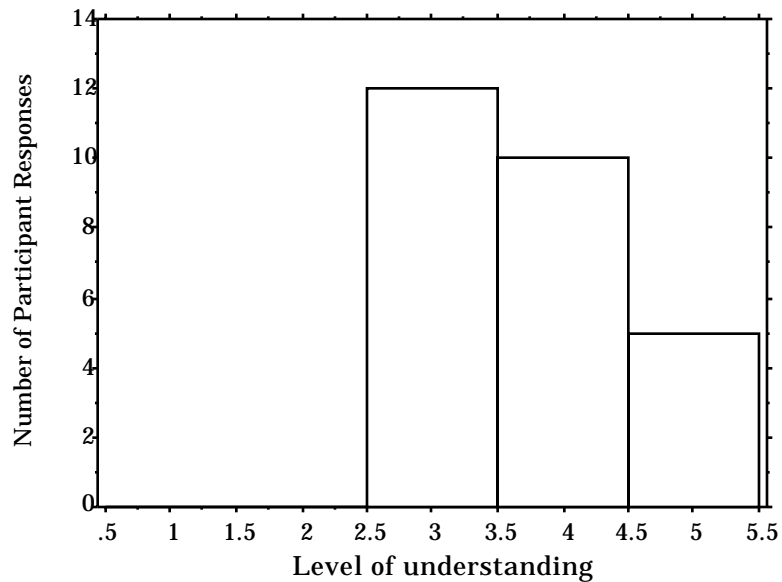


Figure 17. Frequency Distribution for the question: To what extent did Circle the Circle help you understand the role of the resource group in CPS?

As the frequency distribution reported in Figure 17 above shows, generally speaking, most participants saw this exercise as beneficial for enhancing their understanding of the role of the resource group in creative problem solving. As previously reported in Table Two, 27 participants responded to this question with a mean of 3.74 a range of 3-5 and a standard deviation of .76.

The following figure represents a frequency distribution of participants combined responses to all of the questions.

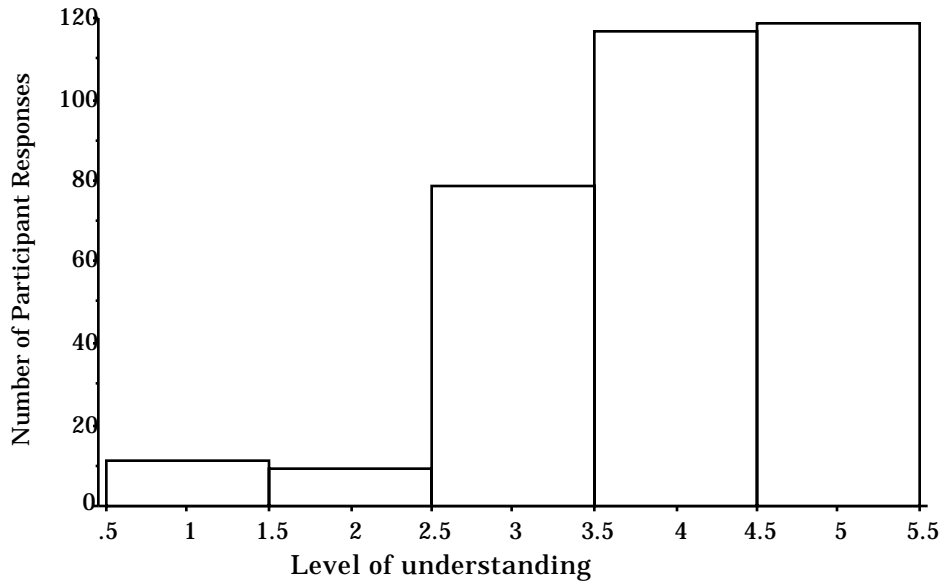


Figure 18. Frequency Distribution of participant responses to all of the questions.

As the frequency distribution reported in Figure 18 above shows generally speaking, most participants saw the OBT exercises as beneficial for enhancing their understanding of selected CPS concepts. The results showed that 70.34% of the responses were rated as four or above, 93.75% of the responses were rated as three or above, and that 5.95% of the responses were one or two.

Summary of open ended narrative feedback

In addition to asking the participants to report a numerical rating indicating the degree to which the initiatives enhanced their understanding of creative problem solving, participants were asked to respond to open-ended questions. Copies of the evaluation forms are found in appendix E. The following section will report participant responses in a thematic summary as determined by the author from the open ended questions on the evaluation forms. These open-ended comments were gathered from the overall evaluation form on the five-day program and the evaluations from days two, three, and four.

The following are the themes, with selected comments, that were reported on the summary evaluation form from the five days for the question:

“Did Hand-Cuffs, Warp Speed, Blind Polygon, Circle the Circle help you understand the CPS process?”

Theme One: Learned specific CPS Concepts

Comments:

“Clearly saw a problem that needed data gathering to go further.”

“Demonstrated how planning affects problem solving and work effectiveness.”

Summary:

There were 18 comments on how the initiatives helped participants to learn CPS concepts. Some people reported that deferred judgement, planning, diverging, and converging were learned through OBT.

Theme Two: Supportive of OBT in general.

