

The Effectiveness of Metaphoric Facilitation Styles in Corporate Adventure Training (CAT) Programs

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The purpose of this study was to examine the outcomes of using metaphors to enhance learning in the framing and debriefing of teamwork issues for a corporate adventure training (CAT) program. Through random assignment, four different but intact regional work groups from a European banking institution participated in a CAT program for the purposes of team-building. A fifth randomly selected intact work group from another region in Europe served as a control group. Each group received the same CAT program, but the groups were provided with different forms of facilitative metaphors in their program. All groups were measured for changes in teamwork during an initial development period, as well as during two follow-up periods to determine the maintenance of potential changes. The mixed isomorphic framing/metaphoric debriefing approach proved to be the most effective training methodology for initially developing, as well as maintaining, teamwork in the CAT training program.

Keywords: Metaphor, Facilitation, Corporate, Team-Building

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Certain corporate adventure training (CAT) programs have demonstrated the ability to produce beneficial outcomes in critical areas of organizational development (Bronson, Gibson, Kichar, & Priest, 1992; Donnison, 2000, 2002; Priest, 1996, 1998), as well as positive financial differences in company profit margins (Bramwell, Forrester, Houle, LaRocque, Villeneuve, & Priest, 1997; Litterini, 2001). While these outcomes speak favorably for these programs, what remains unclear is: (a) how such changes happen, (b) how long such changes are maintained, (c) what factors these changes should be attributed to, and (d) how these factors are affected by differing cultures and organizations. The lack of clarity around these variables has added to the confusion of organizations attempting to determine which corporate adventure programs provide desired positive changes and which programs fall short on delivering expected outcomes.

One key factor of productive CAT programs appears to be how they are facilitated, as well as the effectiveness of certain facilitation practices in achieving desired training objectives for the organization (Gass, 1985, 1993; Kirkpatrick, 1998; Priest, Gass, & Fitzpatrick, 1999). Several facilitation models associated with CAT experiences have been touted as proven professional practices (Hirsch & Gillis, 2004; Priest & Gass, 1993, 1997, 2005). Some professionals have questioned whether these truly benefit individuals and their respective organizations (Hovelynck, 1998, 2003; Mack, 1996; Rongen, 2004). To the critics' credit, research processes differentiating facilitation techniques, how they are used, and when they are best implemented remain unsubstantiated.

One facilitation process in question is the use of metaphors in designing experiences to meet client needs. Numerous CAT programs utilize metaphors as a method to enhance transfer of learning into the workplace (Gass, 1985, 1991). Metaphors have been defined as an idea, object, or description used in place of another different idea, object, or description in order to denote comparative likeness or similarity between the two (Bacon, 1983, 1987; Gass, 1985; Priest & Gass, 1997, 2005). In the process of designing prescriptive metaphors, facilitators often seek to co-create with clients isomorphic (i.e., "same structure") connections to implement meaningful parallel analogies for client change to aid in the transfer process (Gass, 1997).

One question that exists is how metaphors are structured for clients' use. While the use of metaphors can be a key element utilized by CAT

facilitators, the interpretation on how metaphors are used is certainly varied. Some facilitators have emphasized the focus of isomorphic metaphor models to be “client centered,” likening the metaphoric facilitation process to creating a “story” in which clients serve as the authors of their experiences and facilitators assist in the client editorial process. As stated by Gass (1997):

Facilitators join together with clients during this client editorial process (when using metaphors). Most important in helping clients edit their story is to recognize they are the clients' stories, not the facilitators'. In the storyline, clients are both the characters and the writers. Facilitators must recognize that the initial script of the story, as well as the final version, is the client's, and the one they will continue to possess after the experience is completed.... The editing process truly becomes a co-creation process involving both the client and facilitator on the basis of what the clients need. Such co-creation is usually necessary for functional change to occur. (p. 66)

Other practitioners have portrayed the use of metaphors quite differently, describing it as a process that is highly facilitator-based, during which the facilitator exercises maximum control over the processing and whereby facilitators overtly tell participants what they should get out of an activity even before they do it. The purpose of this method, also called the Metaphoric Model (Bacon, 1983), is to have participants think about the primary lesson of the activity while the lesson is taking place. For example, a facilitator may tell a group of people undergoing drug treatment that each step of a difficult hike is like one step to sobriety. Then when participants complain that the hike is too hard, they know (even without being told) that giving up on the hike is analogous to giving up on their treatment program (Bocher, Miller, & Simpson, 2005).

