EFFECTIVENESS OF METAPHORIC FACILITATION TECHNIQUES IN A CHALLENGE COURSE PROGRAM ON THE EMPOWERMENT OF WOMEN PARTICIPANTS

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Abstract.—Research has shown support for the efficacy of differing processing techniques, particularly isomorphic framing. Feminist practitioners contend this methodology disempowers participants. Proponents argue this could result only from improper implementation. This experiment employed a facilitation technique (control, derived, isomorphic) between-subjects design with time (pretest, acquisition, retention) as a repeated factor and utilized both quantitative and qualitative measures to further our understanding of the "process" of facilitation and transfer of learning in a women's challenge course program. It was hypothesized that all 47 women would benefit from participation but to varying degrees depending upon treatment group. Quantitative measures of locus of control, self-efficacy, and self-esteem served as indicators of empowerment. The absence of significant quantitative findings is attributed to insufficient sample size. A manipulation check verified participants' understanding of metaphoric manipulations and provided qualitative data. This study provides tentative support for the appropriate use of both derived and isomorphic metaphoric techniques.

1.0 INTRODUCTION

Outdoor and adventure education literature abounds with theory related to the use of metaphoric facilitation techniques (Luckner & Nadler 1997, Priest & Gass 1997). Research has shown support for the efficacy of isomorphic metaphoric framing (Doherty 1993, Miner 1993). Some feminist practitioners contend that this methodology is inappropriate for use with women's groups (Mack 1996, Mitten 1994). Mack (1996), in presenting an anecdotal account of her work with women's groups, argues that isomorphic framing serves to perpetuate patriarchal stereotypes, which ultimately disempowers the participants due to the prescriptive nature of the technique and the establishment of the facilitator as an "expert" with the answers to participants' issues. Instead, she advocates for a derived metaphoric approach by which participants are trained in creating their own metaphoric connections between the adventure experience and their personal issues (Luckner & Nadler 1997, Mack 1996). Conversely, Stopha (1994) and Hart and Silka (1994) present anecdotal accounts of their work with women's groups on challenge courses and extol the efficacy of isomorphic framing in empowering these groups. In response to Mack's (1996) article, Gass (Priest & Gass 1997) purports that only in the case of improper implementation on the part of the facilitator could isomorphic metaphoric framing result in disempowerment of participants, irrespective of gender. There remains an unresolved question regarding the appropriateness of the utilization of isomorphic framing techniques with women. This study empirically tested the efficacy of isomorphic and derived metaphoric facilitation techniques on empowering women within the context of an 8-hour developmental challenge course program.

2.0 METHODOLOGY

This experiment employed a facilitation style (control, isomorphic, derived) between-subjects design with time (pretest, acquisition, retention) as a repeated factor (Campbell & Stanley 1963). Sixty-two women from Central New York State volunteered to participate in one of three scheduled women's retreat programs, of which the challenge course experience was the major component. Despite recruitment efforts within the general community, most of these women were not representative of the general population in this area of New York State. Most were affiliated with area universities and demonstrated higher levels of education, employment, and socio-economic status. The mean age of the participants was 38 years, though ages ranged from 18 to 62 years. These women were randomly assigned

to one of two groups for each of the three intervention levels. Due to attrition, only forty-seven women completed the follow-up measures and are included in the following quantitative analyses. Two female facilitators were counterbalanced across intervention levels such that each led one group for each intervention method. The facilitators followed scripts prepared in advance by the researcher and presented the challenge course elements to the groups in identical order in an effort to hold programmatic issues constant between groups and program dates.

2.1 Interventions

Facilitators followed a traditional funnel debrief (What? So What? Now What?) in processing the challenge course elements with the women in the control groups (Priest 1996). They were instructed to avoid making any metaphoric references themselves and if the women spontaneously created their own metaphors to not encourage the use of the metaphor nor reference the use of the metaphor in their dialogue with the participant. Women in the derived groups received some initial training in the use and creation of metaphors at the beginning of the challenge course program (Luckner & Nadler 1997). Facilitators encouraged these women to develop and express their experiences in terms of their derived metaphors throughout the program. Scripts for the framing and discussion of challenge course elements for the isomorphic metaphoric framing groups were created by the researcher based on the personal goals that each of the women participating in the programs had provided prior to the first retreat session and in accordance with Bacon's (1983) criteria for effectiveness. Their personal goals were thematically analyzed. The researcher sought to develop isomorphic metaphors that were general enough to be identifiable to women with differing personal goals yet specific enough to be meaningful and relevant to the process of empowering them to achieve their personal goals. Facilitators encouraged the women to discuss their experiences in terms of the prescribed metaphoric frames.