Comments:

“All of them were helpful. Some were better at representing the concepts but please continue using these kinds of tasks.”

“It showed that I must look beyond the obvious.”

Summary:

Ten responses indicated general support for the OBT exercises. Some reported that the initiative helped them see past their expectations, while others saw the value of learning information in this manner and wanted to do more.

Theme Three: Value of teamwork.

Comments:

“Without teamwork CPS cannot work.”

“The difficulties of not cooperating-communicating-creating. These processes help to build team spirit.”

Summary:

There were 13 comments mentioning teamwork as their primary value for the OBT.

Theme Four: Fun.

Comment:

“Easier to learn when having fun.”

“Was fun, but didn't help much in learning CPS.”

Summary:

Fun was mentioned on four responses. Fun was seen as helping the

learning process by one and as fun, but not helpful, for learning CPS by another.

Theme Five: Communication.

Comment:

“To understand how important communication skills are to the organization.”

“When communicating it is important to know what the other is asking you and making yourself understood.”

Summary:

Two responded by indicating that communication skills were important.

Theme Six: Specific Initiatives needed refinement.

Comments:

“Rethink this one, or how to explain it. Did not help me distinguish the role of the facilitator.”

“Needs simplification it did not connect, not sure why.”

“I knew solution existed but time would not be enough, lost interest.”

Summary:

There were three comments directed towards improvement needed on the initiatives. Two were related to the “Blind Polygon” and one to “Circle the Circle”. The concerns ranged from time limitation, complexity and explanation of the activity.

Responses to OBT Initiatives on Daily Evaluation Forms

In addition to the comments regarding OBT initiatives that emerged from the over-all program evaluation form on day five, the following are themes that emerged from the evaluation forms that were distributed on the second, third and fourth days of the program. OBT comments emerged under the questions “What surprised you today?” “Why were you surprised?” “What was the best part of the day for you?” and “What is the main thing about today that you would like changed to improve the program?”

As shown below, the specific question being responded to is in italics and immediately precedes the response which is in quotation marks.

Theme One: Learned specific CPS concepts

Questions:

“What surprised you today?”

“Why were you surprised?”

Comments:

What surprised you today? “Hand-Cuffs.” Why were you surprised? It was such a big part of my understanding the Mess, Data et.al.”

What surprised you today? “Hoola-Hoops” (i.e. Circle the Circle) Why were you surprised? “Helped understanding of facilitators role.”

Summary:

Four people reported various ways that the initiatives furthered their understanding of CPS. This development included further knowledge of Mess, Data, Finding and roles in creative problem solving.

Theme Two: Supportive of OBT in general.

Question:

“What was the best part of the day for you?”

Comments:

What was the best part of the day for you? “Warp Speed.”, “The Blind-Polygon.”, “OBT—got everyone moving, involved—yet learning was occurring.”

Summary:

There were fourteen who reported support for the OBT exercises in general, some of the initiatives mentioned were Warp Speed, Blind Polygon, and Hand-Cuffs.

Theme Three: Value of teamwork.

Question:

“What was the best part of the day?”

Comment:

What was the best part of the day? “Warp Speed, Teamwork.”

Summary:

One respondent indicated the best part of the day was an initiative because of teamwork.

Theme Four: Did not like OBT

Questions:

What surprised you today?

Why were you surprised?

What is the main thing about today that you would like changed to improve the program?

Comments:

*What suprised you today? “OBT activity.” Why were you suprised?
“Seemed to take a long time.”*

*What suprised you today? “OBT.” Why were you suprised? “Was not
expecting such juvenile activities.”*

*What is the main thing about today that you would like changed to
improve the program? “Eliminate OBT activity.”*

*What is the main thing about today that you would like changed to
improve the program? “Forget the Blind Polygon”*

Summary:

The four respondents who reported dissatisfaction with the OBT initiatives indicated that the activities should be excluded entirely, took to much time, were childish in nature and one wrote that Blind Polygon should not be used.

Based on participants responses to the open-ended questions it appears that participants found the OBT initiatives effective in enhancing their understanding, learning and application of selected creative problem solving concepts. In addition the comments pointed out certain challenges for future development of integrating CPS and OBT programs.

Summary of Research Findings

All of the OBT initiatives used in the 5-Day Course in Facilitating Creative Problem Solving received average scores above a 3. The average for all responses was 3.96 with 5 being the most often reported rating. The comments indicate that the OBT activities were well received by most

participants and that the use of OBT initiatives was helpful in learning CPS. The following section will provide some conclusions recommendations and implications from this data.

Section Five

Summary, Conclusions, and Recommendations

This project was designed to examine the use of outdoor-based training initiatives in creative problem-solving programs as a way of enhancing and complimenting the way that CPS is presently being taught. The assertion was that using initiatives would be positively received by participants in CPS programs. Another additional purpose was to develop a mechanism to link OBT activities to CPS programs. The overall mean score from all responses indicated that the initiatives were indeed helpful in assisting participants in learning CPS, and that it is feasible to introduce OBT initiatives into CPS programs.

