

Cognitive Complexity: A Profile of Pre-Service Recreation Managers

康樂管理人員於受訓中的認知複雜性剖析

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Introduction

The quest to identify factors responsible for efficient and effective organisation behaviour has led to the growth of a body of literature known as leadership research, and a recurring theme of interest include that of leadership attributes. This study aims to make a contribution to this area of work by providing a profile on the cognitive disposition of “cognitive complexity” of a group of pre-service recreation managers.

Gardner (1986) made the distinction between “leader managers” and “routine managers” by asserting that the former possess qualities which allow them to exhibit what Bass (1985) calls “Transformational Leadership”. For some years, leadership research has been trying to produce explanatory accounts for efficient and effective leadership behaviours and it appears that a more recent theory of its kind is the transformational leadership theory proposed by Bass (1985). Hater and Bass (1988) suggested that transformational leaders should exhibit superior performance ability in making judgement, decisions, and analysis. Kotter (1990) further added that the ability to “gather a broad range of data and look for patterns, relationships, and linkages that help explain things” (p.104) is one important but basic element for becoming an exceptional leader. Given that these are the behavioural outcomes of “manager leaders”, a question of interest would be to identify the cognitive dispositions responsible for these overt behaviours.

Cognitive complexity, a cognitive disposition, has been defined as a person’s “capacity to construe social behaviour in a multidimensional way” (Bieri, Atkins, Briar, Leaman, Miller, & Tripodi, 1975, p.185). This suggests that level of cognitive complexity may have a bearing on a person’s ability to process multidimensional information such that a cognitively more complex person may have a more differentiated perception of a person, object, or situation than a cognitively less complex person. Within these premises, it could be argued that level of cognitive complexity,

acting as a mediator in the input-output process of cognitive functions, may also influence an individual’s cognitive outcomes. In fact, this contention finds support in previous studies such as those by Tripodi and Bieri (1964), Hale (1980) and Kishor (1990) which had identified a positive relationship between level of cognitive complexity and superior cognitive outcomes. In a more recent study, Spengler and Strohmmer (1994) compared high and low scorers of a cognitive complexity test and found that individuals with lower cognitive complexity scores were more likely to form biased judgements. Given the influence of cognitive complexity in making judgements and appraisals and the administrative challenges faced by today’s recreation managers, the need to preview the status of this cognitive disposition among future recreation leaders is tempting. For a practical and application viewpoint, information from this study might provide some insight into impending programme needs and directions for future foci.

Method

Participants

A total of 60 second and third year students undertaking a three-year Baccalaureate degree in Sports and Recreation Management volunteered for this study. The age range of these students was 21 to 24 with the mean age being 22.4. As sex was not considered an influential variable (see Schneier, 1979), this information was not requested.

Instrument

In assessing cognitive complexity, the 10-by-10 REP grid adapted from Bieri et al. (1975) and used by Kishor (1990) was employed. The validity and reliability of this instrument were well accepted and reported elsewhere (see Schneier, 1979). The grid listed 10 roles horizontally on the top with 10 bipolar constructs, scored on a 6-point scale, presented on the right as shown in Figure 1.

In completing the task, the participants were instructed to imagine a particular individual for each of the role and then assign the appropriate score to each person for each construct. Degree of cognitive complexity was measured by comparing each score in a row with the score directly below it for the same person. In comparing any two construct rows, a score of 1 was given for every exact agreement of ratings on any one person. This matching procedure was carried out for all possible comparisons and the scores for each comparison were added to give a total score.

As there are 45 possible comparisons, the maximum score is 450. For interpretation, a person who scores less than 450 would be considered as cognitively more complex than a person with a score of 450 (a score of 450 would indicate that the participant gave the same score on all constructs to all roles).

Results and Discussions

The means and standard deviations of scores from the 10-by-10 grid test is presented in Table 1.

Table 1. Descriptive Statistics of Cognitive Complexity Scores.

	Percentage of sample (n=60)
Score 225-450	23% (n=14)
Score 224-112	67% (n=40)
Score < 112	10% (n=6)
Mean Score =	182.15
SD =	60.05
Range =	91-365

It would appear that 77% of the respondents scored below the mid-point score (225.5). If a high score suggests a lower level of cognitive complexity, then it would appear that most of the pre-service recreation managers in this study had a high degree of cognitive complexity with 10% of them exhibiting an extremely high level. When the academic results (grade point average) of these persons were examined, it also appeared that they had relatively higher grade scores than their classmates. In fact, when cognitive complexity scores were correlated with academic results, a significant correlation coefficient was obtained ($r = -.42, p < .05$). It might be that cognitive complexity, namely the ability to make differentiated perceptions, is important for scholarly tasks. Evidence from decision making and judgement accuracy research such as those by Spengler and Strohmmer (1994) and Kishor (1990), concurred that persons with a high level of cognitive complexity perform better than those with a lower level of cognitive complexity, and as these skills are necessary for outstanding scholarly performance, it is speculated that they might be partly responsible for the higher academic results obtained by the high scoring individuals in this study. An interesting follow-up study would be to track these high performers over

two to three years to evaluate their performance in the real-world situation and re-assess the degree to which cognitive complexity aids them in solving real-world problems.

To conclude, this study represents only a beginning effort to study the role of cognitive complexity as a leadership disposition and its potential use for vocational selection and performance prediction await to be unfold.

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Figure 1. Scoring System.