2.3 Quantitative Measures

The dependent variable for this study was empowerment, a broad and general concept. Three measurable constructs for which reliable and valid instrumentation was available were selected as indicators of empowerment. These constructs were selected on the basis of their prevalence in previous research with women and/or adventure programming: self-esteem, self-efficacy, and locus of control (Brody et al. 1988, Hans 2000, Israel 1989, Pfirman 1988). Participants completed the following Likert-type scale items: Rosenberg (1979) Self-Esteem Scale (SES); Generalized Self-Efficacy Scale (GSS) (Sherer et al. 1982); and a modified version (Presson et al. 1997) of The Levenson (1973) Locus of Control Scales consisting of three eight-item scales [Chance (LOC-C), Internal (LOC-I), and Powerful Others (LOC-P)] approximately one month prior to participation in the program (pretest), at the conclusion of participation in the program (acquisition), and approximately one month following the program (retention). Cronbach alphas of (0.77) and (0.88) are reported by Rosenberg (1979) in two separate studies for the ten-item SES. Sherer et al. (1982) report a Cronbach alpha of (0.86) for their 17-item GSS scale. Levenson (1981) states Kuder-Richardson reliabilities were 0.78 for the LOC-C scale, 0.64 for the LOC-I scale, and 0.77 for the LOC-P scale. While specific hypotheses will be addressed with the accompanying results, it was generally expected that all women would be empowered from participation in the challenge course program but to varying degrees, depending upon intervention method, and that these results would be maintained a month following the program. It was expected that women in the derived group would be the most empowered, followed by the isomorphic group, and lastly the control group.

2.4 Qualitative Measures

A Manipulation Check was developed to verify participants' understanding of the metaphoric manipulations and to provide qualitative data to further a subjective understanding of the women's experiences. The women completed the manipulation check immediately following each challenge course element, making it effectively another processing technique. However, completion procedures were held constant across all participants in all groups. The women were told that their feedback on the challenge course program would be valuable to improving future programs for women. They were also encouraged to use the booklet as a reflection tool that would be returned to them at

the follow-up meeting, enabling them to later reflect on their thoughts and experiences during the program. Psychologists routinely incorporate manipulation checks into their research when investigating cognitive processes. The manipulation check developed for this study is an effort toward strengthening research in outdoor education in terms of understanding participants, perceptions and thought processes related to the facilitation techniques routinely employed in adventure programming. Arguing the efficacy of differing processing methodologies is meaningless if there is uncertainty as to whether or not participants comprehend the subtleties of these techniques. The women also completed a program evaluation at the completion of their participation, which yielded additional qualitative data for analysis. The manipulation check responses were transcribed by the researcher for later analysis and the booklets were returned to the participants.

3.0 FINDINGS

Quantitative data were analyzed using SPSS version 11.5 ANOVAs for repeated measures. The alpha level for this study was .05. Post hoc analyses for the one significant finding (LOC-C) was conducted with the Fisher's LSD. Qualitative data from both the manipulation check and the program evaluation were analyzed through constant comparison to draw out specific themes related to the women's perceptions of their experiences and enumerated for comparison.

3.1 Quantitative

Descriptive statistics for the SES and the GSS are presented in Table 1 and for the Chance LOC-C, LOC-I, and LOC-P in Table 2. Results are broken down by intervention level and time of testing. It can be seen in these tables that more women from the derived group completed retention measures. Attrition rates were higher for the isomorphic and control groups, seven and five respectively, compared to one for the derived group, though this produced no statistically significant differences between these women as compared to those who did not complete retention measures.

Specific hypotheses are presented here with the corresponding findings. In addition to predictions for mean changes at acquisition, it was anticipated that these changes would be maintained at retention. In reviewing the findings, retention measures more closely approximated the hypothesized acquisition changes for most of the measures. Repeated Measure ANOVAs for all quantitative measures and corresponding mean changes are presented in Table 3. The Pretest-Retention column represents the accumulated mean changes that occurred from pretest to acquisition and from acquisition to retention as these mean changes are cumulative. The only significant finding was for the LOC-C Scale. However, trends in mean changes were frequently consistent with the stated hypotheses.