In this project, a literature search was completed to determine the relevant models and concepts which could be utilized for a productive linkage between creativity, creative problem solving and experiential education, outdoor-based training. A preliminary study was conducted to compare the effects of OBT and CPS on two different groups. The group used to evaluate effects of OBT were from the University of Denver's Masters in Business Administration program. The group used to evaluate the effects of CPS were students enrolled in the graduate level course, Nurturing Creative Behavior at Buffalo State College. This project reported that interesting connections exist between the effects of OBT and CPS training. Based on this evidence, we further investigated models of CPS and OBT for a method of initiative selection for use in CPS programs. We then planned the use of OBT initiatives to enhance understanding of CPS concepts in a Five-Day Course in Facilitating CPS.

The evaluation of the training occurred through the use of self report forms which were completed by program participants. Results indicated that the use of outdoor-based training techniques were helpful in helping participants increase their understanding of CPS. Implications for further development and research are considered in this section.

Conclusions

There are effective bridges that can be built between OBT and CPS

Based on available literature, an informal study, and the present evaluation it appears meaningful bridges may be built between the two broad areas of CPS and OBT. Conclusions from the evaluation data is reported here. In all cases the mean score of responses on the evaluation questions were greater than 3 and the most frequently reported response was a 5 on a five point scale. The responses to the open-ended questions were also supportive. One would infer then that initiatives were positively received by the participants, and were successful in their intended purpose of assisting in learning and applying CPS concepts.

Frequency charts were calculated on each question. The assumption was that chance responses would have revealed an even distribution of responses between the scores one, two, three, four, and five. In each case there were more three, four and five responses than two, and one responses. This indicates that more people found the initiatives valuable than didn't.

The development of specific models is warranted.

This study also validates the choice of models used for selection of the initiatives. Many of these models were developed independently of each other, the results of this project indicate that these models compliment each other and further work is warranted.

On a related note, outside of the scope of this study the writer has been involved in applying OBT initiatives to CPS training in other contexts. These contexts include, three large international corporations that have extensive training and development operations. Each of the corporations has applied initiatives in many different training contexts. Warp Speed, Hand Cuffs and Circle the Circle (Rohnke, 1989) have spread rapidly through these organizations. In one of the corporations, Warp Speed spread so quickly that within a year a facilitator that had planned to use it could expect that someone in a small group had already done it. Adding to the anecdotal evidence, facilitators and participants in training programs in organizations find the use of OBT initiatives a valuable tool for enhancing particular learning objectives including CPS. With the use of models, specifically developed for using OBT to enhance understanding of defined learning objectives, OBT initiatives could become even more effective in the educational setting.

Limitations of the study

The following is a listing of limitations in regard to this project.

1. The sample size was small. With a larger sample broader conclusions could be made.

2. The evaluations were all self-report and as such limited to the perceptions of the individuals.

3. This project was limited to the context of the 5-Day Course in Facilitating Creative Problem Solving. By introducing these techniques into a more indepth program further knowledge or conclusions might be made.

4. This project was limited to initiatives which required very few props. Initiatives using low, high, and wilderness experiences were not considered.

5. Only one of the four facilitators who presented the OBT initiatives had a wide background and foundation in leading OBT exercises. Specific training in facilitating OBT initiatives is necessary to achieve full impact of the objectives.

6. Due to time and space limitations only three questions were asked evaluating each initiative. By using more questions more data could have been gathered regarding the value of the initiatives.

Recommendations for Future Work

The following are possible avenues for further inquiry suggested by this project.

- The initiatives chosen for use in this study utilized models already available in the literature. Other models could be developed in order to make clear connections between work currently being done in experiential education and the work that has been done in the area of creativity and creative problem solving. The models used in this study were not originally developed or intended to be used as a method for integrating CPS and OBT. As a result of this study it is evident these models can be effectively utilized

to integrate these two areas. For example, the Rhodes (1961) model might be used as an organizing framework to develop initiatives aimed at issues of person, press, products and process.

- The use of OBT initiatives worked in this program will initiatives work as well in other programs? Studies could now be done to evaluate the effectiveness in CPS programs of various length and focus. For example the use of OBT initiatives might be used to enhance aspects of the creative personalty.

- A question suggested by this study concerns the use of OBT initiatives as they relate to an individual's identified personality style or type.

Questions might be: Which initiatives work best with what Myers-Briggs Type Indicator personality types (Briggs Myers, Myers, 1980)? Which initiatives work best for what Kirton Adaption Innovation styles (Kirton, 1976)? What are the characteristics of those who like/dislike OBT activities the most?

- OBT initiatives have been shown to be useful in CPS training. This suggests another question: What effect might OBT have on short-term and long-term learning of CPS concepts?

- The OBT initiatives used in this study were comparatively simple activities. Evaluation of initiatives that are more complex in addition to the simple, portable initiatives used in this study would possibly provide useful developmental information. What would be the application of low ropes, high ropes or wilderness experiences in training of creativity and CPS concepts? A fully developed OBT program, aimed at the traditional OBT objectives of teamwork, self-esteem, trust and communication, combined with specific training in CPS might have a synergistic effect on both programs.

