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An examination of the predictive power of demographic, experiential and philosophical orientation variable clusters in relation to change and stability of pre-service teachers' pupil control ideology.

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An Examination of the Predictive Power of Demographic, Experiential and Philosophical Orientation Variable Clusters in Relation to Change and Stability of Pre-service Teachers' Pupil Control Ideology

by

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Abstract

Pre-service teachers enter teacher preparation programs with beliefs about how students and teachers should interact in the classroom. Willower, Eidell, and Hoy (1967) categorized these beliefs into pupil control ideologies (PCI), which were identified as more or less humanistic or custodial. Many researchers subsequently reported that at the beginning of the pre-service teacher education program, pre-service teachers tended to be more or less humanistic in their PCI. Study 1 (part 1 of this work) supported these findings. Study 1 additionally explored the predictive capacity of three clusters of variables (experience, demographics, beliefs about education/philosophical orientation) in relation to these 'beginning' PCI. Multiple regression analyses indicated that pre-service teachers' beliefs about education/philosophical orientation accounted for a higher degree of variance in pre-service teachers' 'beginning' PCI than the other variable clusters. Study 1 resulted in the identification of an emergent variable cluster, containing individual variables from each of the original clusters, that was most predictive of pre-service teachers' PCI at the beginning of the pre-service program.

For Study 2, pre-service teachers' PCI were measured again at the end of the pre-service program. These scores were used to identify PCI change. PCI tended to shift to a more custodial PCI during the pre-service program. ANOVAs were conducted to explore the interaction effects that might occur during the pre-service program among the key variables identified in Study 1. It was hoped that the interaction of these variables would provide a more nuanced understanding of the shift towards a more custodial PCI. These analyses identified the significant socializing influence on pre-service teachers' PCI of their perception of their advisors and mentor teachers' teaching styles during the pre-service program. This socializing influence appeared to have a stronger impact on pre-

service teachers' PCI than any of the other variables considered in this study. The study identifies the potential for pre-service teacher education programs to better serve the needs of students and teachers alike through the development of pre-service teacher education curriculum units that explore these new understandings. In this manner, pre-service teachers' understandings of their beliefs about education, and the impact of in-school socializing factors on these beliefs about education may precipitate a more authentic practice early in their teaching careers.

Dedication

The invisible keel enables the sailing vessel to
stay upright,
stay on course, and
make headway,
...especially in storms.

Susan is my keel and it is to her that I dedicate this work.
There would have been no landfall
without her enduring love.

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CHAPTER I – INTRODUCTION

Overview of the Study

Willower, Eidell, and Hoy (1967) identified the pupil control ideologies (PCI) of custodialism and humanism. These ideologies influenced teachers' approaches to classroom situations that involved interaction between teachers and students. Teachers may be 'custodial' in nature, offering coercion, ridicule, or holding back of rewards as a means of getting students to behave and perform in a particular manner. On the other hand, teachers may be 'humanistic'. They may believe that the student should be empowered to make learning choices, and trusted to behave in appropriate ways (Blust & Willower, 1979). During the past 35 years or so, teachers' responses to student control have been more or less identifiable with one of these positions, the existence of which has been affirmed by a number of researchers (Hoy & Jalovick, 1979; Jones, 1982; Lunenburg, 1986).

In many schools, educational policy and the bureaucratic context support the idea that good control of students equals good teaching. Beginning teachers are often socialized into such settings. Veteran teachers let younger ones know that keeping social distance between themselves and students is important, and that teachers expect that good principals back disciplinarian teachers. The conventions that control these elements of socialization arise from the "norms, role expectations, and rules" (Hoy & Jalovick, 1979, p. 47) of the school. These norms, role expectations, and rules in turn arise from what Manzer (1994) describes as the "substantive meanings" (p. 7) of policy governing the school district.

The specific focus of the study was an examination of the relationship between three groupings of variables, referred to as variable clusters, and the pupil control ideology (PCI) of pre-service teachers. The three variable clusters are demographic, educational experience, and philosophical orientations. The demographic variable cluster is composed of gender, marital status, parent, parent of male child, parent of female child, age, location of elementary and secondary education as a student, and religion. Included in the educational experience variable cluster are level of preparation (primary/junior, junior/intermediate, and intermediate/senior), undergraduate major (a series of dummy variables indicated whether the participants' undergraduate major was best described as in the area of natural sciences, study of the human body, social sciences, psychological studies, sociological studies, creative arts, humanities, business, or English), highest degree attained, and taking of responsibility with scouts/guides, Sunday school, baby sitting, day/summer camps, cadets, 4H clubs, youth groups/clubs, coaching, life-guarding, music lessons, and tutoring. The third variable cluster, philosophical orientations, includes romanticist, progressivist, and traditionalist philosophical orientations. During data analyses, for the purposes of greater clarity the educational experience cluster was sub-divided into the two clusters of academic experience and informal teaching experience. Also, for the purposes of data analysis, the undergraduate major variable was restructured into people-oriented and text-oriented categories. A more detailed explanation concerning this restructuring is provided in Chapter 2.

In particular, the focus was on examining which of the three variable clusters is the best predictor of humanistic PCI for pre-service teachers at the beginning of a teacher education program. It was anticipated that a newer inclusive variable cluster, one that

incorporates variables from the current variable clusters would arise from this research. The role the variable clusters play during the pre-service program in impacting the pre-service teachers' PCI was also examined. The pre-service program experiences of pre-service teachers are characterized in relation to their perceptions of whether they have been exposed primarily to a teacher-centred, a collaborative, or a student-centred classroom management style, and how they perceive their practicum classrooms in relation to SES, ESL and behaviour issues.

Data were collected from approximately 725 pre-service teachers in the consecutive B. Ed. program at a mid-sized Ontario university, through the use of a demographic questionnaire, Educational Beliefs Questionnaire (EBQ), and PCI Form questionnaire. Data were gathered at the beginning of the pre-service program and at completion of the legislated requirement for "observation and practice teaching" (Milne & Mackinnon, 2002, p. 1071), as established in the Ontario College of Teachers Act, 1999 Regulations. The required "minimum of 40 days of practical experience" (p. 1071) was achieved through three practice teaching blocks totalling nine weeks. These data were analysed using appropriate statistical analyses such as multiple regression analyses and ANOVAs.

Statement of the Problem

The problems addressed by this study stem from the lack of knowledge of the potential correlations between pre-service teachers' PCI and the philosophical orientation variables. Such knowledge would be useful to pre-service teachers, but also to university personnel and associate teachers in schools. In the absence of such knowledge, the impact

on pre-service teachers, school students, and educational goals of the tendency for pre-service teachers to be socialized towards a more custodial PCI cannot be accurately understood or evaluated. The main problem is divided into four specific sub-problems.

First, Lunenburg (1986) concluded as a result of data showing changes in pre-service teachers' PCI scores and the relative stability of associate teachers' scores, that the PCI may be 'set' relatively early on in the teaching career. However, pre-service teachers may not know either their own PCI, or know how their beliefs about education or other personal factors influence their PCI. Further, they may not have sufficient knowledge concerning the socialization trends and change patterns that exist in relation to pupil control ideologies of pre-service teachers.

Second, without such understanding, teachers, researchers, and policymakers may perpetuate a school system with a "patent emphasis on bureaucratic procedures and control" (Hoy & Rees, 1977, p. 25). Pre-service teachers may be simply subjected to such a system, without a means of self-reflection or authentic response. According to many educational theorists and researchers, the constant pressure to move to a custodial (Moretz, 1997), mimetic (Kickbusch, 1996), and bureaucratic (Hoy & Rees, 1977) approach to education may not be in the best interests of students or pre-service teachers (Bodine, Olivarez, & Ponticelli, 2000; Lunenburg, 1990).

Third, and closely related to the second problem, if not addressed, the pressure to conform can have a significant impact on both pre-service teachers' PCI and on the well-being of teachers. Blust and Willower (1979) identified the tendency within institutionalized education for principals and teachers alike to display a custodial PCI that aligns with school norms in places where they can be seen by those in formal and

informal supervisory roles. While such displays may not reflect teachers' authentic PCI, they do shape the experiences of pre-service teachers who are in their classrooms during the practicum (Whitney, Golez, Nagel, & Nieto, 2002). Thus, not only are beginning teachers influenced towards custodialism but, as reported by a number of researchers, the teachers themselves experience negative outcomes, such as stress and job loss, that result from such inauthentic approaches to pupil control (Bauch & Goldring, 1998; Dewitt, 1999; Wiley, 2000).

Finally, to date there are very little empirical data available concerning the predictive power of each of the variable clusters in relation to the stability of pre-service teachers' PCI. Without a deeper understanding of how PCI relates to predictive variable clusters, socialization into schools may continue to be considered a legitimate forum for manipulating pre-service teachers' PCI towards the norms of custodialism.

Purpose of the Study

A number of researchers, including Hoy (2001), Hoy and Woolfolk (1990), Jones and Harty (1982), and Lunenburg (1986) have demonstrated that pre-service and beginning teachers tend to have more humanistic PCIs than more experienced teachers. The purpose of this study is to gain new understanding into how pre-service teachers' PCI evolves during the pre-service program and particularly to identify variables associated with the preservation of humanistic PCI by pre-service teachers. In order to fulfil these general purposes, the study will specifically examine the power of the three variable clusters to predict which pre-service teachers are most likely to maintain lower PCI scores. It will also seek to identify variables within the three variable clusters that

predict stability and change, and the degree and direction of change in pre-service teachers' PCI Form scores during their pre-service program.

Dewey (1918) believed that the business of philosophy was to provide the framework within which assumptions about educational approaches could be articulated. An important purpose of the study is to examine whether philosophical orientations provide the most predictive framework in relation to the custodial and humanistic pupil control ideologies of pre-service teachers.

The research questions are formally stated at the end of the review of literature. The first question directs the study toward a determination of which of the three variable clusters (demographic, educational experience, philosophical orientations) best predicts the pre-service teachers' PCI Form scores at the beginning of the pre-service teacher education program. This question also seeks to identify the variables within the three variable clusters that contribute to the construction of a PCI variable cluster that more accurately predicts stability of PCI scores during the pre-service program. The second question leads to an examination of how the pre-service experience is likely to impact the pupil control ideologies of pre-service teachers. Implicit in this question is whether any of the three variable clusters, and in particular the philosophical orientations cluster, are more predictive of stability in the PCI of pre-service teachers during the socialization of the pre-service program. Hypotheses are stated immediately following the research questions.

Significance of the Study

This study will focus on the PCI of pre-service teachers. While the literature review presents many studies of various relationships between variable clusters, variables, and PCI, this work is not complete. "Concepts and measures of control ideology in schools are no less problematic today than 30 years ago, despite a growing body of research on this topic" (Moretz, 1997, p. 2). There is still a large amount of work to be done.

There are a number of generally significant aspects of this study. These aspects relate to the examination of predictive variable clusters and creation of a richer one in relation to pre-service teachers' PCI. Four specifically significant aspects of the study are addressed below. The study takes place in Ontario at a time when centralization and standardization have been central to educational policy (Bedard & Lawton, 2000). The study contributes to knowledge concerning changes to PCI at a crucial time for pre-service teachers, the pre-service program (Huffman, Holifield & Holifield, 2003). The study adds to knowledge that pertains to PCI in the often minimized field of educational philosophy (Carr, 2001). Finally, the knowledge is based on empirical data in the area of beliefs and philosophical orientations, an area where presumption and rhetoric are prominent (Hoy & Jalovick, 1979).

First, a review of the literature indicates that despite the research already completed concerning PCI, little if any has been conducted in the Ontario geographical and political setting, where in-school socialization has been susceptible to shifting jurisdictional polices (Bedard & Lawton, 2000). This study is based in Ontario at a time when school norms, based on jurisdictional policy (Manzer, 1994) may lean toward a

traditionalist philosophical orientation and a custodial pupil control ideology. An empirical investigation of the change in PCI orientations of pre-service teachers during the pre-service program, and of the predictive value of the various variable clusters in relation to PCI stability will lead to a broader understanding of possible determinants of PCI.

Second, the study is significant in relation to the development of knowledge about teacher education programs that may be useful particularly for pre-service teachers. The pre-service teaching experience is the culmination of the education and training program for the beginning teacher. Its ending usually brings a new beginning, a complete immersion into an educational system often with traditional pedagogical views (Bottery, 1999). Huffman, Holifield and Holifield (2003) report that the pre-service program is the most influential educational experience of pre-service teachers, one in which the strongest influences may be from outside the university. As Hoy and Woolfolk (1990) put it in relation to the shaping of PCI, "practice teaching has both positive and negative consequences on student teachers and ...many of the consequences are subtle and difficult to untangle. Unless ... researcher techniques are used to further our understanding of the dynamics of teacher socialization, progress will remain limited" (p. 296).

It seems that the pre-service program would be a crucial time for beginning teachers to have gained a clear picture of their PCI and factors that may cause it to change. The solution may be in developing knowledge of the demographic, experiential, and philosophical orientations factors that influence their PCI, and the classroom conditions and significant influences that define the pre-service period. Such knowledge

will fill a void in the information available to the academic community, including pre-service teachers, university professors, educational researchers, and policy makers. With such knowledge, pre-service teachers may find ways to accommodate both the socialization patterns, through which school personnel attempt to bring about consensus between newcomers and those systematized into the norms (Hoy & Rees, 1977), and their own beliefs about education. Such knowledge may also lead pre-service teachers to conclude that the influence of beliefs about education may be in conflict with the socialization process.

Third, the study is significant in that it will examine the relationship of pre-service teachers' philosophical orientations to PCI. While several studies have examined pre-service teachers' PCI in relation to specific aspects of belief systems, these aspects appear to be only indirectly related to beliefs about education. For example, Hoy and Jalovick (1979) indicated that openness and closedness of belief systems as measured by Rokeach's (1960) Dogmatism scale was more stable than PCI. Hoy and Woolfolk's (1990) study of beliefs about controlling and autonomous orientations indicated that as pre-service teachers' PCI scores became more custodial, their problem-solving orientations became significantly more controlling. Hoy and Rees (1977) reported that as pre-service teachers' PCI became more custodial during the practicum, their practices also became significantly more bureaucratic.

While such studies have examined various aspects of belief systems, the present study examines the relationship between pre-service teachers' PCI and their philosophical orientations, as identified by their beliefs about prominent "educational concepts" (Silvernail, 1992b, p. 667). The focus is on the relationship between PCI and pre-service

teachers' philosophical orientations. A set of educational concepts has been used by Silvernail (1992a) to identify teachers' philosophical orientations, and is prominent throughout the literature (Mitchell & Sackney, 2000; Pajares, 1992; Parkay, Stanford, & Gougeon,1996; Samuelowicz & Bain, 2001; Zinn, 1991). The concepts are (1) the purpose of schools, (2) the nature of curriculum content, (3) methods of instruction, (4) roles of the teacher, and (5) roles of the student.

It seems reasonable to expect that those with a strong philosophical orientation would likely experience a smaller degree of change in their PCI regardless of socializing influences. This expectation is based on the findings of Hoy and Rees (1977) concerning the relative stability of pre-service teachers' belief systems in relation to 'openness' and 'closedness' during a nine-week practicum, as measured using Rokeach's (1960) Dogmatism Scale. While philosophical orientations are not the same as dogmatism, since both are reflections of aspects of the belief system and the degree of dogmatism appeared stable during the practicum, it may seem reasonable to expect a similar stability in relation to philosophical orientations.

Pre-service teachers' PCI has not been examined in relation to philosophical orientations, which are identifiable based on cohesive sets of beliefs about education (Silvernail, 1992a). This study intends to address this issue in particular, by measuring pre-service teachers' philosophical orientations as measured by Silvernail's (1992a) Educational Beliefs Questionnaire (EBQ).

Finally, an empirical examination of the predictive power of these variables, and in particular philosophical orientations, is significant. More than 20 years ago, Hoy and Jalovick (1979) cited the problem of lack of critical empirical investigations into the

educational rhetoric associated with beliefs about education. They indicated that ideas concerning beliefs about education were praised by their advocates and eschewed by their opponents, however, "[A] review of the literature yields mostly opinions, prescriptions, and anecdotes, not generalizations based on research findings" (p. 45). This study contributes to addressing this weakness in the research, which continues to exist as exemplified in the opinions expressed by Moretz (1997).

An empirical approach to the problem is in line with the recommendations of key researchers in this field. Hoy (1967) encouraged research that addressed why individuals adapted differently to organizational pressures to become more custodial. Hoy asked whether certain beliefs characteristics of individuals made them more "successful in adapting to such organizational demands", while other individuals' beliefs made it less likely that they would "adapt and [be more likely to] subsequently leave the school and perhaps the profession" (p. 155). Other researchers have called for more empirical studies concerning the interaction of teachers' beliefs about education with specific aspects of teachers' daily routines. (Barratt, 1994; Ikejaiku, 2000; Silvernail, 1992a; Solomon, Battistich, & Hom, 1996).

CHAPTER II - REVIEW OF LITERATURE

Introduction

Educational orientations, based on expectations, beliefs, assumptions, and experiences, often form the basis for teachers' approaches to the classroom. These orientations have been of interest to educational researchers and theorists for a number of years. One particular area in which a considerable amount of research has been conducted has been the orientations of pre-service teachers. The pre-service teacher preparation program is seen as the time when a number of major elements come into play for the pre-service teacher within a relatively short period of time. Pre-service teachers must integrate their own expectations with the expectations of the supervising teacher, the placement environment, the associate teacher, and skills and knowledge attained from on-campus classes (Securro, 1994). In this literature review, the shift towards custodialism (Hoy, 1967; Hoy & Woolfolk, 1990; Jones & Harty, 1981; Lunenburg, 1986) that usually occurs in PCI as pre-service teachers attempt to integrate these factors during the pre-service program is examined.

The review of literature is organized around the key concepts that will be examined in this study. After a review of the origin, use and validity of the PCI Form, studies that examine the relationship between one or more of the three variable clusters (demographic, educational experience, philosophical orientations) and PCI will be reviewed. A notable weakness in this area of research is the absence of a comprehensive variable cluster focusing on the philosophical foundations that may be predictive of pre-service teachers' PCI at the beginning of the pre-service program, and of the stability of PCI during the program. Literature is then presented which illustrates the implicit

predictive value of philosophical characteristics in relation to PCI. The foundation on which such implicit philosophy can be made explicit through philosophical orientations is reviewed, and the Educational Beliefs Questionnaire, the instrument to be used to collect data concerning teachers' philosophical orientations, is examined. This is followed by a review of the impact of educational policy on the socialization process encountered by pre-service teachers during their pre-service programs. An examination follows of attempts to manage PCI, and the impact on teachers of such attempts. The review concludes with a discussion of theories that may assist in understanding the patterns of PCI changes that pre-service teachers experience.

Historical Context

The concept of PCI emerged at the end of a half-century of organizational management research and debate concerning the competing 'human' and 'systems' perspectives within organizations. Taylor (1914) stressed the importance of management's setting of the overall direction and ensuring the workers' compliance. An alternative to this 'natural systems perspective' emerged in the 'human relations approach' evident in the Hawthorne studies (Roethlisberger & Dickson, 1939) and the work of Mary Parker Follett (Metcalf & Urwick, 1941) which focused on the development of harmonious human relationships within organizations. In a 'social science' approach that attempted to draw on the best of these perspectives, Chester Barnard (1938) pointed to the importance of concepts such as free will, cooperation, communication, and authority in the operation of the formal and informal organization.

In 1960, Rokeach's Dogmatism Scale was presented as a means of identifying beliefs systems as open or closed. Such orientations were somewhat consistent with the natural systems and human relations perspective (and as reviewed below, parallel to humanistic and custodial PCI positions). In the same year, McGregor (1960) put forward Theory X and Theory Y regarding the degree to which employers needed to control their employees (Theory X), or saw them as willing to handle responsibility and able to be trusted (Theory Y). As with many patterns in the evolution of education during the twentieth century, the concepts that Theory X and Theory Y embodied were foundational to those of humanistic and custodial PCI in educational settings. Huffman, Holifield and Holifield's (2003) work presented below illustrates the parallels between Theory X and Theory Y, and PCI positions.

