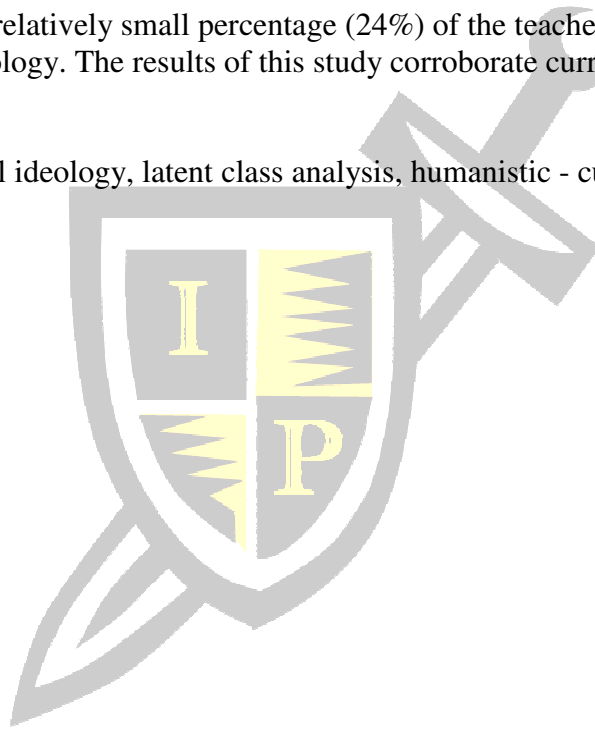# A study of pupil control ideology: a person-oriented approach to data analysis

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ABSTRACT

Responses of urban school teachers to the Pupil Control Ideology questionnaire were studied using Latent Class Analysis. The results of the analysis suggest that the best fitting model to the data is a two-cluster solution. In particular, the pupil control ideology of the sample delineates into two clusters of teachers, those with humanistic and those custodial control ideology. Cluster one teachers are humanistic in orientation and consisted of a large majority, 76% of the teachers. A relatively small percentage (24%) of the teachers in cluster two are custodial in control ideology. The results of this study corroborate current conceptualizations of pupil control ideology.

Keywords: Pupil control ideology, latent class analysis, humanistic - custodial ideology.

INTRODUCTION

Teachers' ideology, belief or value system exerts great influence on their professional practices (Richardson, 1996). In particular, teachers' pupil control ideology (PCI) provides them with: (1) a means for cognitively organizing, comprehending, and evaluating their every day world, i.e. the classroom (Gutek, 2004); and (2) a set of ontological assumptions about pupils with whom they interact everyday (Barley & Kunda, 1992). In turn, PCI informs and guides their understandings about appropriate and desirable instructional practices, teacher-student interactions and classroom dynamics (Willard, 1972). Thus, PCI constitutes a critical intermediary between the teacher and the strategies they adopt to maintain an orderly classroom environment (Wiseman & Hunt, 2008).

PCI studies began in the sixties under the leadership of Professor Donald J. Willower and his colleagues at Pennsylvania State University. They recognized the saliency of pupil control in their initial studies of Junior High Schools. Hoy (2001) summarizes the historical and theoretical underpinnings of PCI investigations. He indicates that pupil control is usually a problem in service organizations like schools, hospitals and prisons, which require mandatory participation from clients who did not volunteer to join the organization. Subsequent PCI studies have investigated and confirmed the psychometric properties of the instrument and elaborated on the original theoretical underpinnings of the PCI scale (Hoy, 2001). However, the numerous studies of PCI have principally been factor analytic investigations focused on identifying or confirming the factor structure that accounts for the interrelationships among the scale items. PCI studies conducted thus far employ a variable-oriented approach to data analysis. i.e. they express hypotheses and research questions in terms of variables (von Eye, Bogat, & Rhodes, 2006). Some examples from Hoy's review of PCI studies are: The relationship between bureaucratic structure of an institution and pupil control ideology; why teachers are more custodial than principals are; and the pupil control ideology of teachers in selected schools (Barfield & Burlingame, 1974). In contrast, virtually no empirical studies of PCI employ 'person-oriented approaches' (Bergman, Magnusson & El-Khouri, 2003) which focus on individuals as opposed to variables and sample means. Variable-oriented analysis of PCI scores usually focuses on central tendencies, correlations and standard deviations; such studies thus provide information for identifying the "average person" in a study sample. It does not however capture the heterogeneous orientations that may exist within teachers in a study.