- We know now as a result of this project that OBT reinforces CPS concepts. As a result of the preliminary study reported in Section Two page 33, we also know that OBT builds trust, group homogeneity, and that CPS improves group process. It seemed natural to link CPS and OBT together and the benefits of that linkage have been demonstrated here. Rigorous testing and careful development of other initiatives is required in order to discover which initiatives work best for specific creativity and creative problem solving concepts.
- This study was designed by a person with extensive background and experience in the use of OBT initiatives in academic and nonacademic settings. Further successful application might be limited to people with a similar background. This suggests that there is a definite need to develop a manual or book with a number of initiatives and activities to help CPS practitioners in the use of OBT initiatives. This also suggests that a course or training program might be useful to help train CPS practitioners in the use of OBT initiatives in CPS programs. Conversely, OBT practitioners could be trained in the use of CPS techniques.
- The question of why the initiatives were so successful arises. Several explanations can be examined. OBT initiatives access many different learning styles. With OBT initiatives there is kinesthetic, verbal, visual, and auditory activities occurring simultaneously. A participant involved in an initiative has the opportunity to utilize more than one learning style and possibly their preferred style. Presentation style is flexible to the degree that a variety of learning styles can be met while maintaining the effectiveness of the training experience. Meeting the learning needs of participants also enhances the success of the training. Another aspect of the success of OBT is that initiatives are fun. Participants can try out new modes of thinking

and behaving with immediate non-threatening feedback. Many initiatives employ metaphor. Fantasy is utilized, allowing adults the opportunity to become more open and childlike in their approach to the problems presented to them. The result is that connections are made to the ways that fun, humor and play can free up thinking and make otherwise overwhelming tasks seem less so. The author has had groups of adults decide as a result of OBT sessions to effect changes in their workplace making them more enjoyable and fun.

The results of this study validate the further investigation and application of combining OBT and CPS. It also under scores what an exciting time it is to be involved in the fields of creativity and experiential education. This is a time of fast paced change and innovation for both fields. This project represents only a small example of the contributions waiting to be made as the fields of creativity and experiential education develop.

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APPENDIX A

Definition of Terms

Definition of Terms

The following will provide a definition of terms related earlier in the literature in section two regarding the study which compared CPS and OBT training. Included are citations as to how each dimension was measured

Trust: The extent to which one is willing to assign good intentions to, and have confidence in, the words and actions of one's co-workers. The actual measures consist of two specific measures: Faith in peers, and confidence in peers. Both faith in peers and trust in peers were measured using 3-item scales developed by Cook & Wall (1980).

Group Homogeneity: The feeling among group members that each member of the work group recognizes the differences in abilities between the individual members of the work group. Group homogeneity was measured used a 2-item scale from the Michigan Organizational Assessment Questionnaire (Seashore, Lawler, Mirvis & Cammann, 1982).

Group Clarity: The feeling among group members that each member of the work group is committed to achieving the group's common goal. Group clarity was measured used a 2-item scale from the Michigan Organizational Assessment Questionnaire (Cammann, Fichman, Jenkins & Klesh, 1979; Seashore, Lawler, Mirvis & Cammann, 1982).

Group Cohesiveness: The feeling among group members that each member of the Work group is committed to the overall goals of the group. Group Cohesiveness was measured used a 2-item scale from the Michigan Organizational Assessment Questionnaire (Cammann, Fichman, Jenkins & Klesh, 1979; Seashore, Lawler, Mirvis & Cammann, 1982).

Overall Group Process: A measure of the overall functioning of the work group, including level of cooperation, group competence, and task

motivation of the members of the work group. Overall group process was measured using a 7-item scale, which is part of the Survey of Organizations questionnaire (Taylor & Bowers, 1972).

APPENDIX B

Five Day Course in Facilitating Creative Problem Solving Program Design

Five Day Course in Facilitating Creative Problem Solving

Program Design

April 6 - 10, 1992

Goal

To develop Creative Problem Solving (CPS) facilitation skills by:

- Stimulating the creative potential of the participants and developing skills in applying Creative Problem Solving techniques; and
- Providing depth of knowledge regarding CPS and its facilitation, leadership and group development.

This program examined both basic and advanced approaches to CPS. It was designed to help participants develop personal understanding and application of CPS, as well as to experience CPS facilitation in a group setting.

Day One

Monday, April 6, 1992

Introductions and Orientation

The focus of the first day was to provide the participants with an overview of CPS and an opportunity to begin working with the CPS process.

The objectives of the day were to:

- Examine participants' personal creative problem-solving process;
- Identify and explain non-productive mythology associated with creativity;
- Recognize four basic productive approaches for understanding creativity;

- Identify and explain model for effective facilitation of CPS;
- Know participants personal style of creativity and its implications for productivity; and
- Practice the roles and responsibilities involved in a client/facilitator planning meeting.

The schedule of the morning follows.

8:05-8:55 Participants were introduced to each other and asked to provide their expectations for the program.

8:55-10:00 Participants participated in an activity designed to examine their personal creative process by reflecting back on a problem they had encountered and examining the process that they used to solve that problem. They were then asked to draw that process or represent it in words.

10:10-10:30 Participants examined their drawing in relation to the creative problem solving process. The model for creative learning was also explained.