In 1962, Kuhn published his seminal work *The Structure of Scientific Revolutions*, in which he proposed that the 'scientific foundation' on which one's way of seeing things was constructed was restricted not only by one's "experience and observation" but also by one's "personal and historical" (1970a, p. 4) journey. He believed that the recognition of paradigms was essential to scientific inquiry—"no natural history can be interpreted in the absence of at least some implicit body of intertwined theoretical and methodological belief that permits selection, evaluation, and criticism" (1970a, p. 16-17). In other words, scientific research was not conducted in a contextual vacuum, but rather was influenced by such things as one's experiences, history, and personal approach to life. Individuals held sets of beliefs about the nature of reality and other philosophical assumptions that might be identified as paradigmatically different from beliefs and assumptions of others.

The organizational theory context of the 1960s had thus been framed, for example, by 'natural' and 'human' systems, the emergence of social science, open and closed belief systems, and sociological and scientific paradigms. It was in such a research context that Willower et al. (1967) conceptualized humanistic and custodial approaches to teachers' control of pupils.

Pupil Control Ideology Form

Willower et al. described the concept of student control along a humanistic to custodial continuum. Humanistic orientation was evident in an educational community atmosphere present in the school, where students learned through interaction and cooperation with others. Psychology and sociology were prominent in understanding the processes of learning and behaviour. Self-discipline replaced strict teacher control. A democratic atmosphere led to flexibility in status and rules, interpersonal sensitivity, open communication and an increase in student self-determination. Teachers and students made and accepted responsibility for educational decisions. Blust and Willower (1979) summarized humanistic PCI as stressing trust of students and valuing student self-discipline.

Custodial orientations were typified by the presence of a rigid and highly controlled classroom atmosphere. Maintenance of order was most important, and order was often judged based on stereotypes such as appearance, behaviour, and SES. Well-dressed, neatly groomed students who sat quietly were evidence of an orderly, well-run class. Custodial teachers understood schools to be autocratic, hierarchical organizations with the flow of power and communication downwards to students. Student misbehaviour

was taken personally and controlled through punishments, since students were generally perceived as irresponsible and undisciplined. Generally the attitude was that teachers must keep their guard up against students who are all alike, won't achieve much if not pushed, and can't really be trusted. Blust and Willower (1979) summarized custodial PCI as emphasizing distrust of students and valuing imposed discipline.

Willower et al.'s (1967) over-arching control theory rested on three key foundations. Firstly, control is necessary because of the unselected clientele and mandatory participation of students in public schools. The ability to choose who participates is based on the underlying conditions that determine who attends school and why. Schools are public service organizations in which all children of a certain age must participate. Secondly, individuals in schools wish to protect and enhance their status in relation to one another. When status is threatened, individuals adopt stances that they believe will assist in controlling the threat. Finally, due to the nature of schools, teachers must deal directly with students, the source of many of these threats to teacher status. Willower et al. postulated that when the status of educators was threatened, custodial measures provided the means of gaining control over the situation. According to Hoy (2001), these factors virtually guaranteed that pupil control would be an ongoing concern in school life.

Willower et al. (1967) also cited similarities between schools and prisons regarding their inability to select clients and the mandatory participation of clients in programs of the institution. Blankenship and Hoy (1967) and Etzioni (1975) urged caution in comparing schools to mental hospitals and prisons, since they differ

considerably in other areas. For example, the latter are total institutions, and as such are much more coercive than schools

Following the description of the humanistic and custodial positions as ideological extremes "not necessarily found in such form in experience" (Willower et al., 1967, p. 5) located at opposite ends of a control ideology continuum, Willower et al. developed the PCI Form as a measure of pupil control ideology (see Appendix B). Hypotheses were tested, the results of research were published, and the conclusions were critically examined (Hoy & Jalovick, 1979; Hoy, 2001). This instrument continues to be a good fit with theories of teaching and learning. According to Hoy (2001), the humanistic perspective on student control, for instance, aligns with current approaches of constructivist teachers, who often focus on the process of knowledge building rather than on its product (Harris & Hodges, 1995). Constructivist teaching practices include an emphasis on teaching for understanding, intrinsic motivation, student autonomy and self-direction, and frequent interaction and engagement among students (Kickbusch, 1996).

The Pupil Control Ideology (PCI) Form consists of 20 Likert-type items. Responses can range from one (strongly disagree) to five (strongly agree). The scores on PCI can range from 20-100. Lower scores are more humanistic and higher scores are more custodial (Hoy & Jalovick, 1979, Jones, 1982).

Much work has been done regarding the validity and reliability of the PCI Form. Willower et al. (1967) reported split-half reliability coefficients in two samples of .95 (N = 170) and .91 (N = 55) using the Spearman-Brown formula. The PCI Form was also validated by comparing principals' pre-knowledge and judgement of the control orientations of teachers to the results of the PCI Form questionnaire administered to such

teachers. Based on principals' judgements, teachers were divided into custodial and humanistic groups, and these groups were administered the PCI Form questionnaire. The mean scores of this test for these two groups was then compared through a *t* test of the differences of the means of the two independent samples. In the one-tailed *t* test, $t(48) = 2.639$, $p < .01$, indicating a significant difference between the two groups as identified by the principals.

Theory X and Theory Y

Hoy (2001) reported that largely as a result of the work of Willower et al. (1967), PCI studies have become a key area in understanding teachers' approaches to pupil control. Other approaches to this issue have been developed independently of Willower et al. Of particular prominence in the field of educational administration is McGregor's (1960) management theory concerning Theory X and Theory Y. In its larger, non-educational sense, Theory X and Theory Y typify managers' assumptions about employees. In explaining the relevance of Theory X and Theory Y to education, Harris (1988) reported that manager/employee and teacher/student relationships were closely analogous. Teachers were the managers in the classroom, and their beliefs and assumptions about the education process shaped the role of the students.

There is no indication that Willower et al. (1967) were influenced by McGregor's (1960) work. There is, however, a notable similarity between the McGregor's management theory and Willower et al.'s educational theory. This may be due to the shared organizational theory history of these approaches. Theory X and custodial PCI both focused on the high degree to which employers/teachers needed to control their

employees/students. Theory Y and humanistic PCI focused on the willingness of employees/students to handle responsibility and on their trustworthiness.

Theory X employers were described as seeing their employees as lazy, avoiding responsibility, and not to be trusted. Strict control over subordinates was required. Theory Y employers saw their employees as self-motivated, self-controlled, and desiring responsibility. These employers believed their employees would do the right thing if given the opportunity and therefore tight control was not necessary or desirable.

Using the Theory X and Theory Y framework, Huffman, Holifield and Holifield (2003) provided an example of an alternate approach to the measure of pre-service teachers' orientations to control of students. Using parallel categorizations of beliefs about pupil control as developed in *Views About People Survey: Theory X and Theory Y* (Woodcock & Francis, 1981), they conducted a study into the Theory X and Theory Y orientations of a group of pre-service teachers. The primary research question was whether and to what degree the assumptions of pre-service teachers concerning student control changed during practice teaching.

A total of 500 pre-service teachers, comprising 277 elementary, 24 middle level, and 199 secondary pre-service teachers, participated in a pre- and post- test measure of changes to assumptions about the management of students. Huffman, Holifield, and Holifield (2003) did not specify the length of the teaching internship, and provided only limited analyses of the data generated by the instrument. They reported that regardless of grade level, almost all (94%) of the interns identified with Theory Y management assumptions at the beginning of the internship. After the internship 30% of this 94% had

moved to a centrist (scores falling within a 5-point swing of the middle score of 37.5 on a scale of 0-75) or to a Theory X position.

The researchers did not complete any statistical analysis such as *t* tests to determine the significance of the changes in these scores. They reported that elementary teachers were the most resistant to change, with only 11% changing category, and secondary teachers were most likely to change, with 53.5% moving to a Centrist or a Theory X position. This study appears to suggest that during pre-service teachers' socialization into schools there is a change towards tighter control of pupils' behaviour, that more elementary pre-service teachers are likely to be oriented towards the humanistic approach to their students, and that secondary pre-service teachers are most likely to change towards custodial positions.

The study would have been more meaningful had there been a statistical analysis of the significance of the changes, of the significance of the difference in scores between the teaching levels, and so on. The data would also have been more useful if particulars of the study had been described in more detail. There was no information on the participants' age, sex, or educational experience, for instance, and therefore these findings could not be compared in a meaningful manner with findings of other studies that have approached the same questions.

Prominent Variables and Variable Clusters, and Pupil Control Ideology

In the years following Willower et al.'s (1967) establishment of the PCI Form, much work has been done to create variable clusters and identify individual variables that influence teachers' PCI (Hoy, 2001). Of particular interest to the present study is research

concerning pupil control ideology that centres primarily around independent variables and variable clusters which can be categorized as demographic, educational experience, and philosophical orientations. In the literature reviewed here, researchers sometimes present these variables individually or in clusters with differing names. For instance, Smyth (1977) included in his biographical variable cluster age, teaching experience, and educational qualifications. Jones (1982) considered level and length of pre-service teaching preparation apart from any particular variable cluster, although it does appear to be aligned with an experiential focus.

Details of a number of key studies are presented in the literature review, including doctoral dissertation research by Steinberger (1984), Stiscak (1987), and Moretz (1997). Many of the studies, which focused on student teachers during their pre-service programs, examined the relationship of variables to the change that may occur to pre-service teachers' PCI during this time. Of particular interest in this review of literature is research that considered beliefs and personal orientations, since these variables relate in some measure to the larger philosophical variable cluster that the present study explores.

Demographic Variable Cluster

Virtually all of the early studies in which PCI was the dependent variable examined the relationship between teachers' PCI and demographic variables (Bartlett, 1976; Brown, 1975; Hoy & Rees, 1977; Smyth, 1977; Willower et al., 1967). Many of the studies also included a specific focus on one or more additional variables. Of the studies cited here, Smyth (1977), for example, focused on demographic variables. Brown

(1975) and Bartlett (1976) are briefly referenced as examples of studies that also bring attention to additional variables such as hierarchical status and teachers' beliefs.

Smyth (1977) evaluated the importance of demographic and other variables to PCI in a study that included a large, broad sample. This variable cluster comprised the variables of age, sex, status (organizational position), teaching experience, and educational qualifications. The data for this study were taken from eight previously archived sets of data completed in one state in Australia for government high schools of varying sizes over a four-year period. Four hundred and sixty-six usable responses from teachers and administrators were included in the study. One-tailed *t* tests were conducted on these data, and in four of five cases, significant relationships were found between PCI and the variables included in the study.

- Age: 30 years and under were less custodial than those over 30 ($t(464) = 6.14, p < .05$)
- Sex: Male educators were more custodial than females ($t(464) = 1.71, p < .05$)
- Teaching experience: Educators with less than 5 years experience were significantly less custodial than those with more than 5 years. ($t(464) = 3.58, p < .05$)
- Educational qualifications: Those attending Teachers' College were significantly more custodial than those attending University ($t(464) = 11.61, p < .05$)
- Status: There was no significant difference evident in the area of status.

Since the majority of the demographic variables yielded a significant relationship for PCI in this larger and more diverse sample size, a Multiple Regression Analysis was conducted to determine the degree to which teacher PCI could be attributed to these factors. A co-efficient of multiple determination of .0595 indicated that the combined influences of these independent variables (experience, qualifications, status, age, and sex)

was 5.9% for this sample. This challenged Helsel's (1976) results, who in a study of 500 public school teachers, provided multiple regression scores of 44% for demographic variable factors including status obeisance. As evidence of the prominence of the socialization influence of schools, status obeisance was the willingness to act upon the perceived PCI of those in direct power positions in the organization. Most of this relationship was attributable to the status obeisance factor, while teaching level, experience, and sex had very little appreciable affect on PCI. While Helsel did not provide a stepwise Multiple Regression Analysis to attribute specific weight to particular factors, one could conclude from this study that the presence of the external socialization factor of status obeisance was deemed to be significantly more influential on the teachers than their demographic characteristics.

Hoy and Rees (1977) hypothesized that there would be a shift toward a custodial orientation as pre-service teachers completed their practice teaching. The PCI Form was used to measure orientation to pupil control. They included 79 pre-service secondary teachers in their study, including 56 female and 23 male students. The difference in the male PCI mean score before student teaching (48.57) and after (53.48) was significant, $t(23) = 2.74, p < .05$. The difference in the female PCI mean score before student teaching (46.20) and after (48.57) was significant, $t(56) = 2.23, p < .01$. They concluded that the hypothesized relationship held regardless of the student teacher's gender.

Brown (1975), in a study of three secondary schools, measured the demographic variables of age, sex, teaching experience, status, and educational qualifications. A multiple regression analysis indicated that these variables explained 5.6% of the variance in the teachers' PCI.

Bartlett (1976) conducted a Multiple Regression Analysis to determine the explanatory power of primarily demographic variables (age, sex, status, qualifications, and teaching experience) using a sample of 193 secondary teachers. These variables were found to account for less than 8% of the variance. On the other hand, eight dimensions of teachers' beliefs accounted for 54.6% of the variance. The conclusion of this study was that attitudinal or beliefs dimensions of teachers regarding the nature of children and the process of education were responsible for a large proportion of PCI variance. This study may have been improved through additional focus on the interaction of these variables at three levels of teaching (junior, intermediate, and senior). This would have led to a more articulated understanding of these variables during the formative pre-service program, and would have lent additional insight into the patterns of change of PCI.

School Location and Teachers' Beliefs About Student Behaviour

Research has been conducted on the relationship between location of schools and the approaches of school personnel regarding student behaviour. Furlong, Babinski, and Poland (1996) reported on the beliefs of school psychologists concerning the likelihood of encountering behaviour problems in inner-city, urban, suburban, and rural schools. One hundred and twenty-three school psychologists responded to a survey about their perceptions, experiences, and readiness to meaningfully address behaviour issues ranging from anti-social behaviour to bullying. The authors reported that 45.6% of school psychologists working in inner-city schools believed that their schools had high levels of violence, compared with 14.3% of those working in urban-not inner-city, 4.9% of those working in suburban schools, and 0% of those working in rural schools.

Shen (2001) reported on the 1993-1994 survey of the National Center for Education Statistics of the U.S. Department of Education which examined teachers' leadership in public schools. A representative sample of 9,000 principals and 50,000 public school teachers were asked to rate, on a six-point Likert scale ranging from "no influence at all" to "a great deal of influence," their leadership on various policy issues both schoolwide and within the classroom. Shen reported that teachers believed that they had less opportunity to respond individually to behaviour issues in urban settings, where they reported being required to adhere to more rigidly enforced school-wide codes of conduct.

The Shen data seem to suggest that organizational structure and decision-making mechanisms were more formalized in urban than rural schools, resulting in less-empowered teachers in urban schools. The more formalized decision-making mechanisms in urban schools led to teachers reporting that they felt less empowered to make their own decisions, instead being required to follow more centralized and rigidly articulated schoolwide and classroom student management policies.

Thirty-four percent of urban teachers reported that they had "much influence" on schoolwide discipline, as compared to 37 percent of rural teachers. Fifty-five percent of urban teachers reported much influence in the classroom issue of selecting content, topics, and skills to be taught, as compared to 67 percent of rural teachers. In the matter of disciplining of students in the classroom, 67 percent of urban teachers reported that they perceived that they had much influence, as compared to 70 percent of rural teachers. Comparison of mean scores through statistical analyses such as *t* tests were not presented, so it is unclear whether these percentages represent statistically significant differences.

Based on the data presented, it appears that rural teachers believed that they had more power in disciplinary and instructional issues than their counterparts in urban schools. It appears that they may have used this power to respond to individual situations and students in a more humanistic or progressivist manner. The responses of urban teachers might be related to the more formalized decision-making structure in urban schools, where school policy may have required teachers to follow a more custodial, traditionalist approach to behavioural and instructional issues.

Undergraduate Majors and Teachers' Classroom Orientations

Several articles in the literature tended to support the idea of a relationship between teachers' classroom practices and beliefs about education and their subject areas and undergraduate majors. Abd-El-Khalick, Bell, and Lederman (1998) conducted a study of 14 pre-service secondary science teachers. They reported that while these pre-service teachers claimed to have adequate understanding of important nature of science issues, the pre-service teachers also indicated that such factors were not adequately taught to the class because of their preoccupation with classroom management. These teachers may have believed that well-ordered nature of science issues were best taught in well-ordered (custodial) classrooms.

Silvernail (1992b) reported on differences in philosophical orientations held by high-school teachers who taught in different subject areas. English and social studies teachers were reported to have more progressivist orientations (mean = 4.10) than those who taught science and math (mean = 3.96), $t(155) = 2.83$, $p < .01$. Silvernail encouraged

additional research into the possible connection between educational philosophies and approaches to teaching within particular disciplines.

Dar (1981; 1985) discussed the possible connection between philosophies of education and views of how certain academic disciplines should be learned. According to Dar, mathematics and sciences were examples of disciplines where knowledge was viewed as hierarchical, and needed to be taught in a sequential manner. This approach to teaching may have been attractive to traditionalists.

Experiential Variable Cluster

Changes in PCI can be measured for pre-service teachers through repeated measurements using the PCI Form. Jones (1982) used this procedure in order to examine the change in pupil control ideology during the pre-service teaching experience in relation to two specific aspects of the program. Rather than focusing on the impact of a range of variables on PCI, Jones looked closely at the length of time practice teaching, and the level of the pre-service program (elementary/secondary) in which the pre-service teacher is participating. Jones referred to these elements as the 'length' and 'level' variables. In Jones' study, 62 student teachers completed a pre- and post-measure PCI Form. The sample was divided into four different groups of combinations of the length and level variables. They were 16 week elementary, 16 week secondary, 8 week elementary and 8 week secondary. The mean age was 23.9 years, and there were 17 males and 45 females. A full range of subject, specialist, and 'classroom' teachers were present in the 16-week program, but was limited to four teaching areas in the eight week

program. The focus of the study was on the effect of length and level, and the amount of change in PCI of pre-service teachers.

Most scores of pre-service teachers fell in the middle ranges and over time showed a modification towards a more custodial ideology. Jones (1982) reported that the changes do not represent an abandonment of one extreme for another, but instead a modification of one's ideology in one direction or the other. Lunenburg (1986), Jones and others report that this shift was usually towards more custodial ideologies.

T tests were used to measure the pre- and post- PCI changes. The entire group showed a PCI significant increase (Pre = 51.71, Post = 55.66, $p < .01$). The mean PCI increased for all four length and level groupings, indicating a shift towards custodialism, but only the two secondary groupings showed significant changes (8 week: Pre = 53.00, Post = 56.64, $p < .05$; 16 week: Pre = 53.22, Post = 58.22, $p < .01$). This change in the secondary grouping was large enough to account for the significant shift observed in the total sample. The limited size of the sample in this study did not allow for a more fine-grained examination of interaction effects among variables such as age, sex, and level. With an increased sample size, such an examination might have led to a deeper understanding of the possible reasons for the trends reported in the study.

Since Jones (1982) found a significant change in PCI scores in relation to the level of pre-service teaching, but not in relation to length of the practicum, Jones concluded that level had a more significant influence on PCI than length of practice teaching. One possible explanation for a difference in the influence of 'level' might be the smaller number of students that elementary teachers must interact with in a typical school day, as compared to secondary teachers. The smaller numbers may allow

elementary teachers to develop closer and more personalized relationships with students, and consequently require less custodial responses.