These two approaches to using metaphors present themselves as vastly different philosophies and techniques. And while it would seem these approaches would produce different results, no study has been conducted in the field to determine if such varying approaches to metaphors produce varying results.

A second critical question that exists is the actual sequencing of when metaphoric processes occur in training programs and the potential differences that may result in learning outcomes. With CAT programs, metaphoric processes may occur at different times in the client experience. For example, metaphoric debriefing (i.e., reflection with the use of relevant analogies *after* the training experience) has been a common facilitation

practice with metaphors for CAT programs (Luckner & Nadler, 1997; Schoel & Maizell, 2002). This style of facilitation usually occurs after completing a training experience, during which metaphoric client dialogue can center around issues like: "The way we planned for the training exercise was just like the way we plan at work;" or "Facing risks with team support was successful in the adventure, so perhaps this same strategy may be successful if similar forms of trust can be maintained back on the job." In examples like these and others, metaphoric debriefing enables clients to reflectively view new perspectives of relevancy and realism from their learning experiences.

Another use of metaphors in CAT programs is when facilitators and clients proactively frame training experiences (i.e., implement analogous descriptive processes *prior to* the learning experience) to possess relevance to clients' training issues. The training experience is not introduced as a fantasy game but with elements of valuable context and relevance for a particular group. For example, a Spider's Web (Rohnke, 1989) experience becomes more than a web of string tied to several supportive poles. Instead it represents an analogous "distribution network through which goods or services are passed to customers, with contact with the network damaging the goods or services and necessitating their return to the warehouse for repair and reshipping." The particular frame presented here becomes a valuable training experience for this group from the distribution center of a corporation when these isomorphic elements are in place. Different isomorphic frames would be co-created for finance, marketing, or computer departments when they are relevant for these particular clients (Gass, 1997). As described earlier, the utilization of specific, client-centered, isomorphic framing enables clients to learn in analogous work-like conditions. Discussions following an isomorphic framework tend to focus more on actions related to the context of work, and less on elements related to the training experience.

While debriefing after CAT experiences has been common practice in CAT programming for many years, isomorphic framing has been touted as a more effective method than metaphoric debriefing (Boyle, 2000; Doherty, 1995), not only because it generates awareness for change, but also it provides an opportunity to practice such changes in a parallel work environment. "Corporate adventure training programs that effectively create beneficial change for organizations also need to be adept at creating structural isomorphic frameworks that address the needs of the client within the context of the company" (Gass, Goldman, & Priest, 1992, p. 37). One question arising from this professional dialogue is what metaphoric practices are the most effective? How effective is isomorphic framing in contrast to metaphoric debriefing, and do different uses of metaphor have differing effects on the long-term benefits for clients in

their workplaces? While several studies have examined the effectiveness of facilitation techniques in adventure programming (Doherty, 1995; Gillis, 1986; MacRea, Moore, Savage, Soehner, & Priest, 1993), no research exists examining this issue.

The primary purpose of this study was to examine the influence of metaphoric debriefing and isomorphic framing techniques on the initial development as well as ongoing maintenance of teamwork for a CAT program. Such information could inform the design and delivery of CAT programs to become an even more effective training. A secondary purpose was to integrate any potential findings with studies on the use of metaphoric facilitation from other settings to examine emerging trends.