Table 1.—Descriptive Statistics for Rosenberg Self-Esteem Scale (SES) and General Self-Efficacy Scale (GSS)

SES		N	M	SD
Control	Pretest	14	5.62	0.83
	Acquisition	14	5.73	0.88
	Retention	14	5.93	0.80
Isomorphic	Pretest	14	5.93	0.65
	Acquisition	14	6.14	0.48
	Retention	14	6.28	0.55
Derived	Pretest	19	5.91	0.61
	Acquisition	19	5.70	0.58
	Retention	19	6.04	0.65
GSS		N	M	SD
Control	Pretest	14	5.33	0.92
	Acquisition	14	5.41	0.98
	Retention	14	5.58	0.83
Isomorphic	Pretest	14	5.30	0.77
	Acquisition	14	5.23	0.47
	Retention	14	5.56	0.46
Derived	Pretest	19	5.28	0.78
	Acquisition	19	5.28	0.64
	Retention	19	5.54	0.58

SES: It was hypothesized that all women's scores would increase, with the greatest increase occurring for the derived group and the least increase for the control group. The control and isomorphic groups demonstrated the predicted incremental increases in SES at acquisition and continued to increase through retention. Despite a rebound at follow-up, the derived group scores did not recover from the unanticipated decrease at acquisition.

Table 2.—Descriptive Statistics for Levenson Locus of Control Scales: Chance (LOC-C), Internal (LOC-I), Powerful Others (LOC-P)

LOC-C		N	M	SD
Control	Pretest	14	2.02	0.59
	Acquisition	14	2.36	0.98
	Retention	14	2.44	0.96
Isomorphic	Pretest	14	2.34	0.61
	Acquisition	14	2.12	0.50
	Retention	14	2.43	0.71
Derived	Pretest	19	2.32	0.60
	Acquisition	19	2.12	0.50
	Retention	19	2.43	0.71
LOC-I		N	M	SD
Control	Pretest	14	4.71	0.88
	Acquisition	14	4.92	0.91
	Retention	14	5.05	0.65
Isomorphic	Pretest	14	4.49	0.61
	Acquisition	14	4.64	0.65
	Retention	14	4.70	0.60
Derived	Pretest	19	4.88	0.67
	Acquisition	19	4.78	0.56
	Retention	19	5.05	0.65
LOC-P		N	M	SD
Control	Pretest	14	2.32	0.72
	Acquisition	14	2.47	0.73
	Retention	14	2.20	0.69
Isomorphic	Pretest	14	2.25	0.64
	Acquisition	14	2.42	1.01
	Retention	14	2.54	0.60
Derived	Pretest	19	2.58	0.84
	Acquisition	19	2.41	0.81
	Retention	19	2.36	0.76

GSS: It was hypothesized that all women's scores would increase, with the greatest increase occurring for the derived group and the least increase for the control group. Negligible changes occurred at acquisition for all groups with an unanticipated decrease for the isomorphic group. Ultimately, while all groups demonstrated increases on this measure overall, these mean changes were virtually identical for all of the intervention groups.

LOC-C: It was hypothesized that all women's scores would decrease, with the greatest decrease occurring for the derived group and the least decrease for the control group. This was the only significant finding of the study but as seen in Table 2, it can be attributed to the low pretest score for the control group, despite random assignment to the intervention groups. The Fisher LSD bore this out in the post hoc analysis, revealing significant differences between the pretest-acquisition change for the control group and both the derived and isomorphic groups, T(31) 3.51 and T(26) 3.40 respectively. The anticipated decreases for the isomorphic and derived groups did not hold and actually rose at retention, resulting in increases on this measure. The control groups "rebound" at acquisition resulted in an elevated overall change on this measure.

LOC-I: It was hypothesized that all women's scores would increase, with the greatest increase occurring for the derived group and the least increase for the control group. There was an unanticipated decrease from pretest-acquisition for the derived group that rebounded from acquisition-retention. While overall, all groups demonstrated a mean increase on this measure, the results are inverted from predictions in that the control group demonstrated the greatest increase and the derived group the least.

LOC-P: It was hypothesized that the women's scores would increase for the isomorphic group and decrease for the derived and control groups, with the greatest decrease occurring for the derived group. There was an unanticipated mean increase for the control group that was smaller than that of the isomorphic group. However, this increase continued only for the isomorphic group from acquisition to retention. Overall mean changes are consistent with the original hypotheses for acquisition testing in that the isomorphic group was the only group to increase on this measure.

3.2 Qualitative

Table 4 demonstrates the result of enumeration of the thematically analyzed responses of the women on the manipulation check and program evaluation. Where similar themes emerged, the results have been combined and are indicated by (MP). The isomorphic and derived

Table 3.—Facilitation Style by Time Repeated Factor ANOVA and Mean Changes for Quantitative Measures