Hoy and Woolfolk (1990) indicated that secondary-level pre-service teachers may gravitate quickly to the custodial approach as a means of demonstrating the highly valued ability to control the classroom. The custodial 'control' approach becomes important as student teachers realize that they have only a limited amount of time with a relatively large number of classes, thus making it difficult to follow more humanistic practices. Such shifts in PCI that occur during the pre-service teaching assignment may form the basis of the teacher's full-time practice the following year.

Lunenburg (1986) reported that research was beginning to show by the mid 1980s that student teaching experience was associated with changes towards custodialism in student teachers' PCI. The question of whether level of student teaching experience influenced the degree of change in PCI of student teachers was specifically addressed in this study, along with several other variables. Lunenburg examined the degree of change in the PCI of pre-service teachers during their pre-service experiences, the possible differences in changes in PCI between elementary and secondary pre-service teachers, and the possible influence of associate teachers on the PCI of pre-service teachers. A sample size of 146 student teachers, 65 elementary and 81 secondary from three universities, provided data for this study. PCI Forms were completed before and after a nine-week practice teaching block in order to measure the change in PCI scores for the student teachers. Associate teachers also completed pre- and post-PCI Forms.

T tests for the difference between means of correlated samples were computed. These showed that there were significant changes toward custodial ideology for the

whole group ($t(146) = 6.05, p < .01$). Both levels of pre-service teachers showed a change in PCI at the end of the teaching block. Elementary ($t(65) = 3.65, p < .01$), and secondary ($t(81) = 4.82, p < .01$) pre-service teachers both showed a statistically significant shift toward a more custodial PCI. The PCI scores for the whole group of associate teachers showed no significant change, ($t(146) = 1.78, p > .05$). Evidence was inconclusive concerning the degree of influence of the associate teacher on the PCI of the student teacher. Lunenburg reported that there were significant changes in the PCI scores of secondary associate teachers, but not of elementary associate teachers. There was no report of testing for correlations between associate and pre-service teachers PCI scores.

Lunenburg (1986) did not take into account other variables that would permit insight into theoretically important issues. While the shift towards custodialism by pre-service teachers was confirmed, there was no examination of variables such as age, sex, culture, or beliefs that might inform the theory of change within which pre-service teachers' PCI changes could be best understood. Lunenburg relied on *t* tests to determine whether there was a significant difference between scores of elementary and secondary pre-service teachers before and after their practica. The absence of other variables prevented more fine-grained analyses using such tests as Multiple Regression Analyses in order to attribute weight to factors that may have affected changes in PCI of pre-service teachers.

Hoy and Jalovick (1979) used the PCI Form to examine pupil control orientations of teachers in relation to level of teaching and several other variables. Data were collected from 80 teachers in 20 middle-class schools, half of which were elementary, and half middle schools. The primary hypotheses of the study, that higher openness

scores and lower custodial scores would be correlated and that custodial scores would increase as the degree of teaching experience increased, were confirmed. Additional analyses revealed that there was no significant difference in the pupil control orientations of middle and elementary school teachers. Teacher gender, type of school (elementary or middle), type of undergraduate preparation, and type of graduate preparation were not related to pupil control ideology.

SES, ESL, and Custodialism in the Classroom

Specific classroom and student characteristics have been associated with a more custodial approach to classroom management. Such custodialism is manifested in the approach that educators take in relation to discipline of students, including sending students to the school office, suspension, and placement in special classes (Dixon-Floyd & Johnson, 1997; Skiba, Reece, & Peterson, 1997). The literature has identified several correlates of this increased disciplinary activity.

Low socio-economic status (SES), along with race, gender, and disability are the most frequently reported correlates of school and classroom discipline problems (Brantlinger, 1991; Costenbader & Markson, 1994; Panko-Stilmock, 1996; Wu, Pink, Crain, & Moles, 1982). Skiba et al. (1997) indicated in two studies that low socio-economic status (SES) was the second most likely factor, after race, and before gender and disability, to be associated with the administration of school discipline. Students from both higher and lower income brackets perceived that low-SES students were disproportionately targeted for disciplinary practices.

For Study 1, subjects were the middle school population in a large, urban Midwestern public school district. Students were classified as low-SES if they met the criteria for financial assistance in the lunch program. Just over 65% (7,287) of the students met the criteria required for free lunch. Another 26.6% received partial assistance. Skiba et al. (1997) reported that there were significant differences in numbers of disciplinary referrals by school lunch status, $F(2, 10{,}998) = 57.91$, $p < .001$. Student-Newman-Keuls follow-up tests indicated that low SES students (as defined by the lunch assistance criteria) were more likely to receive disciplinary measures than the rest of the population. The most common of the disciplinary responses was suspension. Large significant differences in average number of suspensions were identified as a function of low SES, $F(2, 10{,}998) = 46.45$, $p < .001$. Follow-up tests showed that students who received lunch cost assistance were more likely to be suspended than those paying full cost.

Study II involved students in one middle school in a medium sized, Midwestern city's public school district. Again, SES was identified based on participation in cost–sharing of the school lunch program. While 32.2% of the school population was eligible for assistance with lunch costs, 47.1% of discipline problems, as identified by office referrals, were for this group of students. Similar to Study 1, the most frequently occurring discipline issues were lack of co-operation, insubordination/verbal abuses, excessive tardiness/absences, and inappropriate/profane/abusive language.

Students who were deemed appropriate for assignment to behavioural classrooms have been identified in the literature, according to Dixon-Floyd and Johnson (1997), based on ethnicity, gender, SES, below-average basic academic skills in mathematics and

reading, failing one or more grades or courses, and poor attendance. In Dixon-Floyd and Johnson's examination of variables associated with assigning students to behavioural classrooms, data were collected from two middle schools in the American south-west. The study included the three behavioural classrooms from each school, which together included 85 6th-, 7th-, and 8th-grade students. Low SES was identified in this study as one of four attributes associated with behaviour problems (the others were ethnicity, gender, and basic academic skills). Statistically, low SES was significantly related to grade failure, $x(1, 85) = 15.78$, $p = .001$; course failure, $x(1, 85) = 17.45$, $p = .001$; Texas Assessment of Academic Skills test performance, $x(1, 85) = 23.65$, $p = .001$; and attendance, $x(1, 85) = 16.67$, $p = .001$.

In the Dixon-Floyd and Johnson (1997) and the Skiba et al. (1997) studies, low-SES was identified as a correlate of behaviour problems. In these studies, educators are reported as having adopted custodial practices such as sending children to the office, suspending them, or assigning them to special classrooms where behaviour management was a priority.

Some literature suggests that custodialism is likely to be prominent in 'English as a second language' (ESL) classrooms. Olivo (2003) conducted an ethnographic study of ESL students and the ESL program with seventh and eighth grade students at a Toronto, Ontario public school. The school was located in a multi-ethnic, working- and lower-middle-class neighbourhood. The study examined the ways ESL students were subjected to institutional control in the classroom. This control was seen as constraining their ability to practice and learn English. Olivo reported that in a situation where talking would be normally perceived as a means of facilitating the acquisition of English,

students' talk and their work were perceived to be in opposition. The ideology of talking and working being in opposition to each other were evidenced in the teacher's custodial directive "Quit talking and get back to work".

Markham (1999) identified a number of re-occurring sources of teacher stress in ESL classrooms. They included attempting to cope with ESL students with a range of levels of ability in the same classroom, attempting to provide remedial assistance to newly arriving students who are well below grade level, and sensing that some administrators and teachers with whom the teacher interacted were generally not supportive. Markham concluded that a high degree of control of student activities in the classroom is important in ESL situations since in most cases not only English proficiency, but general subject matter knowledge is quite varied. In such situations, it was a challenge to keep students on task.

In summary, Dixon-Floyd and Johnson (1997) and Skiba et al. (1997) are reporting on situations where students identified as low SES displayed behaviours that teachers may have responded to with more custodial approaches. It seems likely that classes identified as 'low SES' may have received more disciplinary measures than those not so identified. Olivo (2003) and Markham (1999) are reporting on situations where teachers believed that ESL students' classroom behaviours needed to be controlled through a custodial approach. Olivo reported that ESL students' need to talk as a means of practicing their new language was perceived by some teachers as in opposition to doing actual school work, and custodial approaches were used to keep the classroom quiet. Markham indicated that teachers' stress-reducing coping mechanism led them to

employ custodial measures in ESL classrooms where students were working at a broad range of capacity and level.

Philosophical Variables Cluster

Silvernail (1992a) identified philosophical orientations based on teachers' beliefs about a comprehensive set of key educational concepts. It appears that no studies have been completed concerning the predictive power of philosophical orientations, as identified by such concepts, in relation to pre-service teachers PCI. A number of studies have, however, examined the relationship between other aspects of beliefs and orientations and PCI. Other studies have considered the relationship of PCI to broad personal orientations. For example, Willower et al. (1967) compared the degree of dogmatism in teachers' beliefs systems generally to their PCI. Steinberger (1984) and Stiscak (1987) examined the change in perspectives ("a person's ordinary way of thinking and feeling about and acting in ... a situation", Steinberger, 1984, p. 34) in relation to changes in PCI. Hoy and Woolfolk (1990) considered the relationship between PCI and orientations to solving social and behavioural problems. Following is a review of studies that consider the relationship between PCI and these beliefs and orientations.

Control Orientations

Hoy and Woolfolk (1990) examined the changing PCI of pre-service teachers, using the PCI Form. They considered the relationship between the control orientations of their participants and their orientations to solving social and behavioural problems in a school using a continuum identifying controlling orientations at one end and autonomous

orientations at the other. Deci, Schwartz, Sheinman, and Ryan's (1981) *Problems in School Inventory* was used to measure social problem-solving orientations. Teachers who already have the solutions to classroom problems in mind, and use punishment and reward to ensure these solutions are implemented have a controlling orientation. When teachers encourage students to weigh the problem and arrive at solutions for themselves, they are said to have an autonomous orientation. The sample for this study comprised 191 Liberal Arts Majors (171 female, 20 male; 68 were 19 or younger, 80 were 20-21 years old, 36 were 22-30 years old, and seven were over 30). *T* tests performed on the data showed that there were significant differences in the means of the before-practicum (mean = 48.03,) and after-practicum (mean = 50.06, SE of diff. mean = 0.83) scores for each of the scales for student teachers. Student teacher PCI scores became more custodial $t(58) = 2.44, p < .01$ (one-tailed *t* test used for student teacher group). Also, student teachers' problem-solving orientation became significantly more controlling, $t(64) = 3.68, p < .01$.

Bureaucratic Orientations

Hoy and Rees (1977) presented three hypotheses, each of which was tested using a different instrument. The *Work Environment Preference Scale* (WEPS), a 24 item 5-point Likert scale instrument that measures bureaucratic orientation, was used to test the hypothesis that the student teachers would become more bureaucratic during their student teaching. These researchers suggested that the somewhat idealized attitudes and values that pre-service teachers bring to their practice teaching may become viewed by those student teachers as either idealistic or naïve. Whereas in the university they are presented

with discussions of autonomous responses to professional responsibilities, in the school they face administrators who demand conformity, and experienced teachers who value strong disciplinary leadership.

The PCI Form instrument was used to test the hypothesis concerning a shift in control orientations of pre-service teachers. Hoy and Rees (1977) hypothesized that there would be a shift toward a custodial orientation as pre-service teachers completed their practice teaching.

Hoy and Rees (1977) also examined the relationship between PCI and dogmatism. Theorizing that the nine-week student teaching experience would not be sufficient to bring about change in the basic beliefs structures of student teachers, they hypothesized that there would be no significant change in their beliefs orientation to openness or closedness. Troldahl and Powell's (1965) short form of Rokeach's Dogmatism Scale Form E (1960) was used to test this hypothesis. While this personal orientation will be examined in more detail later, the hypothesis and results concerning this element will be presented here.

The sample for this study included 79 pre-service secondary teachers, who completed pre- and post-tests for each of the scales identified above. All three hypotheses were confirmed using *t* tests for comparison of means of paired samples. Pre-service teachers were significantly more bureaucratic after the practicum (mean = 25.90) than before (mean = 23.30), $t(78) = 4.26$, $p < .01$. There was no significant change in the degree of dogmatism (open-mindedness versus closed-mindedness) for pre-service teachers after (mean = 65.68) than before (mean = 64.59), $t(78) = .87$, $p > .05$. Pre-service teachers were significantly more custodial after (mean = 49.96) than before (mean =

46.88), $t(78) = 3.38$, $p < .01$. The relationships held irrespective of pre-service teacher gender.

Hoy and Rees' (1977) study demonstrated that while PCI scores became more custodial for pre-service teachers, the post-practicum scores were still in the humanistic range. These scores may have reflected the ideologies of pre-service teachers in a different educational era in New Jersey. During this era, education in the U. S. had, according to *A Nation at Risk* (Gardner, Larsen, Baker, Campbell et al.,1983), minimized the importance of 'core' subjects, provided a "curricular smorgasbord" (p. 18) with too much choice for students, and moved away from solely quantitative testing as a means of measuring student achievement. This may have been a North American phenomenon, since Bedard and Lawton (2000) reported that in Ontario, education was less centralized and as a result, there was a less bureaucratic approach to education during the this era.

Authoritarianism is closely related to the bureaucratic approach. Hoy (2001) indicated that there was a strong connection between authoritarianism and the valuing of concreteness, disdaining ambiguity, revering authority, and embracing custodial control. Authoritarian orientation in this sense was a predictor of custodial pupil control ideology (Hoy, 1967; 1968; 1969).

Dogmatism Orientations

The measure of dogmatism has been particularly prominent in PCI studies. Dogmatism, as described and measured originally by Rokeach (1960), is the degree to which an individual is oriented to an open or closed belief system. It is presented here as

a further examination of whether dogmatism, as an element of belief systems, is seen in the literature in a correlative or predictive relationship with PCI.

Barth (1972) referred to the type of education occurring in schools and classrooms where educators' beliefs were open (Rokeach, 1960) as open education. Hoy and Jalovick (1979) suggested that open education required a humanistic pupil control orientation, since this was consistent with the underlying philosophy of openness (Rokeach, 1960). Open education was characterized by the belief that knowledge is uniquely constructed by each individual as a result of the direct exploration of one's own personal environment. Learning is therefore a result of the interaction between the individual and the real world of that person, remembering that such a real world takes different forms for different people. The role of the teacher in such a view of education is that of facilitating students' active exploration in a manner that will most likely be fruitful for the individual. The learning process is therefore a joint responsibility of the teacher who provides materials and the student who responds to those materials. The classroom becomes a place where the focus is on discovering and facilitating the scope of possibilities students can explore, instead of a place where optimal knowledge transmission occurs. According to Hoy and Jalovick (1979), this approach to education (openness) depends on the openness of teachers' belief systems. The openness of teachers' belief systems is in an inverse relationship with PCI scores – the more open the beliefs, the lower the PCI scores, and vice versa.

Willower et al. (1967) examined the relationship between dogmatism and PCI. To assess dogmatism, they employed Rokeach's Dogmatism Scale, Form E (Rokeach, 1960) to measure the degree of open- and closed-mindedness of teachers. The higher the score,

the more closed the belief system (the more dogmatic) and the more authoritarian (Gilbert & Levinson, 1957) and custodial (Willower et al., 1967) the individual. In order to determine educators' PCI, participants were asked to complete the PCI Form. Data were also collected concerning position and number of years teaching.

One thousand, three hundred and six educators provided usable data for the PCI Form, including 945 teachers (468 elementary, 477 secondary), 181 principals (84 elementary, 97 secondary), and 180 counsellors. Nine hundred and seventy-three of these completed the Rokeach Dogmatism scale, including 805 teachers (376 elementary, 429 secondary) and 168 principals (79 elementary, 89 secondary).

T tests for independent samples were conducted on the means of each of the groups by their position in the school. The hypotheses concerning the higher custodial scores for those more directly responsible for client control was supported. The difference between teachers (mean = 58.8) and principals (mean = 54.4) was significant, $t(180) = 5.69, p < .001$, as was the difference between teachers (mean = 54.4) and counsellors (mean = 52.3), $t(179) = 9.90, p < .001$.

The hypotheses concerning the more custodial orientation of secondary school personnel was supported. There was a significant difference between elementary teachers (mean = 55.3) and secondary teachers (mean = 62.3), $t(467) = 12.69, p < .001$, as well as between elementary principals (mean = 50.9) and secondary principals (mean = 57.4), $t(83) = 4.82, p < .001$.

The hypotheses concerning the more custodial orientation of more experienced teachers was supported. There was a significant difference between teachers with five

years or less of teaching experience (mean = 56.9) and teachers with more than five years of teaching experience (mean = 59.7), $t(297) = 4.58$, $p < .001$.

The hypotheses that closed-minded individuals in all role and experience groupings would be more custodial were confirmed. There was a significant difference between open minded teachers (mean = 53.1) and closed minded teachers (mean = 63.5), $t(195) = 12.12$, $p < .001$, and also between open minded principals (mean = 48.4) and closed minded principals (mean = 61.5), $t(36) = 6.06$, $p < .001$. There was a significant difference between open minded elementary teachers (mean = 49.8) and closed minded elementary teachers (mean = 59.2), $t(92) = 8.00$, $p < .001$, and between open minded secondary teachers (mean = 56.0), and closed minded secondary teachers (mean = 67.6), $t(98) = 10.90$, $p < .001$. There was a significant difference between open minded elementary principals (mean = 45.5), and closed minded elementary principals (mean = 56.6), $t(17) = 4.35$, $p < .001$, and between open minded secondary principals (mean = 50.8), and closed minded secondary principals (mean = 66.3), $t(18) = 5.00$, $p < .001$.

Hoy and Jalovick (1979) examined the relationship between teachers' open education beliefs and practices and their pupil control orientations. In their study, open education is presented as at one end of a continuum, with traditional education at the other. The Teacher Attitude Inventory of twenty items was used to measure two aspects of beliefs about education: their attitudes about the nature of knowledge and how pupils learn. PCI was used to measure the degree to which teachers' views concerning pupil control were custodial or humanistic. Data were collected from 80 teachers in 20 middle-class schools, half of which were elementary schools, and half of which were middle schools. There was no significant difference in the pupil control orientations and attitudes

of middle and elementary school teachers. A correlational analysis was also conducted. Teachers' beliefs about learning and knowledge correlated with pupil control ideology. The more open the beliefs, the less custodial the pupil control ideology ($r = -.55, p < .01$). Among other findings of the study, amount of teaching experience was significant. Teachers with 10 or less years of experience tended to be humanistic and open, those with 10-20 years were more custodial and traditional, and those with 20-30 years of experience moderated between the two.

Since a positive relationship was determined between 'openness' and a humanistic PCI, and since openness is similar to the progressivist position described on Silvernail's (1992) continuum of philosophical orientations, it is important to consider the manifestations of openness (and progressivism) as identified by Hoy and Jalovick (1979). Five characteristics were prominent in the role of 'open' teachers. The characteristic were:

1. Provisioning – books, materials, equipment, furniture, experiences, organization of time and space, explicit procedures and expectations, and a purposeful, energetic, accepting climate.
2. Diagnosis – surveilling activities in order to guide, remedial instead of judgemental.
3. Instruction – encouraging and influencing individually, with emphasis on listening and observing as well as questioning and informing.
4. Humaneness – encouragement of respect for others, and strong interpersonal skills. Defensiveness is minimized, and feelings are valued, never dismissed or disparaged. All are recognized and valued as having strengths and weaknesses.

5. Seeking – searching for and engaging in personal growth within and outside the classroom. Teachers become actively involved with students' development and learning.