10:30-10:50 Information was provided on the background of Center for Studies in Creativity.

10:50-11:00 Morning break.

11:00-12:10 Productive approaches to creativity were examined and a discussion of the creative product and environment was also discussed.

12:10-1:10 Lunch.

1:10-1:50 An activity was conducted on examining the elements of the creative climate. Participants were asked to interview each other on a situation where they had a personal challenge and were asked to examine the climate that surrounded that challenge.

1:50-2:10 Participants examined the “front end” of the process, this is the first component of the process and consists of Mess-finding, Data-finding, and Problem-finding.

2:10-2:15 Break.

2:15-3:15 An examination of the creative person was conducted. The results of the Kirton Adaption Innovation inventory were debriefed and participants were informed of their specific orientation to creative problem solving.

3:15-3:25 Break.

3:25-4:07 The Kirton Adaption Innovation inventory was discussed.

4:10-4:45 Participants were introduced to the procedure for a client/facilitator planning meeting. Participants worked through the first component of the creative problem solving process and developed initial problem statements to be dealt with through out the remainder of the program by utilizing CPS.

4:45-5:00 The day’s activities were reviewed through the use of a “Teach back” activity. Written evaluations were distributed, completed by the participants and collected.

Day Two

Tuesday, April 7, 1992

Dynamic Balance, Understanding the Problem and Generating Ideas

The focus of the second day of the program was to examine the dynamic balance in CPS and to focus on the first component of the process “Understanding the Problem” and the second component of the process “Generating Ideas”.

The objectives of the day were to:

- Learn and apply four guidelines and two techniques for generating options;
- Learn and apply four guidelines and one technique for analyzing, developing and refining options;
- Identify a model for targeting idea generation; and
- Complete the components Understanding the Problem and Generating Ideas on a real challenge.

The schedule of the morning follows.

8:00-8:25 A discussion was conducted on the results of the feedback from the previous day. Specific issues were addressed for improvement and positive change in the program.

8:25-8:52 The first Outdoor-Based Training (OBT) activity was introduced, Hand-Cuffs. Participants solved this problem in pairs. For a complete description of Hand-Cuffs see Chapter Three.

8:52-9:27 A review was conducted of the first component of the process, Understanding the Problem. The purpose, stages and outcomes of Component One were discussed and the elements of problem statements were examined.

9:27-9:43 Break.

9:43-10:30 Dynamic balance. Guidelines for evaluating options were explained along with the guidelines for evaluating options. Participants practiced brainstorming problem statements using Post-it notes.TM Participants prepared initial mess statements for a “round robin” problem generation session.

10:30-10:48 Break.

10:48-11:42 Participants became involved in a “round robin” problem-statement generation activity. In this activity each participant had problem statements generated for their particular challenge. Participants became involved in this activity in the role of facilitator, resource group member, and client.

11:42-11:56 The guidelines for analyzing, developing and refining options were reviewed and clients practiced and applied the highlighting activity. The highlighting activity is a convergent technique designed to isolate key problem statements.

12:03-1:10 Lunch.

1:10-1:25 Participants applied the highlighting technique to their own problem area and converged on a single problem statement.

1:25-1:45 Warp Speed, the second OBT activity, was presented. As participants became involved in this activity they were divided into three groups. For a complete description of Warp Speed see Chapter Three.

1:45-2:50 An introduction to the second component of CPS, Generating Ideas was conducted. The purpose stages and outcomes of Component Two were explained along with an overview of primary idea generation tools. These tools included Brainstorming, Brainwriting, Visually Identifying Relationships, and Forced Relationships. The model

for targeted idea generation was reviewed in relation to adaptive and innovative types of ideas and participants prepared for a round robin activity designed to generate ideas to solve their particular problems.

3:05-3:59 A round robin generation activity was conducted on generating ideas for solving participants particular problems.

4:07-4:40 Using the ALU technique (Advantages Limitations and Unique Connections) an activity was conducted on selecting a highly novel idea and applying affirmative judgment through the use of ALU to make the idea more workable.

4:40-5:00 The day's activities were reviewed through the use of a "Teach back" activity. Written evaluations were distributed, completed by the participants and collected.

Day Three

Wednesday, April 8, 1992

Planning for Action

The focus of the third day of the program was to complete the Planning for Action component of CPS and investigate the relationship between leadership and teaming.

The objectives of the day were to:

- Learn three techniques for analyzing, developing and refining options;
- Complete Component Three on participants challenge.

The schedule of the morning follows.

8:00-8:40 A discussion was conducted on the results of the feedback from the previous day. Specific issues were addressed for improvement and positive change in the program.

8:40-9:30 The Blind Polygon OBT activity was conducted. Participants were divided into two groups for this initiative. For a complete description of the Blind Polygon see Chapter Three.

9:30-10:15 Purpose stages and outcomes of the third component of the creative problem solving process were explained. An activity was conducted on generating various types of criteria. Participants then reviewed the criteria and selected appropriate criteria on which to evaluate their selected ideas.

10:15-11:55 The PCA, a convergent technique that is used for prioritizing ideas, was introduced through the use of a case study. The PCA was demonstrated and participants were asked to make linkages back to its use in their personal/professional lives.