Bergman & Magnusson (1997) argue that a person-oriented approach "involves studying individuals on the basis of their patterns of individual characteristics that are relevant for the problem under consideration" (p. 293). PCI studies featuring person-oriented approaches might investigate research questions such as how many qualitatively distinct classes or groups of teachers can be identified from a population of teachers based on their responses to PCI scale? Thus person-oriented approach to research focuses on individuals or homogeneous clusters or subgroups of individuals. The person-oriented approach to PCI data analysis affords researchers an opportunity to identify distinctive groups of teachers with qualitatively different philosophical or pupil control orientations. (Collins & Lanza, 2010). The present investigation was undertaken to apply latent class analysis (LCA), a person-oriented approach to data analysis to identify and characterize the pupil control ideology of a sample of classroom teachers. It seeks to understand the patterns of PCIs of urban schoolteachers. Specifically, this study seeks to determine whether qualitatively distinct groups or clusters of teachers could be identified based on their responses to PCI questionnaire.

LCA is a method for analyzing the relationship among manifest variables where a number of latent or unobserved categorical variables are used to explain the relationships among the manifest data (McCutcheon, 1987). LCA with categorical variables has two types of parameters, conditional response and class membership probabilities. The later specifies the size or proportion of the population in each class. The conditional response probabilities on the other hand are the probabilities for each latent class that an individual in that class will endorse or choose a given value on an item. (Collins & Lanza, 2010; Hagenaars, & McCutcheon, 2002; Goodman, 2002).

METHOD

Two hundred urban school teachers working in Northern California completed the 20-item Likert-type PCI scale. Each item on the instrument has five response categories ranging from strongly agree to strongly disagree. PCI scale measures the degree to which an individual's pupil control ideology is custodial or humanistic. (Hoy, 2001). The analysis was performed with Latent Gold Version 4.5 (Vermunt & Magidson, 2005). Different models were estimated by stepwise addition of classes, until the model that best fitted the data was obtained.

RESULTS

The Bayesian information criterion (BIC) indicated that a two-class model fitted the data better than a one, three, or four class model. The two-class solution has the lowest BIC, 1285.36 compared to 1312.62, 1299.58, and 1307.82 of one, three and four class solution respectively (See Table 1 in the Appendix). In addition, the analysis identified four questionnaire items that best distinguish between the two clusters. Table 2 (Appendix) presents the results of Latent Class analysis of teachers' responses to PCI scale.

In this solution, cluster one is the most prevalent. As shown in Table 2, seventy six percent of the teachers in this cluster show high probabilities of disagreement with the items measuring custodial control ideology. In contrast to cluster one, cluster two has 24% of the teachers showing low probabilities of disagreeing with the items. Examination of class-specific probabilities presented in Table 2, suggest that cluster one teachers were humanistic in control ideology while cluster 2 teachers were custodial in orientation.

SUMMARY

The person-oriented approach to data analysis employed for this study successfully identified two distinctive groups of urban schoolteachers with humanistic and custodial pupil control ideologies. The large proportion, 76% of the teachers with humanistic control ideology may reflect the liberal orientation of teachers in this area of California. This finding is complementary to the results from many PCI studies. The results of this study corroborate with the current conceptualization of PCI.

Table 1 – BIC Values for Estimated Two Cluster Model of Pupil Control Ideology

Model	BIC (LL)
1-Cluster	1312.26
2-Cluster	1285.36
3-Cluster	1299.58
4-Cluster	1307.82

Table 2 –Latent class and conditional probabilities of disagreement with items that best distinguish between the two clusters

	Cluster one	Cluster two
Latent class probabilities	.760	.240
Questionnaire Items		
1. Too much pupil time is spent on guidance	.635	.153
2. More important for pupils to learn to obey rules	.863	.494
3. Necessary to remind pupils that their status in school differs from that of teachers	.657	.034
4. Severe punishment for destroying school material	.265	.036

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