Teaching Orientations

Some studies have examined the impact of PCI in relation to teaching approaches in particular subject areas. In these subject areas, teachers may find their particular approach to be shaped by beliefs about education. In other words, beliefs about education may direct the teaching of the subject in a particular manner. That approach may be predictive of the PCI of the teacher. Morrison, Wilcox, and Madrigil (1999) and Morrison, Wilcox, and Madrigil (1997) examined the relationship between the theoretical beliefs about reading instruction and pupil control ideology. Using the Theoretical Orientation to Reading Profile (TORP) and PCI Form, these researchers found that (1) as teachers were identified at the whole language end of the TORP scale, PCI scores were also identified as being more humanistic; and (2) there was a positive correlation between teachers' orientations toward phonics and their views of classroom management as more custodial. The researchers concluded that teachers' beliefs about how to teach a particular subject correlated significantly with their PCI.

There may be a shared foundation between the beliefs about the subject and the categorizations of beliefs about education into philosophical orientations. Silvernail (1992) referred to these orientations as traditionalism, progressivism, and romanticism.

The traditionalist orientation centres on learning a set of predetermined facts and skills, whose knowledge of and ability to perform are in the possession of an elite group.

The role of the school is transmitting essential knowledge, and perpetuating the predominant culture. Drill and practice, strong authority roles for teachers and passive roles for students are valued. This learning is administered in an externally controlled manner, and produces pre-determined quantifiable outcomes. Effectiveness is measured by quantifying cognitive achievement.

The progressivist orientation allows students to discover 'facts' through 'logical' inquiry, learning those facts and using those skills that are most relevant to them in their relationship to the world as they are taught to perceive it. The role of schools is to foster the intellectual process, the inquiry method of learning, teachers as facilitators, and active student involvement. Teachers are the guides who keep the learning of facts and skills within a predefined framework. The purpose is still to produce outcomes, albeit broader, more difficult to assess outcomes in the affective and behavioural as well as cognitive domain. Effectiveness is still measured by success in producing 'productive' citizens.

The romanticist orientation directs attention onto the child. School is a place where children are free to experience themselves and society around them by being fully involved in choosing the direction of any program or evaluation. Schools are sources of new social ideas and individual self-awareness. Knowledge is created for each individual through their understanding of how current social issues relate to them. Teachers are guides in the natural development of each student. Outcomes within the logical positivist domain may or may not be relevant, and effectiveness may not be a linear function of input and process factors (Silvernail, 1992a).

One may surmise from the work of Morrison et al. (1999) and Morrison et al. (1997) that teachers who identify with the whole language approach would value student

discovery, teacher as facilitator, and the constructivist approach generally, and that teachers at the phonics end would likely value the conventions of the language, which are to be taught by teachers and learned by students. While not based on empirical evidence, it may be the case that in the teaching of reading, traditionalist teachers tended to be custodial, and progressivist or romanticist teachers tended to be humanistic.

Teachers' beliefs about education were not always consistent with their PCI. Mathematics teachers' orientations to grading practices, as an example of beliefs about education in a particular area, were not predictive of PCI. Cicmanec, Johanson, and Howley's study (2001) provided PCI Form data from 230 respondents, from a random sample of 500 Ohio public school teachers. The study explored the grading practices of math teachers, comparing the degree of influence on grading practices of context factors such as class size, at-risk designation, and presence of upper level mathematics courses to the influence of PCI. An analysis of the PCI Form survey data, and a comparison to the contextual data indicated that the contextual factors contributed more to shaping teachers' grading practices than did the teachers' PCI.

Absence of a 'Beliefs about Education' Variable Cluster

Variables and variable clusters prominent in the 'PCI literature' (demographic, experiential, beliefs/orientations), or that may be seen as potentially having a predictive relationship with PCI (SES, ESL, behaviour), have been reviewed above. Absent from the literature is a rationale for exploration of the relationship between philosophical orientations, based on beliefs about key educational concepts, and pre-service teachers'

PCI. As a result, there appears to have been little if any research that measures the relationship between philosophical orientations and PCI of pre-service teachers.

However, the foundation of one's approach to all aspects of teaching, that of philosophy of education (Livingston, McClain, & DeSpain, 1995; Ornstein & Hunkins, 1988; Ozmon & Craver, 1981), may have a significant relationship to the PCI of pre-service teachers. Lack of understanding about the relationship between PCI and philosophical orientations may have reduced the potential impact of some PCI research, as illustrated below.

Undervaluing Philosophical Correlates

Hoy and Jalovick (1979) discussed the tendency for researchers to make unfounded philosophical assumptions concerning the preferential status of particular positions on the humanistic-custodial continuum. "[A] review of the literature yields mostly opinions, prescriptions, and anecdotes, not generalizations based on research findings" (p. 45). Moretz's (1997) work is an example of this type of research. Citing unspecified researchers, Moretz (1997) suggested that:

> changes reflecting a humanistic direction must be made so that schools more often become places where students may wish to study.... Clearly such schools are more desirable places for students compared with highly structured and authoritarian schools which exhibit custodialism. (p. 2)

Moretz (1997) takes the position that all reasonably informed educators prefer the same humanistic approach to and outcomes from education. This researcher does not consider the potential validity of beliefs (or the perceived legitimacy of outcomes) held

by many educators that serve as a foundation for a more custodial PCI, or that these beliefs may predict degrees of PCI stability or change. Further, learning theories are not considered. A weighing of cognitive dissonance theory (Festinger, 1957) or social impact theory (Latané, 1981) may have lent a deeper understanding to whether change in the research participants' PCI were primarily a result of socialization based on demographic and experiential characteristics coupled with school characteristics and influences, or a strategy designed to reduce dissonance between their beliefs and a bureaucratized environment (Dickinson, McBride, Lamb-Milligan, & Nichols, 2003; Hoy & Rees, 1977).

Moretz (1997) appears to have presumed that all caring educators have the same set of beliefs about education. In fact, educators hold a range of philosophical orientations with which beliefs about education can be identified. They include beliefs about education held by prominent thinkers and educators of the past and present, such as those of Rousseau (1969), Dewey (1918), and Kickbusch (1996), who have espoused romanticist and progressivist philosophical orientations similar to those evidenced by Moretz. These views place a high value on the humanistic pupil control ideology.

There are also, although unacknowledged in Moretz's work, other researchers and theorists including Bagley (1938), and more recently Bloom (1996), Hirsch (1996), and O'Hear (2000) who would cite empirical research in the school effectiveness field with equal passion in support of the 'highly structured and authoritarian school' and the traditionalist philosophical orientation. These philosophical orientations, supported by underlying beliefs about education, are prominent in many current neo-conservative approaches to education in the western world (Leithwood & Duke, 1999).

While Moretz (1997) does not address actual outcomes of schools in any form, there are empirical data, although unreported by Moretz, that would have, if considered, moved her supposition about the preference of students concerning teachers' PCI to a more scholarly foundation. According to Lunenburg (1990) students placed a higher value on teachers with humanistic PCI. Lunenburg reported that teachers' humanistic PCI were empirically associated with students' perceptions of school as more challenging and interesting. Bodine, Olivarez and Ponticelli (2000) reported direct links between custodial PCI of teachers and students' negative feelings concerning teachers. Schmidt and Jacobsen (1990) indicated that teachers' PCI was an accurate predictor of school climate. While unreported by Moretz, such studies support the assumptions on which her research rests, and provide the basis called for by Hoy and Jalovick (1979) from which generalizations about philosophical assumptions can be made.

Many researchers indicate that there are practical and theoretical reasons why philosophy has not been acknowledged as playing a larger role in the shaping of specific approaches to education. Zinn (1991) reported on the pressures and trends that often took the place of philosophical underpinnings as guides to teachers' practices. Socializing influences such as availability, attractiveness, and affordability of instructional materials, teaching strategies based on current popular approaches, or the vested interests of funding agencies often served as a primary guide, rather than a set of personally held beliefs or values.

Hiemstra (1988) and Carr (2001) reported that educators rarely reflected on the meaning and direction of their activities, being generally more concerned about skills than with principles and with details than the whole picture. Practicalities of the

classroom, such as control of pupils, may have caused many beginning teachers to decide that principled reflection on educational problems was irrelevant to good practice. Consequently teachers may be, as Ornstein and Hunkins (1988) put it, subject to educational fads and frills and externally imposed educational authority in the absence of practice based on informed philosophical reflection.

Philosophy is not necessarily valued among new teachers. Carr (2001) reported that the study of philosophy was usually a small component of the theoretical studies in most institutions of teacher education. To many the study of philosophy and theory, as opposed to teaching practice, was vague and irrelevant to experiential classroom events. Carr concluded that the "discovery that such generalities may have little direct practical utility in the fires of initial contact with the untidy particularities of school placement" (p. 465) caused many pre-service teachers to decide that principled reflection on educational problems was irrelevant to good practice.

The True Value of Philosophy to Education

According to Sergiovanni (2000), philosophy of education is the foundation for one's actions concerning education. It is a statement of what one intends to do and how in relation to education. Galbraith (2000) indicated that it is the basis for decisions, processes, and actions made about the process of instruction and learning.

Many theorists and researchers, including Livingston, McClain, and DeSpain (1995), Ornstein and Hunkins (1988), and Sheppard and Gilbert (1991) were specific about the relevance of philosophy to education. Philosophy shaped the practice of education, covering all the components of practice, including best teaching methods,

pupil-teacher time schedules, assignment of homework, teacher directives regarding time spent on a particular subject, allowing students to choose uses of time, and degree of classroom control by teacher and student. According to Ornstein and Hunkins everything that occurred during the educative process, including belief in a process, was based on philosophy of education. Ozmon and Craver (1981) indicated the relevance of philosophy to one's understanding of current educational trends. "[P]hilosophical thought – even thought contained in ancient philosophies – has influenced education and still continues to do so" (p. xii). Hiemstra, (1988) indicated that a philosophical orientation, although unarticulated, undergirded most aspects of educational practice.

The Implicit Link between Philosophy and Pupil Control Ideology

Consistent with the foregoing literature, it is hypothesized that pre-service teachers' philosophical orientations may be a significant predictor of PCI change and stability. Although there is an implicit connection in the literature between philosophical underpinnings and teachers' approaches to classroom management and pupil control, empirical research has not explicitly examined the connection between pre-service teachers' beliefs about education and PCI. It is therefore important to consider the presence and nature of this link.

The positive relationship between the philosophical orientations and PCI is implicit in the work of Hoy and Jalovick (1979). They presented the traditional classroom model, where custodial PCI operates, as centring on transmission of knowledge. Consistent with the Theory X approach of McGregor (1960) as reviewed earlier (employers needed to control their employees), knowledge must be formatted, prioritized,

and presented to students based on the decisions of educators. Traditionalists decide what is most crucial and appropriate for the various age groups. Teachers teach such curricula, and students are expected to master such knowledge. Students are evaluated to determine how much knowledge has been acquired and how fast its possession can be displayed. The ultimate purpose of traditional education, in this view, is for students to acquire at least the minimum essential body of knowledge. The objectivist philosophical assumptions underwriting the traditionalist philosophical orientation position (Silvernail, 1992a) and custodial PCI appear to be consistent in this regard.

Hoy and Jalovick (1979) predicted that "programs of open education are doomed to failure unless teachers have and can maintain a humanistic PCI" (p. 49). Humanistic PCI is a prerequisite for open education. It is consistent with romanticist/progressivist orientation, which values the construction or discovery of knowledge based on the understandings and exploration of the individual student. The role of the teacher as the facilitator and the student as central in the learning process is common to both. The 'open' teacher manages the classroom to enlarge the breadth and depth of student exploration, as opposed to optimizing conditions for knowledge transmission. The philosophical assumptions underwriting the romanticist/progressivist philosophical orientation position (Silvernail, 1992a) and humanistic PCI appear to be consistent in this regard.

Despite the lack of research regarding the relationship between philosophy and PCI, there is a large body of literature that links philosophy with approaches to education generally. Teachers' approaches to education were based on their beliefs (Martin, Prosser, Trigwell, Ramsden, & Benjamin, 2002; Olson & Singer, 1994; Samuelowicz &

Bain, 2001). Galbraith (2000) stated: "A working or guiding philosophy of educational practice provides the foundation for all decisions, processes, and actions made about the instructional and learning process" (p. 1). It is important to recognize this literature since the more specific new knowledge concerning the relationship between PCI and philosophy rests on this broader foundational platform.

As identified above, teachers whose practices were based on differing orientations have been categorized as traditionalist, progressivist, or romanticist (Silvernail, 1992a). Gardiner (2000) identified a number of polarities which exemplified these philosophical categorizations. Teachers' beliefs required them to make choices between breadth and depth, between accumulation or construction of knowledge, between utilitarian outcomes and intellectual growth, and between uniform and individualized growth.

Developing a Broader Philosophical Variable Cluster

The literature indicates the presence of a close, albeit implicit, relationship between philosophy and approaches to the classroom. This relationship may hold true as it pertains specifically to philosophy and PCI, one aspect of teachers' approaches to the classroom. It logically follows that the development of a deeper understanding of the predictive value of a 'philosophical orientations' group of variables in relation to PCI may facilitate the purposes of this research. Such a variable cluster should contain a range of orientations. Each orientation should contain beliefs about education that are consistent with each other both philosophically and practically. For instance, a teacher's belief that the purpose of education is the transfer of a pre-determined canon of knowledge from teacher to student may be consistent with that teacher's belief about the role of the

student, and belief about the role of the teacher. The philosophical orientations variable cluster should facilitate the understanding and measurement of the predictive value of each philosophical orientation in relation to PCI of pre-service teachers.

'Philosophy of science' provides a foundation on which an understanding of the philosophical distinctiveness of these orientations can be identified. It also provides a rationale for the location of these orientations along a subjectivist/objectivist continuum, as described by Burrell and Morgan (1979). Positions along this continuum may be seen to be consistent with positions along the PCI continuum described by Willower et al. (1967). 'Philosophy of science' roots are present in the work of Karl Popper, Thomas Kuhn, and Paul Feyerabend. For this study, the positions held by Popper, Kuhn, and Feyerabend are briefly examined in order to clarify that the philosophical orientations can be considered philosophically distinct from each other.

At the end of the 'philosophy of science' discussion, literature is presented that shows what the philosophical orientations, delineated by philosophy of science, look like in practice. This section concludes with an identification and discussion of the presence of these orientations in the work of many educators, theorists, and researchers.

Philosophy of Science Roots

Popper, Kuhn, and Feyerabend may be seen for the purposes of this study as representing philosophical positions to the right, centre and left, respectively. Popper is considered by many researchers and theorists to have staked out a very clear objectivist position in relation to his views of the philosophical foundations of science (Fuller, 2003). In the Preface to the first edition of his book *The Logic of Scientific Discovery,*

which was initially published in 1934, Popper (1968) indicated that the structure of scientific doctrine was already in existence, along with a generally accepted problem-situation. He claimed that this structure was pre-existing and generally accepted as the framework of scientific knowledge within which new contributions to science could be fitted.

Popper disputed the validity of philosophical considerations that indulge in questioning the validity of knowledge on the basis that knowledge is impacted by perception. Accordingly, philosophy had no value when it was unable to contribute "to the advancement of knowledge of the world" within "the rationalist tradition" (1968, p. 19).

Kuhn was portrayed as standing in philosophical opposition to Popper's objectivist philosophy of science views (Fuller, 2003). Kuhn believed that Popper's statement that "frameworks are the prerequisite of research" (Kuhn, 1970b) was inconsistent with Popper's rationalist objectivist views. In *The Structure of Scientific Revolutions*, originally published in 1962, Kuhn developed a descriptive-historical approach to these frameworks that served to identify the philosophy of science positions defined by various assumptions about the world (Preston, 2002).

Standing to the subjectivist left of Popper, but also of Kuhn, Feyerabend stated as the aim of his book *Science in a Free Society* (Feyerabend, 1982) "to remove obstacles intellectuals and specialists create for the traditions different from their own and to prepare the removal of the specialists (scientists) themselves from the life centres of society" (p. 7). This is a reasonable aim, according to Feyerabend, since the "comparative excellence of science has been anything but established" (p. 106). As opposed to Popper

at the objectivist end of the continuum, he indicated that rationality was one tradition among many instead of the standard to which traditions must conform.

Feyerabend's best known work, *Against Method* (Feyerabend, 1979), concluded that there are no useful methodological rules that govern the progress of science and the growth of knowledge. Feyerabend challenged the logical empiricist methodologies of Popper, referring to the epistemological anarchism of such positions.

Philosophy of Science Continuum

In the context of such philosophy of science positions, Wittrock (1974) indicated that during the 1960s and early 1970s a paradigm shift was occurring in the study of human learning, a shift toward emphasizing the role of the learner in the process. This shift, and Whittrock's acknowledgement of it, is consistent with the exploration of 'open' education arising from Rokeach's (1960) dogmatism scales. As discussed earlier, these concepts were applied to education through the 1960s and 1970s by such researchers as Willower et al. (1967), Barth (1972), and Hoy and Jalovick (1979).

The impact on education of this approach to learning and knowledge was that it was now possible to consider that knowledge could be created based on the perceptions and interpretations of the learner. Meaning and knowledge could be constructed from *subjectivist* individual reactions to the stimuli, not just from perception of the *objectivist* nominal characteristics of the stimuli.

"[T]he new philosophy of science" (Wittrock, 1974, p. 15) approach to knowledge and learning was rooted, according to Macmillan and Garrison (1984) in understandings of paradigms and research traditions. These research traditions were

located "within a set of assumptions about the appropriate method of defining the domain, investigating the world, and explicating the theories" (p. 16).

Burrell and Morgan (1979) described a 'philosophy of science' continuum upon which the divergent epistemological, ontological, beliefs about human nature, and methodological perspectives held by those with either a subjectivist or an objectivist philosophy of science could be positioned. If each of the philosophical assumptions about the nature of knowledge and being, as reviewed above (Burrell & Morgan, 1979; Feyerabend, 1979; Kuhn, 1970a; Kuhn, 1970b; Macmillan & Garrison, 1984; Popper, 1968; Wittrock, 1974), were placed on such a philosophy of science continuum, positions to the left would be considered subjectivist. Those holding the subjectivist position would be more inclined to stress the importance of the personal interpretation of experience of individuals in creating knowledge about truth and reality concerning the social and natural world. Methodological issues focus on explanation and understanding of individual characteristics through methods that would be considered unscientific according to the ground rules of the natural sciences.

Positions to the right on the philosophy of science continuum would be considered objectivist. Holders of this position would consider the world, as evident in the natural and social sciences, to be an external, objective reality. The methodology is likely to focus on the relationship and regularities between the components of the phenomenon, in a search for universal laws which govern the reality being examined.

This 'subjectivist/objectivist' continuum provides a device upon which philosophical orientations and pupil control ideologies may be better understood, since they too may be seen as subjectivist and objectivist. When pre-service teachers'

philosophical orientations are positioned along the subjectivist/objectivist continuum, their alignment with humanistic and custodial PCI positions may be more easily discerned.

Identifying Philosophy of Education Foundations

The subjectivist and objectivist 'philosophy of science' assumptions may be seen as undergirding beliefs about education, as exemplified in the work of a number of researchers (Ayres, 1944; Gardner, 2000; Nyberg, 1993; Ornstein & Hunkins, 1988). Nyberg's (1993) research is representative of the work of such researchers in that it provides examples of how subjectivist or objectivist views of the world and education serve as a foundation for beliefs about education.

Nyberg posited that philosophies of education could be grouped into two categories, according to their proponents' need to find patterns of truth in a 'moral principles' orientation, or to allow for individual meaning in individual circumstances, referred to as the 'personal-values' orientation. Those with moral-principle orientation viewed rationality as allegiance to a single best concept or idea, through an economy of means of thought, which was broadly applicable. The personal-values orientation, held by existentialists and philosophical constructivists, saw "individuals with perfect clarity, in all their literal, particular, factual fullness...no matter how fragmented the world may then seem" (p. 206).

The legitimacy of connecting philosophy in general with educational philosophical orientations has been explored. Diverse philosophical assumptions have been identified by the polemic positions of subjectivists and objectivists, and the

educational philosophical orientations of romanticists, progressivists, and traditionalists have been described. It is from within these categorizations that the relationship between pre-service teachers philosophical orientations and PCI can be examined.