Method

Participants

Five intact work groups from a European banking institution (Deutsche Bank) were randomly selected from five regional head offices to participate in the study. Four of these groups (A, B, C, D) were randomly selected to participate in a four-day CAT program for the purposes of team-building. The fifth intact work group (Z) from another European regional office was randomly selected to serve as a control group and received the CAT program during the year following the completion of the study. All five groups were identical in composition and structure with 23 members each: 1 regional vice-president (4%), 3 divisional directors (13%), and 19 departmental managers (83%). All participants were over the age of 30, and most individuals were male with at least three years of experience with the company.

Training Program

The program was a 72-hour residential experience from midday Monday to midday Thursday. Monday afternoon was devoted to goal-setting and socialization exercises. Tuesday was filled with group initiatives addressing specific elements of teamwork. On this second day, the learning experiences were designed to generate group awareness for specific items related to a high-performing team (i.e., communication, cooperation, trust, and leadership). Once aware of their shortcomings in these areas, each group was encouraged to continue toward improving their performance in these particular areas. Wednesday was composed of additional group initiatives designed to "practice" teamwork. After the group practiced these skills, they were tested in their ability to apply those new behaviors to problem-solving and decision-making tasks in a synergistic manner. Thursday morning was spent action-planning for the future and celebrating program successes. No long-term follow-up procedures with

teamwork were implemented for any group. However, groups did meet three weeks after the program to discuss the progress of their action plans.

Measurement Tool: Team-Development Indicator (TDI-m)

Teamwork levels were measured with the medium version of the Team Development Indicator (TDI-m) one month before, one month after, six months after, and 12 months after the CAT program. The (TDI-m) (Bronson, 1991) measures teamwork and the principle components of trust, communication, collaboration, problem-solving, decision-making, and task completion. Subjects respond to 50 behavioral items on the (TDI-m) by indicating the percentage of the time each specific behavior is true for their team. The 50 items are loaded on to the following six-factor structure: (1) Trust (acceptance, believability, confidentiality, dependability, encouragement, confidence); (2) Communication (listening, feedback, honesty, nonjudgmental, respect, paraphrase); (3) Collaboration (cooperation, sharing, fear, risk-taking, assumptions, compromise); (4) Problem-Solving (responsibility, creativity, analytical, anticipation, alternatives, time); (5) Decision-Making (support, understanding, information, action, evaluation, options); and (6) Task Completion (vision, purpose, goals, personal roles, team roles, commitment, productivity). The (TDI-m) has been shown to have face validity (Kormanski & Mozenter, 1987), an equivalent reliability of 0.95 between two alternate versions (Bronson, Gibson, Kichar, & Priest, 1992) and a criterion related validity of 0.98 with other versions of the TDI (Priest & Lesperance, 1994). The (TDI-m) was selected for its accuracy in measuring teamwork and its frequency of use in experienced-based training and development (EBTD) research since 1990 (Bronson, 1991).

Design and Procedure

All four experimental groups (A, B, C, & D) received the same activities in the same order on the same day of the program. However, the manner in which the group initiatives were delivered and debriefed on Tuesday and Wednesday varied for the four groups depending upon a specific facilitation model. As stated earlier, Group Z received no CAT programming.

Group D received guidelines for the training experience and reflective dialogue about what occurred in the experiences and the consequences of group members' particular actions, but without any special metaphorical framing or debriefing. No structured metaphorical processing was conducted before or after individual training experiences with group members during the CAT program, although the members of this group did spend time talking among themselves at meals and in the evenings. Some of this unstructured time may have included metaphoric reflections of the training.¹

Group C received a nonisomorphic explanation of each task beforehand plus a relevant metaphoric debriefing after all learning experiences. This style of debriefing consisted of a facilitator asking participants guided inquiry questions to assist them in discovering lessons they learned, how learning from the training applied to their jobs, and how they might change work behaviors when they returned to the office. While discussing these learnings, applications, and changes, facilitators asked participants to search for metaphors or analogies from the adventure experiences that share similarities with work.