SES	F (2,44) = 0.68, p < 0.51		
	Pretest - Acquisition	Acquisition - Retention	Pretest - Retention
Control	0.11	0.20	0.31
Isomorphic	0.21	0.14	0.35
Derived	-0.21	0.34	0.13
GSS	F (2,44) = 0.01, p < 1.00		
	Pretest - Acquisition	Acquisition - Retention	Pretest - Retention
Control	0.08	0.17	0.25
Isomorphic	-0.07	0.33	0.26
Derived	0.00	0.26	0.26
LOC-C	F (2,44) = 3.67, p < 0.03*		
	Pretest - Acquisition	Acquisition - Retention	Pretest - Retention
Control	0.34	0.08	0.42
Isomorphic	-0.22	0.31	0.09
Derived	-0.20	0.31	0.11
LOC – I	F (2,44) = 0.39, p < 0.68		
	Pretest - Acquisition	Acquisition - Retention	Pretest - Retention
Control	0.21	0.13	0.34
Isomorphic	0.15	0.06	0.21
Derived	-0.10	0.27	0.17
LOC-P	F (2,44) = 2.72, p < 0.08		
	Pretest - Acquisition	Acquisition - Retention	Pretest - Retention
Control	0.15	-0.27	-0.12
Isomorphic	0.17	0.12	0.29
Derived	-0.17	-0.05	-0.22

groups made virtually the same number of references to metaphors; substantially more than the control group. Interestingly, some women in the control group did generate spontaneous metaphors. The isomorphic group made the greatest number of references to the program's relevance to their personal goals for their own lives. This was followed by the derived group, which also demonstrated more references to their personal goals than the control group. The isomorphic group made more references to considering the processing of the elements as being effective while these results were almost identical for the control and derived groups. Only in the control group did any of the women state that they believed processing of an element was ineffective. No one in the control group made reference to empowerment or feelings of validation as a result of their participation in the program. While the derived group made more references to empowerment, references to validation were equal for the isomorphic and derived groups.

4.0 DISCUSSION

The lack of statistically significant findings is attributed to a lack of statistical power due to an insufficient sample size (Cohen 1988, Hattie et al. 1997). Given the number of dependent measures in this study and the anticipated effect sizes from participation in a one-day challenge course program, double the number of participants would have been required to achieve statistically significant results (Gall et al. 1996). It could be argued that the acquisition-retention findings paralleled hypothesized effects of participation in the challenge course program due to the commonly accepted

Table 4.—Frequency of Responses by Theme for Qualitative Data: Manipulation Check (M) and Program Evaluation (P)

Reference to Metaphors (MP)			Relevance to Life/Personal Goals (MP)		
	N	%		N	%
Control	14	8%	Control	37	14%
Isomorphic	82	46%	Isomorphic	128	49%
Derived	83	46%	Derived	95	37%
Reference to Group/Social Interactions (MP)			**Reference to Debrief (M)**		
	N	%		N	%
Control	113	28%	Control	28	27%
Isomorphic	127	31%	Isomorphic	40	39%
Derived	170	41%	Derived	35	34%
Processing Considered Effective (P)			**Processing Considered Ineffective (P)**		
	N	%		N	%
Control	8	26%	Control	4	100%
Isomorphic	14	45%	Isomorphic	0	
Derived	9	29%	Derived	0	
Reference to Empowerment (P)			**Reference to Validation (P)**		
	N	%		N	%
Control	0		Control	0	
Isomorphic	3	38%	Isomorphic	2	50%
Derived	5	62%	Derived	2	50%

belief that participants' learning continues beyond actual participation in adventure programming because time is needed to reflect and assimilate learning into their daily lives. It is more plausible in the present case, that fatigue negatively impacted the pretest-acquisition results. Acquisition measures were generally completed late in the evening. Virtually all of the women expressed fatigue and were visibly exhausted.

Though no significant differences between the intervention groups were found, the accumulated increases in self-esteem, self-efficacy, and internal locus of control are consistent with demonstrated outcomes of adventure programming in previous research (Hans, 2000; Hattie et al., 1997). While the quantitative findings produced no evidence of the merit of either metaphoric technique over the control group, differences were found in the qualitative results. Qualitative data demonstrated that both the isomorphic and derived groups saw more relevance in the challenge course program to their personal goals, and made some references to feeling empowered and validated by the experience. The derived group made the greatest number of references to group/social interactions during the challenge course program and demonstrated almost no attrition from the study.

Perhaps of greatest interest was the near significant finding for the LOC-P scale, which was consistent with pretest-acquisition hypotheses for both the acquisition-retention and accumulated pretest-retention results. Despite enduring increases on this measure, which is consistent with Mack's (1996) portrayal of isomorphic framing as establishing facilitators as powerful others with the answers to participants' issues, women in the isomorphic group demonstrated feelings of empowerment in their qualitative responses. This raises an interesting question: Is it possible that patriarchal values and practices such as seeking expert advice rather than relying on more feminine practices such as relying on one's intuition, self-knowledge, and inner strength are so ingrained in women's self-concept that they do not perceive that they may very well be disempowered?

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