Silvernail (1992a; 1992b) used the Educational Beliefs Questionnaire to "assess beliefs about ... educational concepts from multiple philosophical orientations" (1992b, p. 667). These philosophical orientations were traditionalism, progressivism, and romanticism. Silvernail's work was based on, among others, Sirotnik (1979) and Kerlinger and Kaya (1959) who measured two "philosophical educational orientations" (p. 663) of traditionalism and progressivism.

Measuring Philosophical Orientations

A number of researchers have utilized a variety of instruments to quantify various aspects of beliefs and personal orientations. These instruments have facilitated the ability to understand, among other things, the degree of influence of these aspects of beliefs on PCI. In the same manner, a variety of approaches have been used in attempting to categorize beliefs about education into philosophical orientations. There is a strong research base of studies in which researchers have used 'philosophical orientation' categorizations of teachers' beliefs about education in order to understand some aspect of the teaching-learning process (Hiemstra,1988; Livingston et al., 1995; Martin et al., 2002; Owens, 1981; Silvernail, 1992b; Solomon et al., 1996; Zinn, 1991).

Several instruments have been used to measure teachers' philosophical orientations and beliefs about education. The advantage to teachers of using such inventories was that the data they generated laid the groundwork for understanding how

their beliefs and practices related to a consistent purpose of education. They also promoted critical thinking about dominant philosophies and practices.

In providing a means of identifying fixed philosophical orientations, Hiemstra (1988) discussed the process of discovering one's personal philosophy and how this translated into professional action. This writer was aware of the tendency to categorize philosophy within pre-structured formats, resting on assumptions that may at best approximate one's true philosophical position. Hiemstra's "Personal Philosophical Worksheet" explored beliefs about practice, and how they related to one's philosophical stance.

Lorraine Zinn (1991) produced a "Philosophy of Adult Education Inventory", based on a framework provided in 1980 by Elias and Merriam (as cited in Zinn, 1991). Zinn's inventory placed an individual in one of five philosophical orientations: radical (reconstructionist), humanistic, progressive, behaviourist, and liberal (traditional). Zinn's radical (reconstructionist) and humanistic orientations are more representative of subjectivist views of the world, while the behaviourist and liberal (traditional) orientations are more representative of objectivist views of the world.

Silvernail (1992b) set out the history of the development of three philosophical orientations into which teachers may be categorized, and presented an instrument for determining these orientations, the Educational Beliefs Questionnaire (EBQ). These philosophical orientations were evidenced by teachers' beliefs about key concepts of education (purposes of education, nature of curriculum content, methods of instruction, role of the teacher, and role of the student) that are prominent in the literature (Mitchell &

Sackney, 2000; Pajares, 1992; Parkay, Stanford, & Gougeon,1996; Samuelowicz & Bain, 2001; Silvernail, 1992a; Zinn, 1991).

The Educational Beliefs Questionnaire

Silvernail's Educational Beliefs Questionnaire (EBQ) (1992a) pertains specifically to pre-service teachers' beliefs about education. This instrument has been chosen because of its long, evolutionary history (this instrument resulted, as noted below, from a four decade long evolutionary process), because of its brevity in relation to other measures (20 items), because it has been designed for use in schools (as opposed to with adult learners), and because it has been used in empirical research.

Silvernail's (1992a) research focused on discovering teachers' philosophical orientations. Twenty Likert-scale items were used to indicate which of three orientations high school teachers in a north-east US state held. Silvernail's approach continued to refine a process that was grounded in decades of research (Kerlinger & Kaya, 1959; Ornstein & Hunkins, 1988; Sirotnik, 1979; Stone & Schnieder, 1965; Wright, 1980) by arriving at three orientations that represented the educational philosophies held by secondary school teachers. This questionnaire, the EBQ, will be used in the present study (see Appendix A). The philosophical orientations were traditionalism, progressivism, and romanticism. Details of these orientations and the concepts of education on which they are based have been defined above.

In Silvernail's (1992a) study, 284 secondary school teachers from three rural and two urban high schools, representing 86% of the eligible teacher population, completed the EBQ. Ninety-two percent had earned at least a baccalaureate degree, and teaching

experience ranged from 1-34 years, with an average of 13.87 years. Fifty-two percent were male. Twenty-eight percent taught mathematics or science, an equal number taught English or social science, and the remainder taught the full range of high school subject areas.

The results of the study revealed that there was a significant difference at the .01 level between the mean scores of all three subscales for this group of teachers. This was determined through the use of a series of *t* tests. They agreed most strongly with the progressivist orientation (mean = 4.19, SD = .44), and least strongly with the romanticist orientation (mean = 3.43, SD = .57). The traditionalist orientation scores (mean = 3.73, SD = .56) were between progressivist and romanticist scores. There was no report of the number of teachers who scored highest in each of the orientations. The sample indicated that they held fairly strong beliefs consistent with each of the three philosophical orientations. Silvernail believed that one explanation for how this could be was that teachers might not have developed an internally consistent set of educational beliefs for themselves. This may be further evidence that teachers often do not have a working knowledge of how their educational philosophy impacts their practice.

Theoretical and Practical Applications.

The preceding sections have described the foundations of philosophies of education and their categorizations and measurement with respect to three philosophical orientations. This section will further clarify each of these orientations through an examination of beliefs held by prominent proponents such as Rousseau, Dewey, and Hirsch. This section also presents arguments against each of the views of education,

primarily in a traditionalist and progressivist/romanticist dichotomization, as seen by those holding the opposing philosophy of science position. It is also evident, though often not explicit in the following discussion, not only what the philosophical orientations of those educators beliefs about education are, but what their PCI appears to be, as well.

The romanticist orientation to education places the interests and capacities of the child at the centre. Perhaps the most prominent illustration of such an approach to education is Rousseau's *Emile* (1762/1969). The naturalistic view towards education portrayed in this book indicated Rousseau's belief during this period of his life that the good inherent in humans would develop if not corrupted by external influences of vice and error. Rousseau acknowledged that this type of development, idealistic though it is in its fictionalized state, required the sacrificing of individual excellence that might be achievable through the interference of external influences that teach the student what he did not discover for himself. Rousseau believed that this type of education brought one closer to natural goodness and harmony. There is a strong suggestion of humanistic PCI in Rousseau's approach, as expressed in his writings. It appears that Rousseau did not move beyond the conceptual stage of this idealistic philosophical approach; he abandoned his children at birth, and lost most of his friends through their non-compliance with his insistence that they befriend only those who favoured his views (Fonseca & Ussher, 2003).

A. S. Neill (Summerhill School) provided another prominent example of the romanticist approach to education. He founded Summerhill school in the U. K. in 1921 as a child-centred approach to education. The school claims that it is not about creating 'products'. Its aim is to allow children to be themselves. The staff at Summerhill view as

their mission the task of providing choices and opportunities that allow children to develop at their own pace and to follow personal interests. Summerhill claims that it does not aim to produce particular types of people, with specific skills or knowledge assessed in a particular manner. It aims to provide an environment where children determine who they are and who they want to be. As one student put it, referring to systematized education outside Summerhill, "We are precisely the 'useful people' their curricula is designed to produce! And we are happy and productive to boot" (Summerhill School). Neill appears to have set a humanistic PCI tone at Summerhill.

While Summerhill is widely seen as an example of a child-centred romanticist approach to education, several challenges appear on closer examination. There is a claim of free choice, yet there are clear delineations of how and when the weekly school meetings occur, who may speak, and who can attend. There is still governance, and a systematized hierarchy, with Zoe Readhead (Neill's daughter) as head, and teachers, house-parents, classrooms, and so forth. Some might argue that despite its unorthodoxy, these institutional trademarks prevent Summerhill from being a true example of romanticist education.

Other well-known educational theorists and practitioners held beliefs similar to Rousseau and Neill. Pestalozzi (1746-1827) valued the role of child-centred activity, as opposed to rote learning. Froebel (1782-1852) saw education as part of cosmic evolution, with stress on the individual's inner development towards full self-consciousness. Montessori (1870-1952) believed that children in an environment rich in manipulative materials would teach themselves. These early thinkers were all seen as being on the romanticist wing of child-centredness.

Dewey (1938) brought to the spectrum of philosophical orientations the sociological element absent from Rousseau and his successors. This hallmark of progressivism distinguishes Dewey from the romanticists. Because to Dewey education was a social and political endeavour, he was critical of the individualism of the romanticists. To him, the relationship of the individual to the life of society was crucial. In this perspective the teacher was the leader of group activities, whose "suggestion is not a mould for a cast-iron result, but is a starting point to be developed into a plan through contributions from the experience of all engaged in the learning process" (p. 72).

According to Dewey (1918), education did not simply shadow the child's natural growth. Appreciation of society's common needs and the wisdom of sharing them as widely as possible would cause education to break down stratifications and distinctions. His stand against the creation of these barriers through the romanticists' individualized interpretations of and response to reality was clarified in his dismissive position regarding the possession of individualized personal truth. Dewey's PCI appears to require that the teacher at times direct, so it is likely that while humanistic, it would be closer to custodialism than Rousseau and Neill.

More recently, Mortimore (1992) examined the role of the teacher in an approach that aligned with the progressivist orientation. A progressivist teacher could organize, analyze, synthesize, present, assess, manage, and evaluate. Such a teacher valued input from students in a context that empowered both student and teacher decision-making. Mortimore identified intellectually challenging teaching, achievement focused environment, maximum communication, parental involvement, and unprejudiced expectations among the attributes present in the practice of progressivist teachers. This

researcher concluded that there was some difficulty in getting U. K. ministerial officials to pay attention to the body of research that supported such non-traditional theories of school effectiveness and improvement.

Writing from the traditionalist perspective, O'Hear (2000) saw the progressivist philosophy as omnipresent in Britain over the past 30 years and in contrast with the traditionalist approach to education of "teaching from without of the best that has been thought and known, regardless of the child's immediate interests, social needs in general or immediate applications of what is learned" (p. 149). In comparing the relatively poor core subject academic scores of schools in the U. K. in relation to Pacific Rim Schools, O'Hear (2000) suggested that awareness of philosophies had moved the focus away from subjects to be learned and disciplines to be acquired, toward the mental structure, development, and environment of the child.

The traditionalist orientation was clarified at the National Education Conference of 1938 (Gutek, 1988). This declaration was made as a reaction against the "excesses of progressive education" (p. 257). Items (3) and (4) are particularly relevant to PCI.

> (1) The elementary curriculum should emphasize basic skills that contribute to literacy; (2) the secondary curriculum should include history, mathematics, science, literature and language; (3) discipline is necessary for systematic learning to occur in school situations; (4) respect for legitimate authority, both in school and in society, is a value to be cultivated in students; (5) the mastering of a skill or a subject requires effort and diligence on the part of the learner; (6) the teaching of these necessary skills and subjects requires mature and

well-educated teachers who know their subjects and are able to transmit them to students. (pp. 257-258)

William Bagley, a professor of education at Columbia University, in supporting this position, indicated that American schools were falling behind those of other countries, there was too much demand for remedial programs in high schools, math and grammar skills were deficient, and crime rates were increasing, despite increased educational expenditures. He stated that theories such as progressivism were enfeebling the nation, and that social promotion was becoming prominent (Bagley, 1938). Descriptions of this orientation to education use pupil control terms such as training, discipline, and obedience. Bagley's PCI was clearly oriented toward custodialism.

As evidenced in Bagley's sentiments, not all were willing to look for a philosophical or non-traditionalist theoretical understanding of the educational process. They assumed it was not necessary to expand one's view beyond particular epistemological and ontological positions, and dismissed the relevance of philosophy in relation to knowledge. With a set of philosophical assumptions opposite to those of constructivists, Bagley urged teachers to focus on pre-constructed knowledge and on imparting information. He believed that education required knowledge reproduction and was teacher-centred.

Hirsch (1996) has been a strong voice for the traditionalist orientation to education. Hirsch, O'Hear, or Bagley would not likely refer to this approach to education as a 'philosophical' orientation. This appears to be consistent with the objectivist stance of Popper (1968). Popper stated that philosophers who do not work within the pre-existing and generally accepted objectivist framework, or who dispute the foundations of

knowledge because it may be impacted by perceptions, have no valuable role to play in "the advancement of knowledge of the world" (p. 19). Hirsch believed that good education rested in high levels of teacher control of students, preservation of independent knowledge, definite and responsible learning goals, explicit focus, and secure and universal learning. Good education was about transmitting knowledge from the teacher to the student, rather than about the student acquiring formal intellectual skills. Education centred on a common curriculum, provided a means for the advantaged to progress faster, and improved the lot in life of the disadvantaged. Regarding philosophy and education, Hirsch stated that learning how to learn was, in reality, a non-existent abstract concept which must give way to attaining a canon of factual knowledge. When philosophy of education considerations were expanded to include participation, negotiation, and democracy, O'Hear and Hirsch believed that school performance declined. Hirsch's PCI is evident through his stated view of high control of students by the teacher, and would likely be highly custodial.

Intolerance of Philosophical Orientations

Not only did educators hold views about education that were consistent with philosophical orientations, they also held strong views about the problems with other orientations to education, as has already been evidenced in Bagley's (1938) views of progressivism. O'Hear (2000) provided a critique of the romanticist and progressivist positions from a traditionalist orientation. He, with a hint of cynicism, indicated that Rousseau's romanticist view of education was exemplified by "doing and discovery at the expense of reading and being taught, together with a hatred of the existing order of

things, particularly its competitiveness and elitism from which the child must at all cost be protected" (p. 138).

O"Hear (2000) believed that Dewey, like Rousseau, would have accepted mediocrity as a consequence of his view of education. What O'Hear did not address was his own interpretation of mediocrity, which was framed by traditionalist, objectivist assumptions. He viewed mediocrity as comparatively low quantitative scores on tests that measured the ability of the child to assimilate facts and skills required within the traditionalist approach to education. A broader view of mediocrity would, for instance, hold that an education system that met the needs of only those students who excelled in mathematics, science, and language, while placing less importance on the needs and potential of other children, was also mediocre.

O'Hear (2000) concluded his article with these sarcastic comments: "(for haven't we learned that childish spontaneity and experiment is of far greater experiential and educational worth than the absorption of information and solutions provided by others, teachers and the like)" (p. 155)? He stated that traditionalists feared that anarchy and incoherence would result from a society as egalitarian, democratic and multicultural as that envisioned by romanticist progressivists.

Writers such as Bloom (1987) and Hirsch (1996) have objected strongly to positions underwritten by philosophy of science assumptions that are more closely identifiable with a subjectivist approach. In Hirsch's opinion concerning the state of American education, romantic progressivism was dominant and corrupting. He advocated the rejection of its myths. "Romantic progressivist" (p. 68) educators were, according to Hirsch, the antithesis of effective education. They "persist in advocating the very antifact,

anti-rote-learning, antiverbal practices that have lead to poor results..." (p. 69). He claimed that there was no research to sustain their pedagogy, that this all sprang from Teachers College of Columbia University, and that it did not represent the views of the public. In his attack on romantic progressivism, he discounted education that found meaning in varied methodologies to accommodate multiple intelligences (Gardner, 1985), claiming that there was no empirical evidence for the existence of these intelligences.

Conversely, other non-traditionalist writers see traditionalist orientations as an attempt to legitimize 'vested interest' sustaining iterations of education (Hanushek, 1994; Purkey & Novak, 1984; Sarason, 1995). Bates (1992) pointed out that the goal of those with vested economic interests was the perpetuation of the current economic order for as long as possible. Bates stated that to achieve such a goal, the universal interests of society must be subordinated to the partial interests of the economy. Challenges to traditionalist views are also presented by other educators and theorists (Argyris & Schon, 1978; Bacharach, 1988; Hodgkinson, 1988; Johnston, 1999; Maxcy, 1995; Slater, 1995; Young, 1999).

Policy, Socialization, and Pupil Control Ideology

Hoy and Rees (1977) described bureaucratic socialization as the attempt by bureaucratic organizations such as schools to mold ideologies and performances of personnel to fit a role that corresponds with the beliefs, values, and norms of the organization. Essentially, socialization occurs when the personal characteristics of an individual interacts with the culture of the institution (Blust & Willower, 1979). It is in

the context of these socializing influences exerted by the bureaucratic school organization that the variable clusters discussed above interact with the PCI of pre-service teachers.

Two factors are particularly important in understanding socialization in this context. They are the characteristics of the individual and the norms of the workplace (Lortie, 1975). The personal characteristics of pre-service teachers as described in the variable clusters have been examined above. In the following sections literature will be reviewed concerning the role and characteristics of policy. Most importantly, the socialization patterns that arise from these roles and characteristics of policy will be examined as well.

The Impact of Policy on Socialization

There is a strong linkage between 'above the school' policy making, 'school level' policy implementation, and school and classroom level assumptions, roles, and norms (Creemers & Reezigt, 1996) that create the context into which pre-service teachers are socialized. Educational policy supports the norms and expectations that shape what 'experienced' teachers do in the classroom, including how they control pupils.

The presence of such policy and its influence on pre-service and experienced teachers alike is evidenced by practice consistent with the theory of custodial pluralistic ignorance (Blust & Willower, 1979), which bears some resemblance in the impact it has on pre-service teachers to Hoy's (1967) anticipatory socialization. Blust and Willower documented the shared misperceptions held by beginning teachers of the higher degree of custodialism of more experienced teachers and principals. They concluded that this was related to the changes towards custodialism that occurred in beginning teachers' PCI.

These researchers theorized that such custodial pluralistic ignorance arises from an awareness by teachers and principals that since there are expectations from the 'above the school' level of relatively strict pupil control, relatively strict pupil control is what teachers and principals display in places of high visibility. These displays do not necessarily represent the actual PCI of these individuals, but rather expectations arising from policy makers at the 'above the school' level.

In Blust and Willower's (1979) study, 95 secondary teachers from four schools completed PCI forms for themselves and one on their principal, and one describing the 'typical colleague'. Consistent with Blust and Willower's (1979) custodial pluralistic ignorance theory, teachers rated their colleagues as significantly more custodial (70.8) than a sampling of the colleagues rated themselves (56.8), $p < .01$, and they rated their principals as significantly more custodial (64.5) than the four principals rated themselves (52.5), $p < .01$.

The Nature of Policy

Reed (1999) summarized educational policy as the official view of effective education, what changes are necessary, how they are to be implemented, and so on. Since policy is implemented at the school level, it plays a prominent role in shaping the norms and assumptions of the bureaucratic institution into which pre-service teachers are socialized.

The nature of educational policy reviewed here is consistent with the view presented by Manzer (1994), who stressed the "typologies" and "substantive meanings" (p. 7) of educational policy across a jurisdiction. An examination follows of the

significance of the very presence of policy in the education process, as well as the 'typologies' and 'substantive meanings' of educational policy as a reflection of a particular view of the world held by policymakers.

Presence of policy.

A number of writers (Bottery, 1999; Brooks, 1996; Pal, 1997) have indicated that while policy itself is a tool of different philosophical orientations, the very use of centralized education policy is itself indicative of an objectivist philosophy of science position. Young (1999) suggested in relation to educational policy formulation what Kuhn (1970a) had postulated and Burrell and Morgan (1979) had clarified about paradigms and organizations generally. Educational policy research, and resulting policy, has been built on assumptions, norms and traditions that institutionalized the traditionalist orientation. These assumptions, norms, and traditions have framed the context for what many policy makers believe is the "appropriate way to undertake educational policy research" (Young, 1999, p. 678).

Marshall (1997) took a more pointed view concerning the traditional role of policy: It is only within the traditionalist approach to education that policy-making played a role at all. Marshall argued that by definition, the presence of policy represented positivistic and objectivist philosophical assumptions. When one operates within the framework of policy, one becomes subjected to the norms and assumptions of those from whom the policy emerged in the first place. She saw the tool of policy as an instrument for perpetuating the traditionalist approach to education.