Group B received isomorphic framing following a seven-step model outlined in Gass (1991) and Hirsch & Gillis (2004) before each activity and a nonmetaphorical debriefing afterward (i.e., a debriefing without the conscious and intentional metaphorical connection made to the clients' workplace). Excerpted from these two sources, the seven sequential steps of this model include: (a) identify and rank client goals; (b) select appropriate isomorphic experience; (c) identify successful resolution to client issue; (d) strengthen isomorphic framework; (e) review client motivation; (f) conduct training experience; and (g) debrief training experience with client. Applied in this particular corporate training experience, this model was implemented by a facilitator introducing the training task, setting, and goals as metaphorical representations of work. And as indicated by the model, each training experience was tailored to mirror the group and its work roles. Key to the success of the isomorphic framing process was a parallel induction process (Zeig, 1994), during which clients experience a "double entendre" connection between the CAT experience and their workplace. For example, providing "slack" to a coworker in a challenge course belaying experience parallels the process of providing this coworker with "slack" or the room to grow in an individual yet supportive and connective manner at work.

Group A received a mixture of metaphoric debriefing during Day 2 similar in design to Group C and isomorphic framing on Day 3 similar in design to Group B. Variations in the facilitation offered to clients were reduced by: (1) having the same facilitators lead each of the four groups in the CAT study and (2) following treatment models and guidelines for client-centered metaphoric facilitation outlined in Hirsch and Gillis (2004) and Priest and Gass (2005).

Scoring and Data Analysis

Subjects responded to the (TDI-m) by marking the percentage of time their group exhibited each of 50 team behaviors on a scale from 0% (never) to 100% (always). The instrument was index-scored by averaging the scores across all 50 items. Mean index scores of the (TDI-m) were subjected to an

analysis of variance (ANOVA) with repeated measures seeking significant differences across the five groups during the four separate test times (-1 month through +12 months). Significant ANOVA differences were further analyzed with the Scheffe post-hoc multiple comparison procedure to determine the amount of significance between groups as well as test times. Results were analyzed using Statview and SPSS for MacIntosh computers.

Results

Although CAT program attendance was required for all company executives, participation in the program and the research study was voluntary. As a result, only 83 of the 92 (90%) subjects completed all four administrations of the (TDI-m). A summary of the mean index scores is presented in Table 1 and is graphed in Figure 1.

As seen in Table 1 and Figure 1, teamwork for the control group (Group Z) did not change significantly over the time of the study. Given similar external conditions were occurring across all five groups in the organization, this established a baseline of teamwork performance and reduced the likelihood that changes to the other four groups were due to other influences.

Initial Development of Teamwork

As seen in Figure 1 and Table 1, all four groups involved in the training program (Groups A, B, C, D) showed significant increases in the initial development of teamwork over the control group. To determine this growth, teamwork was measured over a two-month period one month before and one month after the CAT program. During this time period, the mixed isomorphic and metaphoric debriefing group (Group A) possessed the greatest initial increase, while the group with no metaphoric debrief or framing (Group D) experienced the least amount of initial increase. Groups receiving either the isomorphic frame (Group B) or the metaphoric debrief (Group C) had similar initial increases in teamwork, but these increases were significantly greater than the group receiving no metaphoric facilitation (Group D), but significantly less than the mixed metaphor group (Group A). This outcome illustrates that the metaphoric debriefing and isomorphic framing approaches were equally effective at initially developing teamwork, and a mix of both approaches was significantly more effective than either approach alone.

Maintenance of Teamwork Changes

In terms of maintaining teamwork levels over the next year, all four groups that received training showed significant decreases from their initial scores at some time over a 12-month period. Much of each group's decrease was likely due to the lack of follow-up procedures implemented to support the groups in their efforts to apply their new behaviors back at

Table 1
Mean Index Scores for the (TDL-m) for Five Subject Groups Over Four Test Times