11:55-12:08 Participants were asked to make individual applications of Solution-Finding Technology which consisted of the Paired Comparison Analysis, the Criteria Matrix, or the ALU on their particular concern.

12:08-1:10 Lunch

1:10-1:45: Participants used Paired Comparison Analysis and Criteria Matrix to reach group consensus on the topic “What are the qualities of a good facilitator.”

1:45-2:40 Participants began work in the Acceptance-Finding stage of the process. They were asked to identify their key limitations as a result of their work in Solution-Finding. Small groups generated ideas to develop and overcome any limitations regarding their plans of action.

2:40-2:55 Break.

2:55-4:00 A round robin acceptance finding idea generation session was conducted on overcoming participants' limitations. Participants then built a plan of action for implementing their idea.

4:00-4:45 Questions and answers were conducted on component three.

4:45-5:00 The day's activities were reviewed through the use of a "Teach back" activity. Written evaluations were distributed, completed by the participants and collected.

Day Four

Thursday, April 9, 1992

Leadership, Group Development and CPS

The focus of the fourth day of the program was to examine the relationship between CPS facilitation, leadership and group development.

The objectives of the day were to:

- Examine a model for learning CPS;
- Broaden and deepen participants knowledge of CPS process and techniques;
- Identify participants personal leadership style and its implications for facilitating CPS;
- Identify the stages of group development;
- Practice Component analysis and CPS session planning;
- Facilitate CPS groups using real challenges.

The schedule of the morning follows.

8:00-8:30 A discussion was conducted on the results of the feedback from the previous day. Specific issues were addressed for improvement and positive change in the program.

8:30-8:45 The model for learning CPS was discussed. This model consists of three levels. It appears in Section two of this project.

8:45-10:20 A discussion was conducted on leadership and group development. The Situational Leadership Behavior II model was discussed and participants identified their preferred style of leadership. This leadership model was then integrated into the development of groups and the use of leadership in creative problem solving.

10:20-10:38 Break.

10:38-10:50 Participants were provided information on a model that is designed to analyze various components of the CPS process. This model helps participants to locate themselves in the process to make effective utilization of the various components. This was done to help them prepare for their client facilitator meeting.

10:50-11:15 The Circle the Circle OBT activity was conducted to assist participants in becoming aware of the roles of client, facilitator and resource group in a CPS session. For a complete description of the Circle the Circle initiative see Chapter Three.

11:15-12:35 One of the program trainers modeled a client facilitator planning meeting in which participants were able to identify how they might locate a client in the CPS process.

12:30-2:15 Lunch. In addition to lunch participants met in teams of two to conduct a client/facilitator planning meeting to prepare for their CPS facilitation sessions.

2:40-4:45 Two creative problem sessions were conducted. These sessions were facilitated by participants and they were debriefed by a faculty member of the Center for Studies in Creativity.

4:45-4:50 The group returned from various break-out rooms where the CPS sessions were conducted.

4:50-5:00 The day's activities were reviewed through the use of a "Teach back" activity. Written evaluations were distributed, completed by the participants and collected.

Day Five

Friday, April 10, 1992

Applying CPS Sessions and Program Wrap-Up

The focus of the fifth day of the program was to complete the practice CPS facilitation session and conclude the program.

The objectives of the day were to:

- Facilitate CPS on a real personal/professional challenge or opportunity;
- Debrief and evaluate the program.

The schedule of the morning follows.

8:00-8:30 A discussion was conducted on the results of the feedback from the previous day. Specific issues were addressed for improvement and positive change in the program.

8:30-12:22 Four more practice facilitation sessions were conducted. In these sessions participants facilitated a component of the creative problem solving process and they were debriefed by a faculty member from the Center for Studies in Creativity.

12:22-1:25 Lunch.

1:25-2:25 The last practice facilitation session was conducted.

2:50-3:06 Groups returned to the main session room to discuss their key learnings.

3:06-3:20 Ethics and guidelines for creative problem solving facilitators were discussed.

3:20-4:15 A closing activity was conducted to review the learnings from the week. Activities and key learnings were reviewed, the program evaluation was completed and participants were presented with a small center piece of the CPS process. This center piece was used to help participants reinforce their understanding of the CPS process.

APPENDIX C

Description of Initiatives

Hand Cuffs (Rohnke, 1984)

DEBRIEFING TOPICS: CPS process, understanding the problem, Data-Finding, Problem-Finding, Blocks to creativity, dynamic balance.

MATERIALS NEEDED: One 5' length of rope per person.

SPECIAL SAFETY: Be aware of any rowdy behavior. People are tied together and can fall down. When searching for solutions, some get in very awkward positions. Be ready to spot when needed.

OBJECT: To separate two loosely connected individuals from a seemingly impossible, but engagingly simple, intertwinement of ropes.

RULES: Two intertwined people must separate from one another without (1) cutting the rope; (2) untying the knots; or (3) slipping the knotted portion over their hands.