Hansen (1994) was very clear about the socialization process, stemming from 'perpetuating traditionalist policy' as it pertained to the efficiency of the school. It was necessary for individuals within the organization to perceive and understand the relationship between their own goals and objectives and those of the organization itself. In so doing, individuals would understand that their approaches to educational practice would either further or hinder the aims of educational organizations. Hansen indicated that it was very important for the administrators of educational jurisdictions to frequently review these relationships and their importance to the overall effectiveness of the system. Administrators were thus empowered to identify and attempt to modify practice that would create resistance or friction in the organization by becoming a source of unfocused or diffuse energy.

Consistency of policy.

The 'typing' of policy is consistent with the research done by Manzer (1994). According to Manzer, there is a "degree of collective consciousness" within policy (p. 4). Manzer indicates that there are themes or ideas incorporated into policies to make them what they are. Although these themes are not "articulated in formal philosophical and theoretical language by participants in ...policy-making" (p. 6) jurisdictional policy is potentially philosophical in nature. In order to perceive such philosophies, "typologies" (p. 7) are needed to understand the "theories, beliefs, doctrines or principles that might provide the substantive meanings" (p. 7) of policies.

The internal consistency of policy, that is, consistency between and within policies of a particular jurisdiction (Pal, 1997) that allows 'typing', results from the

shared vision of the jurisdiction (Hodgkinson, 1983) and the perceived purposes of education in the culture within which the jurisdiction operates (Dewey, 1897). This consistency allows policy to be discussed as a consistent and unified expression of the shared beliefs the policymakers hold about education. These beliefs, manifested in educational policy enacted in the classroom, create the norms into which pre-service teachers are socialized, and their PCI shaped.

Predominant 'type' of policy.

Critique of policy type frequently comes from those with a non-traditionalist view of education. Often this critique does not consider the positive aspects of policy, and its tangible effects on the day to day lives of those who are influenced by such policy. Such critique may appear polemic when perhaps a more reasoned approach would be dialectical in nature. In this section, therefore, it is important that the identification of a predominant 'type' of policy not be confused with the labelling of that policy type as exclusively good or bad in relation to education.

Bates (2001) and Boyd (1999) argued that within schools, interests of students were subordinated to the needs of the market economy. Bates believed that most educational policy was grounded in traditionalist philosophical assumptions, which in the larger world are consistent with what Burrell and Morgan (1979) referred to as the structural functionalist paradigm. From this perspective, the interests of the political and financial elite are given higher priority than social interests in the shaping of the education policy. Writers such as Bottery (1999), Lambert (1995), and Pal (1997) suggested that educators who enacted such policy uncritically lent their expertise to

perpetuating the economic agenda that may not always be consistent with the social needs of individuals within society.

Hodgkinson (1983) indicated that there was no such thing as tabula rasa for the policy maker. "Policy makers come to the table prejudiced and predisposed." (p. 8). Policy makers are often unaware that their views are determined by a set of philosophical assumptions that are not universally held.

Ability to detect the presence of philosophical orientations embedded in educational policy provides stakeholders with a means of understanding the purposes and the methods of education in that particular culture. For example, Stoll and Fink (1998) cited the New American School Development Corporation's (NASDC) "twenty-first century" schools competition as an example of structural-functionalist views of education in society directing educational policy. They indicated that an analysis of this competition leads to the conclusion that the school improvement strategies most highly valued, as indicated by funding, were aligned with the economic interests of the culture, as opposed to its social interests.

Mechlenberger (1992) reviewed the NASDC competition, and reported the absence of non-traditionalist ideas in the eleven winning projects. He suggested that pressure from economic interests, which most strongly influenced the views of society concerning the purposes of education, prevented the incorporation of new approaches to education.

While the economic interests of the culture may have been most highly valued in these approaches to education, it does not necessarily follow that its social interests are therefore sacrificed. Many would argue that the social interests of individuals are best

cared for when economic resources generated in the economy are available. Referred to as 'trickle-down economics' or the 'invisible hand' (Alexander & Salmon, 1995), such views of the facilitating of social interests through economic gain is consistent with traditionalist approaches to education.

Bottery (1999) pointed directly to economic interests of the elite as outweighing social interests in the formulation of educational policy. According to Bottery, those with power and money were most interested in fostering economic wealth within nations. The global pressure to compete in order to foster economic wealth usually dictated education policy. *A Nation at Risk* (Gardner et al., 1983), the defining 'traditional school effectiveness' work commissioned by the U. S. Department of Education, typified this approach to education. Math and Science were more important than a "curricular smorgasbord" (p. 18). Opportunities for the development of excellence in 'smart' students were more valued than the equitable fostering of diverse potential of all students.

As indicated, policy may be typified as objectivist and traditionalist in nature. The potential benefits of the outcome of such policy must be considered. For example, from within 'invisible hand' economic theory (Alexamder & Salmon, 1995), the basic physiological needs for safety and security may be more likely to be cared for across the population for all members. This may occur when as a result of traditionalist policy, 'gifted' individuals rise to the top, and generate residual economic benefit for those dependent on the state supported social security net. Consistent with Maslow's (1970) 'hierarchy of needs' theory, higher self-esteem and self- actualization needs may be more likely achievable by those whose basic needs have been met.

The Ontario Experience

The characteristics of policy as described above (the tendency to be internally consistent, to be traditionalist, and to be influenced by economic as opposed to social interests) are evident in the shift in Ontario over the past couple of decades towards a custodial educational orientation. Bedard and Lawton (2000) provide an excellent overview of Ontario education policy that helps in understanding the political realities that led to this shift.

By the 1960s, Ontario's population had grown to a largely urban base, creating significantly increased revenues from a newly established industrial economy. Within this milieu, public values supported a liberal welfare society that favoured progressive, diverse education. By the 1980's, with increasing debt, deficit, and taxation, issues of standards, accountability and efficiency became prominent in education debate. Schools did not necessarily lose student focused benefits from the preceding era, such as increased emphases on special education, the role of women, and retention. However, Bedard and Lawton (2000) reported on the emergence of policy that resulted in a higher emphasis on regulation over deregulation, monopoly over competition, hierarchy over local initiative, and uniformity over adaptation. The number of school boards was reduced, texts and tests were standardized, and the range of classroom activities reduced. Societal order was more highly valued than individual liberty.

This shift towards a traditionalist educational orientation consistent with custodialism intensified in the early 1990's with the appearance of the Royal Commission on Learning (RCOL). Through the RCOL report *For the Love of Learning,* government attempted to reign in the duplication of services, decentralization, lack of standardization,

and to vest some of these issues in central authority. This policy initiative indicated that the economic system was forcing a move towards traditionalist education, as evidenced, for example, by standardized curriculum and testing, and away from power at the board, school, and classroom level.

During the mid-1990's, the Conservative government used the RCOL as the basis for a further shift to the right, and closer identification with traditionalist education. A small group of inner-cabinet colleagues focused on centralization and standardization of collective bargaining, finance, governance, oversight, curriculum and assessment (Bedard & Lawton, 2000). With a change in government during the Fall of 2003, it appears that there is a move away from the highly centralized and standardized position established by the Harris Progressive Conservative government (1995-2002). This change was signalled during the Speech from the Throne (2003). Time will tell whether these initiatives will actually change the shape of education in the classroom.

The Impact of Socialization on Pupil Control Ideology

In relation to socialization during pre-service teacher education programs, three positions exist concerning changes to PCI. Some researchers, including Hoy (1967), Hoy and Rees (1977), Jones and Harty (1981), Hoy and Woolfolk (1990), Jones (1982), and Lunenburg (1986) held that pre-service socialization was influential, and concluded that the pre-service program moved pre-service teachers towards a more custodial approach. Others, such as Stiscak (1987) reported just the opposite, that while the pre-service socialization had a strong influence, as teachers become more involved in the classroom they become more humanistic. The third position, reported by researchers such as

Tabachnick and Zeichner (1984), and Lortie (1975), is that the pre-service socialization experience was outweighed by more prominent factors such as exposure to teaching styles that pre-service teachers experienced from their teachers when they were students themselves, and therefore had little or no influence on the PCI of pre-service teachers.

The dominant empirical position in the literature is that during pre-service socialization, pre-service teachers' PCI become more custodial (Hoy, 1967; Hoy & Woolfolk, 1990; Jones & Harty, 1981; Lunenburg, 1986). Hoy (1967) and Stiscak (1987) reported that progressive views of education flourished and were encouraged in university faculties of education. Pre-service teachers shifted to more traditional views of education as they found themselves more influenced by the 'practical' demands of their prospective employers than by the more idealistic university views. Pre-service teachers often realized that custodial PCI was necessary in order for teaching goals arising from prescribed curricula to be accomplished. Willower et al. (1967) had earlier reported that experienced teachers tended to oppose the humanistic approach, emphasizing instead rigid control of students and custodial ideology. Additionally, Hoy (1967) identified anticipatory socialization, which occurred as pre-service teachers reacted to their understanding of what to expect from experienced teachers and prepared for how to accommodate these expectations. These influences resulted in a change towards more custodial PCI as pre-service teachers gained classroom experience.

Specifically, Hoy (1967) hypothesized that for all teachers and for elementary and secondary teachers separately, scores would be significantly more custodial after the socialization of the student teaching experience. Two hundred and eighty-two student teachers (130 elementary, 152 secondary) participated in this study. Pre- and post-eight

week practicum PCI scores were collected. All three hypotheses were supported. For all student teachers 'before' scores (mean = 44.688) were lower than 'after' scores (mean = 48.07), $t(281) = 8.74$, $p < .001$. For elementary student teachers, 'before' scores (mean = 42.25) were lower than 'after' scores (mean = 44.262), $t(129) = 4.17$, $p < .001$. For secondary teachers 'before' scores (mean = 46.77) were lower than 'after' scores (mean = 51.33), $t(151) = 7.95$, $p < .001$. While it appears that there was a difference between the 'before' scores of elementary and secondary student teachers, the researchers did not provide an analysis of the data that would confirm this.

Hoy and Woolfolk (1990) pointed out the socialization pressure that comes from pre-service teachers' knowledge that they must demonstrate their abilities in the classroom under the eye of the associate teacher and the supervising teacher. Often the associate's and supervisor's focus was on the neophyte teacher's ability to control the class. Brophy and Good (1986) demonstrated this by identifying the belief among many educators that the classrooms of effective teachers are characterized by order, organization, and efficient rules and procedures.

As further evidence of the socialization pressure that exists in schools, Lunenburg (1986) reported in a study of 146 pre-service teachers that the PCI scores of associate teachers were higher, both before and after (54.09 and 54.83 respectively) they worked with the student teachers, than the pre-service teachers' 'before and after' scores (50.99 and 54.18). It is important to remember that while scores below 50 are generally considered to be more humanistic and scores above 50 more custodial, the shift towards humanistic or custodial PCI during the pre-service program is more important than the actual scores themselves. Consistent with Hoy's (1967) anticipatory socialization theory,

Lunenburg suggested that the pre-service teachers shift towards a more custodial PCI was an indication of the socialization pressure placed on pre-service teachers to conform to the dominant custodial approach in schools if they wished to ascend into the ranks of these schools. Lunenburg concluded that since the authoritarian associate teachers were the ones providing the evaluations for the pre-service teachers, this may have caused a perception among pre-service teachers of the advisability of conforming to the associate teachers' pupil control ideology.

As a means of neutralizing the socialization process, Jones (1982) recommended a higher degree of awareness among pre-service teachers. Jones suggested that pre-service teachers, who tended to be more humanistic, should be made aware of the characteristics and procedures that secondary teaching situations present that would likely make them more custodial in their approach, and of the value of humanistic pupil control ideology. Jones indicated that cooperating teachers should be made aware of the impact their approaches would have on their student teachers.

Not all studies have indicated a move to custodialism by pre-service teachers during their pre-service program. Steinberger's (1984) primary focus of investigation was whether pre-service teachers' perspectives on pupil control, and also on teaching concerns, changed during the student teaching practicum. She was also concerned with the direction of any such change. A pre- and post-test design was used to administer the PCI Form, the Teacher Concerns Questionnaire (TCQ), and the Rokeach Dogmatism Scale to pre-service teachers before and after the practicum. The results of *t* tests for dependent samples showed that teachers became more humanistic during the practicum

(Pre-test: N = 19, M = 51.95, SD = 5.33. Post-test: N = 19, M = 50.00, SD = 5.67), t = 1.95, $p < .05$.

There was a significant correlation between the PCI and the Dogmatism Scale in the pre-tests (N = 19, $r = .57$, $p < .05$), but there was no significant correlation in the post-tests (N = 19, $r = .27$, $p > .05$). This may indicate that teachers' beliefs about control of pupils may change significantly faster than another component of their belief system, their orientation to openness and closedness, as measured on Rokeach's dogmatism scale.

The anomalous results reported by Steinberger (1984) may have been impacted by three factors. Firstly, Steinberger reported that the schools in which the student practice teaching was conducted were noted for their open nature. Openness in schools has been associated with humanistic PCI (Moretz, 1997), and therefore the impact of influences such as anticipatory socialization (Hoy, 1967) may not have been strongly towards custodialism. Secondly, the pre-service teachers were in the elementary area. Willower et al.'s (1967) findings supported their rationale that elementary schools provided more opportunities for personal interaction, and there may be less threat to status (one of the causes of the shift to custodialism) from elementary students. Thirdly, Steinberger reported that professors at the school of education, University of Pittsburgh, (the home university of the participants in the study) were aware of the need for students not to be systematized in their pre-service program towards any particular ideology. Additionally, Steinberger does not indicate whether the t tests performed were one-tailed or two-tailed. If they were one-tailed t tests, then unless Steinberger had a sound theoretical argument for this approach, because these results were against the trend, they

would have to be considered with caution. The small size of the sample (N = 19) may also be cause for caution.

The third position regarding the impact of socialization on PCI was presented by Tabachnick and Zeichner (1984). In this study of the socializing influences on elementary student teachers, 40 elementary teachers were administered a 47-item Teachers Belief Inventory (TBI), developed by the researchers, in order to assess the student teachers' beliefs in relation to key aspects of education. From this group of 40, 13 student teachers were selected for more intensive study. This group of participants represented the urban and suburban nature of the settings, the primary and elementary grade levels, and school organization pattern in which the student teachers worked. All 13 were female. They were interviewed at least five times each, and observed while teaching at least three times each.

The analysis of data collected during these interviews and observations resulted in the identification of three sets of perspectives that were labelled as conservatively traditional, progressive, and a mixture of both. Additionally, profiles were developed for each of the teachers that reflected their perspectives at the beginning of the program. The key questions of the study were "To what degree did the teaching perspectives of student teachers change during the course of the 15-week semester? To what degree did any initial differences in student teachers perspectives disappear by the end of the semester" (p. 33)? A qualitative examination of the impact of the practicum experience on these profiles was completed at the end of the practicum. The data indicated that student teaching did not significantly alter the teaching perspectives the student teachers brought to the experience. Further, student teachers' perspectives did not become homogenized as

a result of student teaching. Tabachnick and Zeichner concluded that the influences of teaching models internalized through the thousands of hours spent as a student in the classroom was the primary influence in the socialization process. According to these researchers, perspectives concerning teacher-pupil relationships held by student teachers at the beginning of the program were not changed by their student teaching experiences.

Consistent with the conclusions reached by Tabachnick and Zeichner (1984), Stiscak's (1987) doctoral research hypothesized that there would be no significant change in the pre- and post-test scores for the PCI Form. Stiscak investigated the impact of a four-week pre-service teaching block on 29 elementary pre-service teachers concerning their perspectives regarding teaching, pupil control, and teacher preparation. Pre- and post-practicum PCI Form and Teacher's Concern Questionnaire (TCQ) were administered to each of the pre-service teachers. Additionally, each of the participants was interviewed following the teaching block. In relation to PCI scores, the participants were slightly custodial at the beginning (Mean = 51.6), with no change after the teaching experience (Mean = 51.2), $p > .05$. Since there were no significant changes in PCI, Stiscak's hypotheses were confirmed.

Stiscak (1987) concluded that teachers' perspectives, as represented by the PCI scores reported above, remain largely unchanged during early field experience. There was no significant shift in PCI because students entered the program with a well-established set of perspectives, derived from their time as elementary and high school students, which were relatively unaltered by their student teaching experiences. Ongoing practices concerning pupil control continue, since teachers' actions concerning the control of pupils in the classroom reflect their beliefs about the role of pupils.

A critique of Stiscak (1987) leads one to consider the possible causes of these results, which appear not to fit the more frequently occurring pattern of humanistic to custodial shifts in pre-service teachers' PCI. The practice teaching occurred in schools noted for their openness, and openness has been associated with humanistic PCI (Moretz, 1997). The findings were based on elementary level pre-service teachers, where there tended to be less of a shift to custodialism (Willower et al., 1967). There was an awareness by professors at the school of education, University of Pittsburgh, where the study was conducted, that pre-service teachers should not be systematized in their pre-service program towards any particular ideology (Steinberger, 1984). Finally there was a small sample size (N = 29) which may lead to a Type II error.

Managed Socialization

A number of researchers, including Hoy (2001), Hoy and Jalovick (1979), Jones (1982), Lunenburg (1986), Pajares (1992) Parkay, Stanford, and Gougeon (1995), Prawat (1992), and Strike and Posner (1992) have explored various approaches that school administrators believe would maximize the benefit of the socialization process. School administrators believe that socialization should ensure that the goals of the bureaucratic, systemized education process are furthered (Hodgkinson, 1983; Marshall, 1997; Young, 1999). They often believe that changes in teachers' approaches to education could be manipulated at the practice level, as opposed to attending to the underlying philosophical orientations to education held by teachers.

In order for academics to accept what Samuelowicz and Bain (2001) referred to as higher order constructivist methods, Strike and Posner (1992) suggested they might

need to undergo a change in beliefs orientation. Such a change may require a conceptual change, that is, a fundamental shift in their educational assumptions and values. According to Prawat (1992), teachers were unlikely to undergo significant change in practices, many of which embraced larger pedagogical responsibilities, without undergoing significant change in their beliefs.

Hoy (2001) believed it was easier to select individuals with 'appropriate' characteristics than to change their beliefs about education. Research has found that beliefs about education may be difficult to change (Fang, 1996). "The resistant-to-change nature of educational beliefs...is a recurring theme" (Pajares, 1992, p. 324). Hoy (2001), in taking the stand that the preferred approach to education is the humanistic one, suggests the option that teacher selection could focus on characteristics that will facilitate this goal. The "selection of open-minded teachers [is] likely to be helpful in muting the custodial edge..." (p. 432). Hoy gives voice to the concern over legal challenges that might arise from teachers whose orientations are not 'appropriate' for this approach to teaching. These teachers may feel they are being denied the right to work due to such selection.

Despite research to the contrary it was sometimes assumed that teachers' beliefs could be easily and effectively directed and controlled. For example, textbooks for prospective teachers instruct them on determining one's philosophical orientation as the basis for one's beliefs and practice in relation to key education concepts. Parkay, Stanford, and Gougeon (1996), authors of one such popular text, offered a 'how to' for identifying beliefs orientations. They suggested that in the real world there were several factors that influenced teachers' classroom practice, "such as political dynamics, social

forces, the expectations of one's immediate family or community, and economic conditions" (p. 200). The writers concluded that usually an eclectic philosophy, one that accommodated these influences, was the safest route to survival as a teacher. The implication seemed to be that teachers would be wise to adjust their beliefs accordingly.