Group	1 month prior to treatment program	1 month following treatment program	6 months following treatment program	12 months following treatment program
A – Mixed Isomorph & Metaphor ($n = 22$)	39.8	82.3	78.9	70.9
B – Isomorphic Frame only ($n = 22$)	41.6	70.3	68.4	56.4
C – Metaphoric Debrief only ($n = 21$)	39.2	67.9	54.3	42.2
D – No Isomorphic Frame or Metaphoric Debrief ($N = 21$)	43.3	55.8	46.5	44.1
Z – Control ($n = 20$)	37.7	36.5	39.4	38.2

Note. Means typed in **bold** indicate significant ($p < .05$) differences across time from pretest scores. Means typed in *italics* indicate significant ($p < .05$) differences across baseline scores from Group Z (Control Group). Means that are typed in **italics and bold** indicate significant ($p < .05$) differences across both pretest scores and baseline scores from Group Z (Control Group).

work. Without strategies for maintaining the new levels of teamwork, these gains were significantly diminished.

Teamwork for the group who received no metaphoric debriefing or isomorphic framing (Group D) returned to baseline levels after six months. The short-term gains experienced by this group apparently were not facilitated in a manner that maintained retention of learning from the training experience.

The metaphoric debriefing group's teamwork (Group C) also returned to baseline levels, but only after 12 months. In this case, the metaphoric debriefing approach possessed limited effectiveness for this time period without follow-up support procedures.

The isomorphic framing group's teamwork (Group B) also remained elevated for six months, but then dropped significantly at 12 months. Nevertheless, the final level of teamwork was still significantly higher than baseline levels and Groups C and D. Apparently the isomorphic framing permitted the group to retain more new learning when back at work, despite the lack of follow-up.

Teamwork levels for the mixed group (Group A) also remained elevated after six months. After 12 months, teamwork levels significantly diminished from levels attained immediately after the training experience, but still remained significantly higher than any of the other groups as well as pretraining levels. Findings of this study support the premise that a mixed approach was most effective at helping this group to develop as well as maintain their teamwork in situations where follow-up support is not provided.

Conclusion

This study demonstrates that CAT programming can produce positive changes in teamwork in corporate organizations, and that without follow-up experiences such gains diminish over time with certain facilitation techniques. Similar positive changes have also been demonstrated in other studies (Bronson, Gibson, Kichar, & Priest, 1992), as well as the loss of such increases from a lack of follow-up procedures (Priest & Lesperance, 1994).

However, this study does offer several new insights into key features of CAT programs on the influence of various forms of metaphoric facilitation on the development and maintenance of teamwork. When combined with the findings of other studies, it also adds some clarity around the successful adaptation of metaphoric facilitation with differing cultures, client groups, and organizations. It further establishes the use of client-centered metaphoric facilitation as an evidenced-based practice (Gass, 2005; Roberts & Yeager, 2004) while addressing some of the pressing validation issues for the CAT field.

In summary, CAT programming was able to increase measures of teamwork from about 40% to as much as 80% (on a 0%-100% scale) depending