PROCEDURE:

- Tie each end of the 5' long rope comfortably around the wrists. How tightly the wrist loops are drawn has nothing to do with the problem. Uncomfortably tight ropes should be avoided.
- Allow as much time as necessary for the solution to be discovered. Once the solution is discovered, it will soon become common knowledge.
- Answer as many non-solution questions as the entwined pair ask and continually emphasize that there is a solution, because logic indicates that a sharp knife is the only answer. (Rohnke, 1984, p. 131)

Warp Speed (Rohnke, 1989)

DEBRIEFING TOPICS: CPS Process, Deferred Judgment, Striving for Quantity, Quality, Paradigms, Cognitive Style, Leadership, Communication.

MATERIALS NEEDED: Stop watch, tennis ball.

SPECIAL SAFETY: Tell people to make eye contact before tossing the ball around. All hands out of pockets.

OBJECT: To have every one touch the ball in a sequence in the shortest possible time.

RULES: Everyone touches the ball once except the first person who begins and ends the sequence.

PROCEDURE:

- Announce that you are going to throw a ball to a person across the circle. That person will then throw the ball to another person on the other side of the circle. This throw and catch action continues until everyone in the circle has thrown and caught the ball.
- Tell the group they will need to repeat the same sequence. Once they accomplish that, tell the group that the object is to pass the ball through the sequence in the shortest time possible.
- The times will continue to drop, in fact well below what they would have thought initially possible. Don't be too strict with the "rules," allowing just about any idea that the group feels good about using.
- These high-energy attempts will eventually reduce their time to less than five seconds, a substantial and impressive

drop from the original time. They will be impressed and pleased with themselves--**smile and agree that they are a very special group** . Strange things happen at Warp Speed. (Rohnke, 1989, p. 83)

- An adaption of Warp Speed is Hurry-up warp speed. When you congratulate the group on another job well done ask if they would like to beat their PB (personal best) and they enthusiastically agree (you hope) ask 'How are you going to do it?'. This sets the group up for generating ideas instead of diving in with only trial and error.

Blind Polygon (Rohnke, 1989)

DEBRIEFING TOPICS: CPS process, Understanding the Problem, Generating Ideas, Planning for Action. Affirmative judgment, Assistance and Resistance, Dynamic balance,

MATERIALS NEEDED: 75 - 150' length of rope.

SPECIAL SAFETY: People are blindfolded.

OBJECT: For a group of any size, wearing blindfolds, form a perfect square, triangle, or pentagon, using a 75-150' piece of rope.

RULES: All participants must be in contact with the rope at all times.

PROCEDURE:

- In a large, relatively flat, cleared area, ask participants to form a circle and put on blindfolds. Give the group the length of rope which has the ends tied together. Ask each person to grab hold, and then ask the group to form a perfect shape (i.e.

square, triangle). When they believe the task is accomplished they are to stand in position and remove their blindfolds.

Circle the Circle (Rohnke, 1984)

DEBRIEFING TOPICS: CPS Process, Understanding the Problem, Deferred Judgment, Dynamic Balance, Being Deliberate, Roles in CPS.

MATERIALS NEEDED: Two large hoops. Hoola Hoops come in various sizes get the larger sizes.

SPECIAL SAFETY: Be aware of the dress of the participants. Those participants wearing dresses may want to not physically participate in this activity but observe it.

OBJECT: To pass two hoops around the circle of participants in the shortest possible time.

RULES: Hands must stay clasped together.

PROCEDURE:

- Ask the group, from ten to thirty participants, to form a hand-in-hand circle. Place two large hoops together between two people (resting on their grasped hands). See how quickly the participants in the circle can cause the hoops to travel around the circle (over the people) in opposite directions, through each other (i.e., hoop through hoop) and back to the originating point. (Rohnke, 1984, p. 60)
- For a variation of this, and to continue for a further stretch, Take out one of the hoops and replace it with a rope loop of similar diameter and ask the group to see how fast they can go. This can be an appropriate time to ask questions based on whatever topic they have been briefed on (i.e. roles

of client, facilitator, and resource group member, Data Finding, Problem Finding, quality process steps, mutual support etc.)

APPENDIX D

Evaluation Forms

Facilitating Creative Problem Solving Program Participants Daily Evaluation Report Day One

Using the scale below please rate each day's activities in terms of:

VALUE. The extent to which the activities were valuable in increasing your own skills or knowledge.

1= Worthless 3= Some value 5 =Very valuable
2= Very limited value 4= Valuable

ENJOYMENT . The degree of enjoyment or dislike you felt for the activity.

1= Very unenjoyable 3= Some value 5 =Very Enjoyable
2= unenjoyable 4= Enjoyable

Please write a number in each category for each activity.

Activity: Drawing your creative process **Value :** ____ **Enjoyment :** ____

Activity: Overview of CPS **Value :** ____ **Enjoyment :** ____

Activity: Demystifying creativity **Value :** ____ **Enjoyment :** ____

Activity: Climate activity **Value :** ____ **Enjoyment :** ____

Activity: Examining KAI styles **Value :** ____ **Enjoyment :** ____

Activity: Client Facilitator meeting **Value :** ____ **Enjoyment :** ____

Activity: Teach-back activity **Value :** ____ **Enjoyment :** ____

What surprised you today? _____

Why were you surprised? _____

What was the best part of the day for you? _____

What is your most important unanswered question? _____

What is the main thing about today that you would like changed to improve the program? _____

Additional Comments: _____

**Facilitating Creative Problem Solving
Participants Daily Evaluation Report Day Two**

Please write a number in each category for each activity.