Consequences of Ignoring Teachers' Beliefs About Education

Parkay, Stanford, and Gougeon (1995) suggested that the socialization process for pre-service teachers could be facilitated by simply choosing an educational philosophy that fit the school context. Wiley (2000) reported that in such cases, where teachers were expected to participate in the long term in approaches to teaching that were not supported by their beliefs about education, significant stress might emerge for the teacher, with dire consequences. Wiley indicated the severity of this issue by suggesting that an ever increasing proportion of teachers suffered serious illnesses or died because of primarily stress-related causes. Feelings of powerlessness, low autonomy, low participation in decision-making, and punishment by administrators who may be authoritarian and rigid were likely causes of stress. Two of Wiley's five recommendations for reducing stress spoke to the conflict that often existed between teachers' beliefs and official policies that perpetuated the socialization process by political interference rather than pedagogical wisdom. She recommended soliciting teacher input in decision-making and allowing teacher involvement in goal setting.

Dewitt (1999) pointed to the stress teachers faced as a result of the conflicts between seemingly antithetical policies of the school system, and personal beliefs about teaching and learning. Tension arose when placing into practice one's philosophy of

education in a system governed by a differing public philosophy. To illustrate such misalignment, Dewitt (1999) provided an example of constructivism in a technocratic system. Constructivist teachers who questioned educational technocratic orthodoxy were often labelled as troublemakers, and as presenting challenges to legitimate authority. Dewitt pointed out the reality that as teachers became exposed to varying philosophies of education, it was necessary for them to consider the various purposes of learning. Personal tension arose from attempting to reconcile jurisdictional mandates regarding education's purpose and one's belief that education might, in fact, be about humanistic outcomes, as opposed to economic and enculturation goals. According to Dewitt, such goals are evident in much current jurisdictional policy.

If, as a result of the socialization process, teachers continue to act in contradiction to their true beliefs about education, it may eventually cost them their long-term health (Wiley, 2000). On the other hand, if they ignore policy that shapes the school culture into which they are to be socialized, it may cost them their reputation as good teachers (Bauch & Goldring, 1998), or their jobs (Education Statutes and Regulations of Ontario 2003, 2002). Simply put, teachers may appear to be more successfully socialized in the short term if they profess beliefs held by more custodial, systematized educators. This approach may yield significant negative consequences in the long term.

Underlying Theories

Theory often provides a framework that affords deeper understandings of the observable patterns of human endeavour. In this study, understandings of findings reported in the review of literature may be enhanced by considering them in the context

of two theoretical camps which deal with different aspects of learning and behaviour. One of these camps is best represented by the concept of an internally oriented framework (for example, cognitive dissonance) and the other by an externally oriented framework (for example, social impact theory).

Within the internally oriented camp, Festinger (1957) proposed the theory of cognitive dissonance to explain change. According to this theory, when there is a conflict between beliefs and behaviour, the dissonance may be resolved by acquiring new beliefs or by changing behaviour to be consistent with beliefs. The internally oriented camp is also somewhat consistent with Piaget's mechanisms of assimilation and accommodation. Assimilating involves interpreting events so that they are consistent with existing cognitive structures. Accommodating involves changing one's cognitive structures to make sense of the situation or environment. Such accommodation often requires one to acquire new cognitive structures.

From the perspective of the more externally oriented camp, the social learning theory of Bandura (1977), similar in many regards to the social development theory of Vygotsky (1978), stressed that individuals learned by observing and modeling the behaviours, attitudes, and emotional reactions of others. This theoretical camp also includes the basic tenets of Latané's (Latané, 1981; Aronson, Wilson, Akert, & Fehr, 2004) social impact theory. Latané postulated that there were three variables that determined the likelihood that one would respond to social influence, including the importance of the group of people to the subject (strength), the closeness of the group of people to the subject (immediacy), and how many people are in the group (number).

The externally oriented camp provides the theoretical foundation for behaviour modeling that occurs in many training programs. According to Bandura, individuals may be socialized via modeled behaviour if the model and the observer are similar, if the model is admired by the observer, and if the modeled behaviour results in functional and valued behaviours.

As part of the externally oriented camp, Vygotsky's social development theory relies on cultural context and social interactions. As a social constructivist (Woolfolk, Winne, & Perry, 2003), he believed that it was within social interactions and contexts that learners internalized outcomes that were acceptable to both the learner and the social norms. Vygotsky proposed the 'zone of proximal development' (ZPD), within which full cognitive development could be achieved. During such time frames, full social interaction of the child, guided by an experienced adult, was necessary for maximum development. In the context of pre-service education programs, the beginning teacher may be the 'child' in need of socialization, guided by the more experienced 'adult' associate teacher.

There is considerable support for social learning and social impact theories in pre-service teacher education. Most researchers report that as pre-service teachers are socialized into the educational system during the pre-service program, they move from humanistic to custodial pupil control ideologies. The custodial position is reported by many researchers (Willower et al. 1967; Hoy & Jalovick, 1979; Lunenburg, 1990) to be held by experienced teachers. This position is consistent with the traditionalist philosophical orientation and Bagley's (1938), Bloom's (1987), and Hirsch's (1996) traditionalist educational doctrine.

Evidence of the social learning and social impact theories can be found in the many reports throughout the literature of interaction between the institutionalized patterns of the educational system (Young, 1999) and the beginning teacher. Socialization into the classroom is a ZPD for beginning teachers in relation to 'becoming' a teacher. It is a time of culmination for the formal education and training process, an ending that usually brings a new beginning, a complete immersion into an educational system often with traditional pedagogical views (Bottery, 1999). Huffman, Holifield and Holifield (2003) reported that during this transition phase, the most influential educational experience of pre-service teachers may be the socialization that occurs in the school and classroom during practice teaching.

While much has been written concerning the socialization of pre-service teachers, there is little attention paid to the diverse beliefs about education that pre-service teachers may hold, or to the idea that these beliefs may create cognitive dissonance with formalized approaches to schooling. The concept of varied beliefs structures is hypothesized to be important by a number of researchers, including Ornstein and Hunkins (1988), Ozmon and Craver (1981), Hiemstra (1988), and Silvernail (1992a). The examination of varied beliefs about education is particularly important to the present study since one of its main purposes is to examine whether differing beliefs about education are predictive of humanistic or custodial pupil control ideologies for pre-service teachers. Each of these researchers indicates the importance of teachers discovering their deeply held beliefs about education. However, while emphasizing the importance of educational beliefs and philosophy, they do not empirically examine the relationship between beliefs and teachers' approaches in the classroom. They may be

further examples of what Hoy and Jalovick (1979) identified as the tendency for researchers to make assumptions concerning the preferential status of particular positions on the humanistic-custodial continuum that are supported by conjecture only, and not by empirical research. There appear to be no studies that examine the impact on pre-service teachers' pupil control ideologies of competing influences like internal factors (i.e. philosophical orientations) and external factors (i.e. institutionalized custodialism) (Bates, 2001; Sergiovanni, 2000;Young, 1999).

The identification of demographic, experiential, or philosophical orientation variables as predictive of PCI scores may indicate which theoretical explanation (internal, external) is most plausible in accounting for the forming of pre-service teachers' PCI. An explanation of the findings of the study may be aligned with one or the other of the theoretical explanations. For instance, if participants with high romanticist or high progressivist beliefs about education tend to resist socializing pressures to become more custodial, while high traditionalists undergo a more pronounced shift towards a more custodial PCI as the result of socialization pressures, then the study could be said to be supportive of a theoretical explanation tied to internally oriented theory. On the other hand, males may be more custodial than females, or participants with people-oriented undergraduate majors may be more humanistic than those with text-oriented undergraduate majors[1], regardless of philosophical orientation, or PCI changes may be associated more with influence of an important, close group such as associate teachers

[1] In the data analysis, undergraduate majors will be referred to as belonging to one of two groups. The 'text-oriented' group will be composed of natural sciences, study of the human body, and humanities. These majors have been grouped together since they are more likely to be concerned with text-based knowledge, and less with personal interactions. The people-oriented group will be composed of psychological studies, sociological studies, and creative arts. These majors have been grouped together since they are more likely to be concerned with personal interactions, and less with text-based knowledge.

than with philosophical orientation. In these cases, where the findings of the study indicate that demographics, experience, or pre-service program conditions are most predictive of PCI stability, then the study could be said to be supportive of a theoretical explanation tied to externally oriented theory.

Summary

The preceding review of literature has presented studies that examined the relationship between PCI and independent variables that comprise the demographic, experience, and philosophical orientation variable clusters. With respect to the demographic and experience variable clusters, a number of researchers reported a significant relationship between the variables of age, gender, number of years teaching, teaching level, educational qualifications, length of time spent practice teaching, and so on, and PCI. Multiple Regression Analyses indicated that the combined influence on PCI of these independent variables was in the 5% to 8% range.

With respect to the philosophical orientations variable cluster, in the absence of studies that link philosophical orientations to PCI, studies have been presented that examine the more general beliefs about the world held by educators, and the relationship of those beliefs to their pupil control ideology. These studies focused primarily on how teachers controlled problem solving, managed their classroom bureaucratically or non-bureaucratically, displayed degrees of openness or closedness (dogmatism), and used mimeticist or constructivist teaching approaches. Researchers have found that as teachers' PCI became more custodial, pre- and post-tests indicated that their approaches to problem solving allowed for less autonomy and became more controlling, and they

became more bureaucratic. While there appeared to be less change between openness and closedness on the dogmatism scale during teaching practica, openness was associated with humanistic PCI, and closedness with custodial PCI. A constructivist approach was associated with humanistic PCI.

Philosophers of science have provided the objectivist and subjectivist philosophical foundations upon which the traditionalist, progressivist, and romanticist philosophical orientations rest in relation to education. These orientations are seen as valid identifications of sets of beliefs about education held by teachers, and have been adopted in this study as the components of the philosophical orientations variable cluster.

In addition to identifying the literature foundations for the variable clusters, literature that examined the socialization process encountered by pre-service teachers during the pre-service program was considered. Educational policy was identified as impacting the assumptions, roles, and norms that define the socialization milieu into which pre-service teachers are placed. Bottery (1999) pointed directly to economic interests of the elite as outweighing social interests in the formulation of educational policy. Such interests led many policy researchers to the belief that educational policy was grounded in traditionalist philosophical assumptions.

Studies have been presented which identified the school and classroom level assumptions, roles, and norms that arise from such policy, and the custodial PCI into which pre-service teachers are subsequently socialized. Hoy and Jalovick (1979) predicted that open education approaches would fail unless teachers with humanistic orientations were identified, and ways were found for them to maintain this humanistic orientation in the face of school socialization pressures.

An exploration of the pupil control ideologies that pre-service teachers bring with them into the pre-service program may contribute to a deeper understanding of custodial and humanistic interactions between students and teachers in classrooms. It would be meaningful to identify demographic, experiential, or philosophical variables that may account for the variances in these orientations. The following research questions are intended to develop new understandings in these matters, and to build on the research of the past several decades.

Research Questions

The theoretical, conceptual, and empirical analyses presented in this body of literature identify a relationship between a number of variables and pre-service teachers' PCI. Of primary concern in this study is the predictive value of identified variables, and in particular those of the philosophical orientations variable cluster, in relation to PCI scores at the beginning of teacher education programs. The following research question is a logical outcome of the literature, and contributes to the development of new understandings in the area of pre-service teachers' PCI.

1. Which of the three variable clusters (demographic, experience, philosophical orientations) best predicts the pre-service teachers' PCI at the beginning of the pre-service teacher education program?

The second research question follows logically from the findings of Study 1, and contributes to the development of theoretical underpinnings of teacher change. Of particular interest is the area of stability of pre-service teachers' PCI during the pre-service program.

2. How does the pre-service experience impact pre-service teachers with respect to their pupil control ideology?

These questions are addressed as Study 1 and Study 2 in the following Methodology and Results chapter.

CHAPTER III – METHODOLOGY AND RESULTS

Study 1

Introduction

To examine PCI scores of participants at the beginning of the pre-service program, Study 1 was planned. Based on the literature reviewed and informed conjecture, it was reasonable to generate the following hypotheses concerning the predictive variable clusters and PCI.

Hypotheses

1. It is hypothesized that all three variable clusters will be predictive of PCI at the beginning of the pre-service program.
2. It is hypothesized that the philosophical orientations variable cluster will be most predictive of PCI at the beginning of the pre-service program.

Participants

Seven hundred and forty-six pre-service teachers at an Ontario University were asked to participate in this study. Data were collected at the beginning of their B.Ed. program. These students were in all three levels of the program, with 432 in the primary-junior panel, 187 in the junior-intermediate panel, and 127 in the intermediate-senior panel. Approximately 30% of eligible participants were male, and 70% female. For Study 1, 30% of participants were male and 70% female. With regard to level, approximately 58% of eligible participants were primary/junior, 25% were junior/intermediate, and 17% were intermediate senior. For Study 1, approximately 58% of participants were

primary/junior, 25% were junior/intermediate, and 17% were intermediate/senior. Table 1 indicates the participation rate of these groups of students.

Table 1. Participation Rate

Level	Number of Males	Number of Females	Total	Participation Rate
Primary/Junior	93	324	417	97%
Junior/Intermediate	71	111	182	97%
Intermediate/Senior	56	67	123	96%
Total	220	502	722	97%

Instruments

Four questionnaires were used to collect the data for this study. Each is described below. Data were collected in relation to variables that comprised the variable clusters examined in the study. The variable clusters are (a) demographic, including gender, marital status, parent, parent of male child, parent of female child, age, location of elementary and secondary education, and religion; (b) educational experience, including level of preparation (primary/junior, junior/intermediate, and intermediate/senior), undergraduate major, highest degree attained, and taking of responsibility with scouts/guides, Sunday school, baby sitting, day/summer camps, cadets, 4H clubs, youth groups/clubs, coaching, life-guarding, music lessons, and tutoring; and (c) philosophical orientations, which will describe teachers' beliefs within a framework of romanticist, progressivist, and traditionalist philosophical orientations.

Educational Beliefs Questionnaire (EBQ)

Silvernail's (1992a) EBQ was used to collect data concerning pre-service teachers' philosophical orientations. The EBQ consists of 20 Likert-type items. Responses can range from one (strongly disagree) to five (strongly agree). This instrument provides a means of identifying the beliefs of pre-service teachers as romanticist, progressivist, or traditionalist by providing scores on each of the three scales (see Appendix A).

Silvernail (1992a) presented a review of the historical, conceptual, and statistical validation of EBQ as an effective means of determining towards which of three philosophical orientations a teacher's beliefs about education are oriented. The construct validity of the EBQ was considered using factor analysis. All twenty items have loadings over .35, with a minimum difference of .20 in loading between factors. Calculations for internal consistency estimates yielded an alpha coefficient of .73 (Silvernail, 1992a).

Pupil Control Ideology Form (PCI)

Willower et al. (1967) developed the Pupil Control Ideology Form as a means of locating educators' pupil control ideologies on a humanistic-custodial continuum. The Pupil Control Ideology Form consists of 20 Likert-type items. Responses can range from one (strongly disagree) to five (strongly agree). Higher scores reflect a more custodial orientation of the respondent. Examples of items include: "A few pupils are just young hoodlums and should be treated accordingly", "It is often necessary to remind students that their status in schools differs from that of teachers," and " Pupils can be trusted to work together without supervision" (reverse scored). Theoretically, the scores on PCI can

range from 20-100. However, the instrument is conceptualized as a bipolar continuum representing ideological extremes or ideal types (Gaffney & Byrd-Gaffney, 1996). Scores are more likely to fall in the 40-60 range. Lower scores are more humanistic and higher scores are more custodial (Hoy & Jalovick, 1979; Jones, 1982) (see Appendix B).

Much work has been done regarding the validity and reliability of the PCI Form. Willower et al. (1967) reported split-half reliability coefficients in two samples of .95 (N = 170) and .91 (N = 55) using the Spearman-Brown formula. Gaffney and Byrd-Gaffney (1996) provided relevant information regarding the continued validity of the original PCI Form, including Halpin, Goldberg, and Halpin's (1974) stability coeffieicent of .86 for prospective teachers, Harty, Andersen, and Enochs' (1984) alpha coefficients of .71 and .76, for samples of pre-service teachers, Graham, Halpin, Harris, and Benson's (1985) alpha coefficient of .90 for a sample of undergraduate and graduate education students, Wolfolk and Hoy's (1990) alpha coefficient of .72 with a sample of prospective teachers, and Enochs, Scharmann, and Riggs' (1995) Cronbach's alpha coefficient of .75 utilizing a sample of pre-service elementary teachers. Given the literature reviewed, Gaffney and Gaffney-Byrd claimed there was support for the continued adequacy of the PCI Form in its original form for use in research.

Demographic Questionnaires

A brief demographic questionnaire was administered, asking respondents to indicate their gender, marital status, age, country of birth, pre-service teacher training level, and highest degree achieved. This was a modified version of the "Information Sheet" attached to Willower et al.'s (1967) instrument. 'Other' has been added as an

option to the marital status category, and questions 4 to 8 on the original "Information Sheet" have been adapted to the pre-service teacher participants. A 'country of birth' question has been added (see Appendix C).

A second questionnaire was used during the second data collection period to collect additional data concerning factors that may have influenced PCI scores. Demographic data were gathered concerning age, children, siblings, and religion. Experiences of the pre-service teachers that occurred before they entered the pre-service program that may have influenced choices during the program such as the level entered (P/J, J/I. I/S), primary location of participants' elementary and secondary education, and undergraduate major were gathered. Data were also gathered concerning the taking of responsibility in areas such as Scouts/Guides, baby-sitting, and coaching (see Appendix D).

Procedure

At the beginning of the data gathering procedure, appropriate ethics approval was obtained from the Ethics Review Board of the university (see Appendix E). Upon receiving this approval, basic demographic data and data concerning the PCI scores and philosophical orientations of pre-service teachers were collected at the beginning of the pre-service program. Data were gathered from six individual classes taught by four professors. Participants were informed of the voluntary nature of their participation, their right to withdraw from the study, and the confidentiality of their responses. This procedure served to document differences in PCI as a function of philosophical orientations and numerous demographic and experiential variables. It also provided an

opportunity to use these data as baseline data for the subsequent monitoring of the impact of the pre-service experience on PCI.

Results - Study 1

Introduction

In order to address the research question, three steps were followed. Firstly, Pearson Product Moment correlations coefficients were computed in relation to the variables grouped in four[2] theoretically constructed variable clusters[3]. Secondly, a series of Multiple Regression Analyses were conducted with respect to these variable clusters (demographic, informal teaching experience, academic experience, and philosophical orientations), with the PCI scores as the dependent variable. Thirdly, a Forward method multiple regression analysis was used to explore a potentially predictive variable cluster arising from this set of variables.

Pearson Product Moment Correlational Analyses

First, four Pearson Product Moment Correlational Analyses between the variables in each of the variable clusters and the PCI scores were computed, in order to examine the relationship between the variables and PCI scores (see Tables 2-5).

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[2] Initially, the variables for this study were grouped into three variable (demographic, experience, and philosophical orientations). The experience variable cluster was subsequently sub-divided into informal teaching experience and academic experience variable clusters, in order to consider more accurately factors outside and inside the formal educational experience.

[3] For the construction of variable clusters, information was utilized from subsequently collected demographic data as well.

Demographic variable cluster.

Table 2 illustrates the Pearson Product Moment Correlation Coefficients for the PCI scores and the variables in the demographic variable cluster.