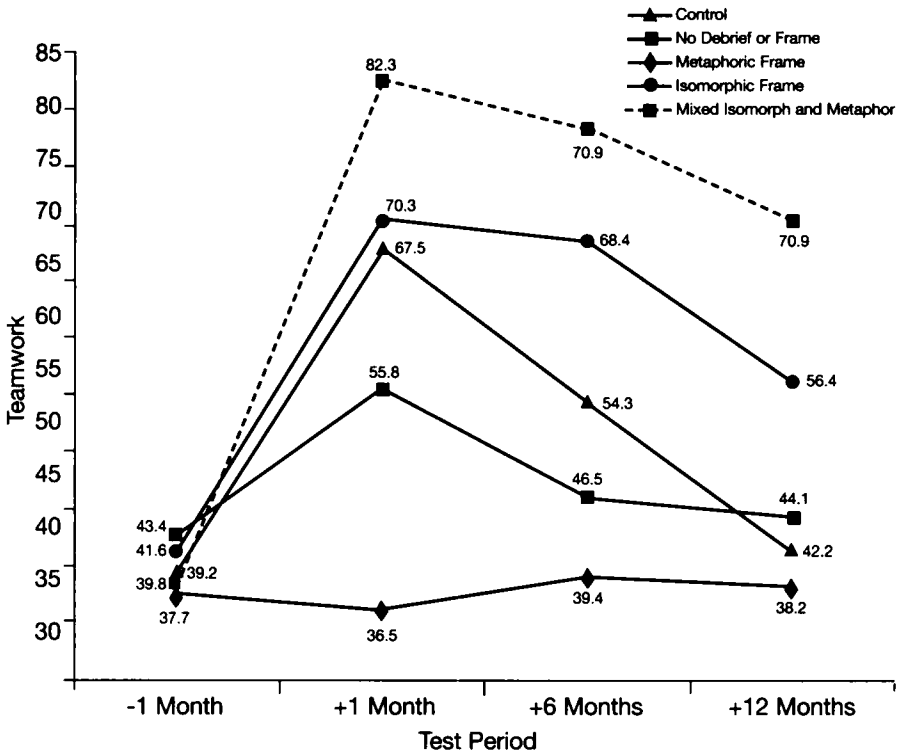


Figure 1. Changes in mean index scores for the (TDI-m) over one-year study period.

Note. CAT programming was able to increase measures of teamwork from about 40% to as much as 80% (on a 0%-100% scale) depending on the approach used to facilitate the learning experience. The CAT program with no isomorphic framing or metaphoric debrief (Group D) accounted for a rise of about 15% in teamwork. The use of either isomorphic framing (Group B) or metaphoric debriefing (Group C) alone resulted in an additional 15% increase in teamwork, but neither approach *initially* appeared more effective than the other. A mixed approach (Group A) was able to generate a further 10% increase in teamwork.

The group with no either isomorphic framing or metaphoric debriefing (Group D), as well as the group with metaphoric debriefing (Group C), lost their improvements in maintaining teamwork after several months. The groups with isomorphic framing (Group B) or a mix of both approaches (Group A) were able to maintain a significant level of their gains in teamwork, ending a year later with 15% and 30% respectively.

on the approach used to facilitate the learning experience (see Figure 1). The CAT program alone, without any form of debriefing or framing, initially accounted for a rise of about 15% in teamwork. The use of either metaphoric debriefing or isomorphic framing resulted in an additional 15% increase in teamwork, but neither approach appeared to be initially more effective than the other. A mixed approach, utilizing the metaphoric debriefing in the first half of the training program and the isomorphic framing in the second half of the training program, was able to generate an additional 10% increase in teamwork. The group with no debriefing or framing as well as the group with metaphoric debriefing lost their improvements in maintaining teamwork after several months. The groups with isomorphic framing or a mix of both approaches were able to maintain a significant level of their gains in teamwork, ending a year later with 15% and 30% respectively.

The approaches utilizing isomorphic framing in this study positively influenced the maintenance of corporate teamwork for at least one year if not longer. This change likely occurred because isomorphic framing allowed clients to practice new behaviors in training experiences that utilized structures parallel to those they experience in work. Because isomorphic frames were created to parallel the work environment, learning generated from the training experience was transferred back in more effective manner regarding the maintenance of learning. Evidence of the difference between these forms of facilitation was not immediately evident following the training but significantly greater both six and 12 months following the training experience.

The mixed metaphoric debriefing/isomorphic framing approach proved to be the most effective training methodology for developing and maintaining teamwork in the CAT program. It is likely this occurred because the metaphoric debriefing process provided better client assessment for the creation of stronger isomorphic connections for co-created framing. The mixed approach induced clients to be the primary authors of their own metaphoric interpretations on the second day of the program before the co-creation of isomorphs on the third day. It is quite possible this joint process enriched client understanding before they became engaged in the isomorphic framing process, as well as the eventual application of learning to their jobs in banking. What is interesting to note is this joint process seems to be promoted both in "established" models to metaphor development in adventure programming (Gass, 1997; Hirsch & Gillis, 2004), as well as the theoretical writings of several critics of this process (Hovelynck, 1998, 2003; Mack, 1996; Pinkard, 1996).