Activity : Review of yesterday's learnings **Value** : _____ **Enjoyment** : _____

Activity : Gerard's use of Hand-Cuffs to
review Mess, Data, and Problem Finding **Value** : _____ **Enjoyment** : _____

Activity : Guidelines to generate options **Value** : _____ **Enjoyment** : _____

Activity : Generating problem statements **Value** : _____ **Enjoyment** : _____

Activity : Highlighting problem statements **Value** : _____ **Enjoyment** : _____

Activity : Generating ideas **Value** : _____ **Enjoyment** : _____

Activity : "Silly to Good" activity **Value** : _____ **Enjoyment** : _____

Activity : Wrap-up activity **Value** : _____ **Enjoyment** : _____

The following questions refer to the Outdoor-Based Training (OBT) activities that you participated in today.

To what extent did Hand-Cuffs help you understand how Mess Finding, Data Finding, and Problem Finding relate to each other?

Little (1) (2) (3) (4) (5) Great

To what extent did Hand-Cuffs help you understand the importance of data finding?

Little (1) (2) (3) (4) (5) Great

To what extent did Hand-Cuffs help you understand Problem Finding?

Little (1) (2) (3) (4) (5) Great

To what extent did Warp Speed help you understand the difference between adaptive and innovative ideas?

Little (1) (2) (3) (4) (5) Great

To what extent did Warp Speed help you understand deferred judgment?

Little (1) (2) (3) (4) (5) Great

To what extent did Warp Speed help you understand the need for striving for many ideas?

Little (1) (2) (3) (4) (5) Great

What surprised you today?

Why were you surprised?

What was the best part of the day for you?

What is your most important unanswered question?

What is the main thing about today that you would like changed to improve the program?

Additional Comments:

Facilitating Creative Problem Solving
Participants Daily Evaluation Report Day Three

Please write a number in each category for each activity.

Activity : Review of yesterdays learnings **Value** : _____ **Enjoyment** : _____

Activity : Generating Criteria **Value** : _____ **Enjoyment** : _____

Activity : Solution finding matrix **Value** : _____ **Enjoyment** : _____

Activity : PCA case study **Value** : _____ **Enjoyment** : _____

Activity : Examining climate perceptions **Value** : _____ **Enjoyment** : _____

Activity : Assistance, resistance activity **Value** : _____ **Enjoyment** : _____

Activity : Building plan for action **Value** : _____ **Enjoyment** : _____

Activity : Teach-back activity **Value** : _____ **Enjoyment** : _____

The following questions refer to the Outdoor-Based Training (OBT) activities that you participated in today.

To what extent did Blind Polygon help you understand the importance of considering sources of assistance and resistance in developing a Plan for Action?

Little (1) (2) (3) (4) (5) Great

To what extent did Blind Polygon help you understand the importance of generating criteria to evaluate ideas?

Little (1) (2) (3) (4) (5) Great

To what extent did Blind Polygon help you understand the importance of clearly communicating a plan for action?

Little (1) (2) (3) (4) (5) Great

What surprised you today?

Why were you surprised?

What was the best part of the day for you?

What is your most important unanswered question?

What is the main thing about today that you would like changed to improve the program?

Additional Comments:

Facilitating Creative Problem Solving Participants Daily Evaluation Report Day Five

One of our values at the Center is continuous improvement. Having just completed our program, you are in the best position to help us with this challenge. Therefore, we would appreciate it if you would complete this feedback form. Your input is important to us! Thank you for your cooperation.

Activity : Your individual facilitation **Value** : _____ **Enjoyment** : _____

The following questions refer to the Outdoor-Based Training (OBT) activities that you participated in this week.

Did Hand-Cuffs, Warp Speed, Blind Polygon, Circle the Circle help you understand the CPS process?

Hand-Cuffs? Yes _____ No _____ Undecided _____: Please explain briefly:

Warp Speed? Yes _____ No _____ Undecided _____: Please explain briefly:

Blind Polygon? Yes _____ No _____ Undecided _____: Please explain briefly:

Circle the Circle? Yes _____ No _____ Undecided _____: Please explain briefly:

Which parts of the training will be most useful for you? Why?

Which part(s) were most difficult to understand? Why?

What will be most difficult to transfer to your own uses? Why?

Which of your questions are still unanswered?

What would you change about this program?

	Poor		Average		Excellent
Quality of program materials and handouts?	(1)	(2)	(3)	(4)	(5)
Pace of the program was: (Circle one)	Too slow		Just right		Too fast
Program met my expectations?	(1)	(2)	(3)	(4)	(5)
Overall, how would you rate this program?	(1)	(2)	(3)	(4)	(5)

For additional comments, please use back of page!

APPENDIX E

Completed Evaluation Forms for the Second, Third, Forth and Fifth days of the Five-Day Course in Facilitating Creative Problem Solving.

Information was gathered on the first day of the program. However, none of that information is relevant to this study and as such is not included here.