As a result of the study's findings, practitioners are encouraged to utilize metaphoric themes in client debriefings as a valuable means to co-construct elements for isomorphic framing. Such a process can create sig-

nificant advantages in both developing and maintaining positive client change. Future research should concentrate on replicating this study with other populations and in examining the use of mixed approaches on constructs other than teamwork, especially combining these concepts with the productive benefits of solution-focused facilitation theory and practices (Gass & Gillis, 1995; Priest & Gass, 1997). Future studies also need to consider the effectiveness of other metaphoric approaches on client change (e.g., Itin, 1995; Luckner & Nadler, 1997; Schoel & Maizell, 2002).

As with all research, one study does not indicate widespread validation of a particular program or concept. In combination with other research, however, the findings of this study do begin to approach a certain level of generalizable concepts, universal understandings, and evidenced-based practices around two major concepts:

(1) CAT programs can have a positive and lasting effect on the development and maintenance of teamwork. When conducted effectively (e.g., using the metaphoric facilitation concepts advanced in this research article), this study and others quantitatively (Bronson, Gibson, Kichar, & Priest, 1992; Priest, 1996, 1998; Priest & Lesperance, 1994; Smith & Priest, 2004) as well as qualitatively (Klint & Priest, 2004) advance the validation that CAT programs are effective in developing key areas of corporate development (e.g., teamwork). Other studies also link such developments in CAT programs to increases in corporate profits (Bramwell, Forrester, Houle, LaRocque, Villeneuve, & Priest, 1997; Litterini, 2001); and

(2) There is growing evidence that metaphoric facilitation can be a valid and important methodology with differing populations and cultures when appropriately implemented. As demonstrated by this study with European banking executives, metaphoric facilitation processes have demonstrated the ability to create significant differences in positive changes with clients groups when appropriately utilized. This type of significant change with metaphoric facilitation has been found to occur in the American (Doherty, 1995), Australian (Boyle, 2000; 2002), and European cultures represented in this study. Similar levels of significant changes from metaphoric facilitation have also occurred with a variety of groups. Examples of these various groups include: university resident assistants (Doherty, 1995), adolescent males (Boyle, 2000), national women's sport teams (Boyle, 2002), and substance abusers (Gass & Gillis, 1995) as well as the banking executives in this study. Future studies should seek to examine these concepts in other cultures and populations to explore the potential adaptations necessary to produce similar significant effects.

It is also important to note that this study only validates client-centered metaphoric facilitation approaches and not the metaphoric approaches espoused by other authors (Bocher, Miller, & Simpson, 2005).

When using metaphoric facilitation, particularly with isomorphic framing, facilitators are reminded of the critical emphasis on appropriate client/facilitator co-construction. Treatment fidelity (i.e., following the uniform guidelines of client-centered metaphoric approaches) is a critical factor in replicating the successes found in this study. Two other studies (Gillis, 1986; MacRea, Moore, Savage, Soehner, & Priest, 1993) have found instances when metaphoric facilitation failed to produce significant changes. In both of these studies, researchers attributed this failure to possible weaknesses of metaphors and isomorphic construction, as well as a lack of appropriate assessment for the particular groups studied. Practitioners seeking the successful implementation of metaphoric facilitation are encouraged to heed the findings of these studies to inform themselves of effective co-constructive practices (Hirsch & Gillis, 2004; Priest & Gass, 2005).

As with all studies, certain cautions need to be taken in generalizing results. One is that until future replications of this study are conducted, the generalization of the results of this study need to be applied cautiously. As future replications occur, greater certainty in application and generalization to other settings will be able to be utilized.

Footnote

¹Failure to use facilitation strategies focused on developing positive change with clients was considered unethical by the researchers. Because of this, following the completion of the study, Groups D and Z were invited back to work with the facilitators and provided with a complimentary program (complete with appropriate facilitation techniques) during the following year.

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