Table 2. Pearson Product Moment Correlation Coefficients for the PCI Scores and the Variables in the Demographic Variable Cluster

	CORRELATION COEFFICIENT	CATEGORY	NUMBER	MEAN	STANDARD DEVIATION
1 GENDER	-.18**	Male	220	52.58	7.51
		Female	502	49.84	6.74
2 SINGLE OR MARRIED	.10**	Single	517	50.25	6.89
		Married	207	51.78	7.47
3 LOCATION ELEMENTARY EDU	.13**	Largely Rural	136	49.62	6.55
		Largely Suburban	182	49.77	6.85
		Largely Urban	152	51.99	7.71
4 LOCATION SECONDARY EDU	.11*	Largely Rural	107	50.00	5.99
		Largely Suburban	200	49.50	6.77
		Largely Urban	153	51.82	7.91
5 HAVE MALE CHILD	-.05	Yes	60	51.25	7.71
		No	414	50.29	7.02
6 HAVE FEMALE CHILD	-.03	Yes	54	51.06	6.72
		No	420	50.33	7.16
7 HAVE CHILDREN	-.05	Yes	82	51.20	7.78
		No	392	50.25	6.96
8 AGE IN YEARS	.06	Less than 30	348	49.70	6.56
		30-39	77	51.94	7.84
		40 or More	31	50.04	6.35
9 CHRISTIAN	.01	Yes	355	50.32	6.46
		No	116	50.47	7.92
10 ISLAM	-.13**	Yes	11	56.45	10.69
		No	460	50.22	6.94
11 HINDU	-.07	Yes	3	56.67	11.37
		No	468	50.32	7.06
12 BUDDHIST	-.09	Yes	1	64.00	
		No	470	50.33	7.07
13 JEWSH	-.02	Yes	2	52.00	7.07
		No	469	50.35	7.10
14 SIKH	-.11*	Yes	10	55.80	5.31
		No	461	50.24	7.09
15 ATHEIST	.04	Yes	5	47.60	4.16
		No	466	50.39	7.12
16 OTHER	.02	Yes	19	49.63	7.50
		No	452	50.39	7.08
17 NO RELIGION	.10*	Yes	65	48.57	7.02
		No	406	50.65	7.07

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Appendix F contains additional information concerning coefficients for each variable in the demographic cluster in relation to each other variable in this cluster. There

were small but significant correlations between PCI and gender ($r = -.18, p < .01$), marital status ($r = .10, p < .01$), location of elementary education ($r = .13, p < .01$), location of secondary education ($r = .11, p < .05$) and some religious variables. These included Islam ($r = -.13, p < .01$), Sikh ($r = -.11, p < .05$), and 'no religion' ($r = .10, p < .05$). The negative correlation between PCI and gender indicates that males (mean = 52.58, SD = 7.51) were more custodial than females (mean = 49.84, SD = 6.74), $t(720) = 4.85, p < .01$. The positive correlation between PCI and marital status indicates that married participants (mean = 51.78, SD = 7.47) were more custodial than singles (mean = 50.25, SD = 6.89), $t(722) = -2.63, p < .01$. The positive correlation between PCI and location of elementary education indicates that participants who received their elementary education in urban schools (mean = 51.99, SD = 7.71) were more custodial than those who had attended rural (mean = 49.62, SD = 6.55) or suburban (mean = 49.77, SD = 6.85) schools, $F(467) = 5.42, p < .01$. The positive correlation between PCI and location of secondary education indicates that participants who received their secondary education in urban schools (mean = 51.82, SD = 7.91) were more custodial than those in rural (mean = 50.00, SD = 5.99) or suburban (mean = 49.50, SD = 6.77) schools, $F(458) = 4.97, p < .01$. The negative correlation between PCI and Islam indicates that Islamic participants had higher PCI scores than non-Islamics. The negative correlation between PCI and Sikh indicates that Sikh participants had higher PCI scores than non-Sikhs. The positive correlation between PCI and No religion indicates that participants identifying a particular religion had higher PCI scores than those who identified no religion.

Academic experience variable cluster.

Table 3 illustrates the Pearson Product Moment Correlation Coefficients for the PCI scores and the variables in the academic experience variable cluster. Appendix G contains additional information concerning coefficients for each variable in the academic experience cluster in relation to each other variable in this cluster.

There were small but significant correlations between PCI and undergraduate major in the natural sciences ($r = -.15, p < .01$), undergraduate major in psychological studies ($r = .09, p < .05$), undergraduate major in sociological studies ($r = .11, p < .05$), undergraduate major in the creative arts ($r = .13, p < .01$), Level ($r = .10, p < .01$), and highest degree ($r = .16, p < .01$).

Table 3. Pearson Product Moment Correlation Coefficients for the PCI Scores and the Variables in the Academic Experience Variable Cluster

UNDERGRADUATE MAJOR IN	CORRELATION COEFFICIENT	CATEGORY	NUMBER	MEAN	STANDARD DEVIATION
1. NATURAL SCIENCES	-.15**	YES	58	53.22	6.78
		NO	408	49.94	7.05
2. STUDY OF THE HUMAN BODY	-.06	YES	65	51.31	6.68
		NO	401	50.19	7.16
3. SOCIAL SCIENCES	-.02	YES	71	50.63	6.17
		NO	395	50.29	7.26
4. PSYCHOLOGICAL STUDIES	.09*	YES	63	48.75	6.76
		NO	403	50.60	7.12
5. SOCIOLOGICAL STUDIES	.11*	YES	41	47.80	6.11
		NO	425	50.59	7.14
6. CREATIVE ARTS	.13**	YES	46	47.67	7.13
		NO	420	50.64	7.04
7. HUMANITIES	-.08	YES	49	51.90	8.64
		NO	417	50.16	6.88
8. BUSINESS	-.01	YES	32	50.63	6.16
		NO	434	50.32	7.17
9. ENGLISH	-.01	YES	41	50.17	7.93
		NO	4.25	50.36	7.02
10. LEVEL (P/J, J/I, I/S)	.10*	P/J	419	50.06	6.95
		J/I	182	51.49	7.03
		I/S	123	51.64	7.47
11. HIGHEST DEGREE (UNDERGRAD, GRAD)	.16**	UNDERGRAD	677	50.40	6.97
		GRAD	47	54.85	7.62

** correlation is significant at the 0.01 level (2-tailed)
* correlation is significant at the 0.05 level (2-tailed)

The negative correlation between PCI and undergraduate major in the natural sciences indicates that participants with undergraduate majors in the natural sciences (mean = 53.22, SD = 6.78) were more custodial than other participants (mean = 49.94, SD = 7.05), $t(464) = 3.34$, $p < .01$.The positive correlation between PCI and undergraduate major in psychological studies indicates that these participants (mean = 48.75, S. D. = 6.76) were more humanistic than other participants (mean = 50.60, SD = 7.12), $t(466) = -1.93$, $p < .05$. The positive correlation between PCI and undergraduate major in sociological studies indicates that these participants (mean = 47.80, SD = 6.11) were more humanistic than other participants (mean = 50.59, , SD = 7. 14), $t(466) = -2.42$, $p < .05$. The positive correlation between PCI and undergraduate major in the creative arts indicates that these participants (mean = 47.67, SD = 7.13) were more humanistic than other participants (mean = 50.64, SD = 7.04), $t(466) = -2.71$, $p < .01$. The positive correlation between PCI and Level indicates that junior/intermediate (mean = 51.49, SD = 7.03) and intermediate/senior (mean = 51.64, SD = 7.47) participants were more custodial than primary/junior participants (mean = 50.06, SD = 6.95), $F(724) = 3.97$, $p < .05$. The positive correlation between PCI and highest degree indicates that participants with graduate degrees (mean = 54.85, SD = 7.62) were more custodial than those whose highest degree was undergraduate (mean = 50.40, SD = 6.97), $t(724) = -4.213$, $p < .01$.

Informal teaching experience variable cluster.

Table 4 illustrates the Pearson Product Moment Correlation Coefficients for the PCI scores and the variables in the informal teaching experience variable cluster.

Appendix H contains additional information concerning coefficients for each variable in the informal teaching experience cluster in relation to each other variable in this cluster.

Table 4. Pearson Product Moment Correlation Coefficients for PCI Scores and the Variables in the Informal Teaching Experience Variable Cluster

EXPERIENCE WITH RESPONSIBILITY IN:	CORRELATION COEFFICIENT	CATEGORY	NUMBER	MEAN	STANDARD DEVIATION
1. SCOUTS/GUIDES	.01	NONE	368	50.49	7.25
		A LITTLE	61	49.75	6.73
		QUITE A BIT	18	49.22	5.07
		A GREAT DEAL	27	51.67	7.29
2. SUNDAY SCHOOL	.22	NONE	313	50.19	7.35
		A LITTLE	86	50.20	6.63
		QUITE A BIT	35	51.91	6.47
		A GREAT DEAL	38	51.16	6.72
3. BABY SITTING	-.14**	NONE	77	52.04	8.02
		A LITTLE	101	51.26	7.35
		QUITE A BIT	102	50.36	6.18
		A GREAT DEAL	193	49.38	6.94
4. DAY/SUMMER CAMPS	-.09*	NONE	234	50.84	7.36
		A LITTLE	87	50.57	7.20
		QUITE A BIT	55	51.07	6.21
		A GREAT DEAL	98	48.89	6.78
5. CADETS	.01	NONE	459	50.41	7.18
		A LITTLE	9	51.22	5.38
		QUITE A BIT	2	50.00	4.24
		A GREAT DEAL	3	50.33	5.51
6. 4-H CLUBS	-.04	NONE	449	50.49	7.19
		A LITTLE	15	50.00	4.86
		QUITE A BIT	5	51.20	5.26
		A GREAT DEAL	3	50.33	5.51
7. YTH GROUPS/ CLUBS	-.01	NONE	255	50.28	6.88
		A LITTLE	103	50.69	8.11
		QUITE A BIT	67	51.67	7.16
		A GREAT DEAL	47	48.72	5.79
8. COACHING	.04	NONE	217	49.80	7.13
		A LITTLE	97	51.57	7.04
		QUITE A BIT	76	50.68	7.06
		A GREAT DEAL	82	50.41	7.22
9. LIFE GUARDING	.02	NONE	418	50.39	7.29
		A LITTLE	12	49.58	5.96
		QUITE A BIT	13	51.00	4.12
		A GREAT DEAL	29	50.79	6.42
10. MUSIC LESSONS	-.02	NONE	365	50.47	7.27
		A LITTLE	44	50.27	6.15
		QUITE A BIT	22	51.09	7.16
		A GREAT DEAL	42	49.69	6.90
11. TUTORING	.02	NONE	147	50.40	7.30
		A LITTLE	141	50.58	6.40
		QUITE A BIT	93	49.23	7.12
		A GREAT DEAL	93	51.37	7.76

** correlation is significant at the 0.01 level (2-tailed)
* correlation is significant at the 0.05 level (2-tailed)

There were small but significant correlations between PCI and baby-sitting (r = -.14, $p < .01$) and day/summer camps (r = -.09, $p < .05$). The negative correlation between PCI and baby-sitting indicates that participants with experience in baby-sitting were more humanistic than those without such experience, $F(473) = 3.21$, $p < .05$. The negative correlation between PCI and day/summer camps indicates that participants with experience in day/summer camps were more humanistic than those without experience in day/summer camps, $F(473) = 1.97$, $p < .05$.

Philosophical orientations variable cluster.

Table 5 illustrates the Pearson Product Moment Correlation Coefficients for the PCI scores and the variables in the philosophical orientations variable cluster. The categories for these variables are the diverse range of average scores received by participants. The number of participants for each category, the mean, and the standard deviation for each is identified in Appendix I. Appendix J contains additional information concerning coefficients for each variable in the philosophical orientations cluster in relation to each other variable in this cluster.

Table 5. Pearson Product Moment Correlation Coefficients for PCI Scores and the Variables in the Philosophical Orientations Variable Cluster

[illegible]	CORRELATION COEFFICIENT
TOTAL ROMANTICIST SCORE	-.15**
TOTAL PROGRESSIVIST SCORE	-.17**
TOTAL TRADITIONALIST SCORE	.36**

** correlation is significant at the 0.01 level (2-tailed)

There were significant correlations between PCI score and romanticist (r = -.15, $p < .01$), progressivist (r = -.17, $p < .01$) and traditionalist (r = .36, $p < .01$). The negative correlation between PCI and romanticist score indicates that high romanticists had lower PCI scores (mean = 49.86, SD = 7.12) or were more humanistic than low romanticists (mean = 51.79, S. D = 6.85), $t(707) = 3.67$, $p < .01$. The negative correlation between PCI and progressivist score indicates than high progressivists (mean = 49.33, SD = 7.19) had lower PCI scores than low progressivists (mean = 51.69, SD = 6.94), $t(699) = 4.36$, $p < .01$. The highest correlation regarding the philosophical orientations variable cluster was for traditionalist. The positive correlation between PCI and traditionalist indicates than high traditionalists (mean = 52.69, SD = 7.18) were more custodial than low traditionalists (mean = 48.84, SD = 6.40), $t(706) = -7.53$, $p < .01$).

Multiple Regression Analyses

Secondly, a series of Multiple Regression Analyses were conducted with respect to demographic, informal teaching experience, academic experience and philosophical orientations variable clusters, with the PCI scores as the dependent variable. The R^2 coefficients indicated strength of the variable clusters with respect to explained variance, and by comparison, the most predictive variable cluster for PCI scores. Standardized Beta scores and t tests are reported in tables 6-9.

Demographic variable cluster.

The demographic variable cluster contained the variables of gender, single or married, location of elementary education, location of secondary education (both were

indicated as either " largely rural", "largely suburban", or "largely urban"), have male child, have female child, have children, age in years, religion, (Christian, Islam, Hindu, Sikh, Atheist, other, no religion)[4]. These variables were entered into the regression function of SPSS as independent variables. The dependent variable was the PCI scores. The demographic variable cluster was significant in predicting the PCI scores of the participants, $R^2 = .121$, $F(15, 424) = 3.88$, $p < .01$. The variable cluster summary indicated that the demographic cluster appeared to account for 12.1% of the variance in the PCI scores of pre-service teachers. See Table 6 for the standardized Beta values.

Table 6. Beta Coefficients for the Multiple Regression Analysis Utilizing the Demographic Variable Cluster

Variable	Standardized Coefficients Beta	t	Sig.
GENDER	-.206	-4.371	.000
SINGLE OR MARRIED	.041	.701	.484
LOCATION ELEMENTARY EDU	.166	2.069	.039
LOCATION SECONDARY EDU	-.047	-.582	.561
HAVE MALE CHILD	-.086	-.969	.333
HAVE FEMALE CHILD	-.092	-1.123	.262
HAVE CHILDREN	.145	1.187	.236
AGE IN YEARS	-.048	-.765	.445
CHRISTIAN	.274	1.129	.260
ISLAM	-.008	-.085	.932
HINDU	-.056	-.946	.345
SIKH	-.036	-.417	.677
ATHEIST	.101	1.355	.176
OTHER	.199	1.664	.097
NO RELIGION	.319	1.588	.113

Only two of the independent variables contributed significantly to prediction of PCI scores, gender (Beta = -.206) and location of elementary education (Beta = .166). For

[4] Buddhist and Jewish were eliminated from the regression analyses because they had frequencies of only one and three respectively

gender, males were more likely to have higher PCI (more custodial) scores than females. For location of elementary education, the more urban the elementary school experience, the more custodial the PCI score was likely to be.

Experience variable clusters.

Multiple Regression Analyses were conducted in relation to each of two experience variable clusters. The 22 experience variables were re-configured within an academic experience variable cluster and an informal teaching experience variable cluster. In this configuration, the academic experience variable cluster is suited to the identifying of more formal educational experience variables that may shape beliefs about teaching as separate from the informal teaching experience variable cluster which considers the practical experience in taking responsibility with young people. The academic experience variable cluster included the variable of Level (preparation for teaching at the primary-junior, junior-intermediate, or intermediate-senior level) which would have been decided upon before the start of the pre-service program. It also included highest degree held, and a series of dummy variables that indicated whether the participants' undergraduate major was best described as in the area of natural sciences, study of the human body, social sciences, psychological studies, sociological studies, creative arts, humanities, business, or English. These dummy variables arose from a restructuring of one variable within which the undergraduate majors of the pre-service teachers were coded from one to nine. These groupings were chosen to include as large a number of participants as possible and to find a meaningful division of majors that might

assist in explaining the variance in PCI scores. Table 7 identifies the specific majors included in each of these nine categories.

Table 7. Majors Included in Each of the Nine 'Undergraduate Major' Categories

'UNDERGRADUATE MAJOR' CATEGORY	STUDENT-IDENTIFIED MAJORS INCLUDED IN CATEGORY	
Natural Sciences	Chemistry Physics General Science Vet. Science Animal Science Nutrition, Botany Geology	Environmental Science Engineering Horticulture Mathematics Computer Science Information Technology Electronics
Study of the Human Body	Biology Anatomy Kinesiology	Nursing Pre-health
Social Sciences	Geography Legal Studies Criminology Law Enforcement Criminal Justice Political Science International Studies	Communications Journalism Urban Planning Social Work Physical Education Outdoor Recreation Recreation and Leisure
Psychology	Psychology	Children and Youth Studies
Sociological Studies	Sociology Family and Social Relations Anthropology	Native Studies Women's Studies Early Childhood Education
Creative Arts	Drama/Theatre Music Music Therapy Visual Arts	Fine Arts Art Fashion Drama in Education
Humanities	Classical Civilizations French, German, Spanish Applied Linguistics TESL	Philosophy History Art History Religion
Business	Business Economics Finance Commerce	Labour Studies Human Resources Marketing
English	English	Language

The categorization of individually identified majors, such as 'Recreation and Leisure' or 'Animal Science' was based on commonly accepted practices regarding the categorization of majors. In cases where there was some doubt concerning the most

appropriate placement, precedent was found, usually based on the identification of that major with a particular category at a university. In cases such as 'Psychology', 'Sociological Studies', and 'English', where the number of participants was large, these participants were moved into separate categories to allow for a more fine-grained analysis.

Academic Experience Variable Cluster. For the academic experience variable cluster, eleven variables were entered into the regression function of SPSS as independent variables. The dependent variable was the PCI scores. The academic experience was significant in predicting the PCI scores of the participants, $R^2 = .070$, $F(10, 455) = 3.45, p < .01$ The variable cluster summary indicated that the academic experience variable cluster appeared to account for 7.0% of the variance in the PCI scores of pre-service teachers. See Table 8 for the standardized Beta values.

Table 8. Beta Coefficients for the Multiple Regression Analysis Utilizing the Academic Experience Variable Cluster

Variable	Standardized Coefficients Beta	t	Sig
MAJOR IN			
NATURAL SCIENCES	-.167	-2.671	.008
STUDY OF THE HUMAN BODY	-.093	-1.473	.141
SOCIAL SCIENCES	-.086	-1.410	.159
SOCIOLOGICAL STUDIES	.043	.771	.441
CREATIVE ARTS	.061	1.052	.293
HUMANITIES	-.118	-2.033	.043
BUSINESS	-.065	-1.217	.224
ENGLISH	-.038	-.682	.496
LEVEL OF TEACHER PREPARATORY	.066	1.289	.198
HIGHEST DEGREE (UNDERGRAD, GRADUATE)	.072	1.547	.123

Only two of the independent variables contributed significantly to prediction of PCI scores, major in the natural sciences (Beta = -.17) and major in the humanities (Beta = -.12). Pre-service teachers with majors in the natural sciences and the humanities were more likely to have higher (more custodial) PCI scores.

Informal Teaching Experience variable cluster. The 'Informal Teaching experience' variable cluster was based on a series of dummy variables which were used to identify experience with responsibility in each of Scouts/Guides, Sunday School, baby-sitting, day/summer camps, Cadets, 4H clubs, youth groups/clubs, coaching, life-guarding, music lessons, and/or tutoring. These variables were entered into the regression function of SPSS as independent variables. The dependent variable was the PCI scores. The informal teaching experience variable cluster was not significant in predicting the PCI scores of the participants, $R^2 = .040$, $F(11, 452) = 1.72$, $p > .05$. The variable cluster summary indicated that the informal teaching experience variable cluster appeared to account for 4.0% of the variance in the PCI scores of pre-service teachers. See Table 9 for the standardized Beta values.

Three of the independent variables appeared to contribute significantly to the R^2 score, experience with responsibility in Sunday School (Beta = .112), experience with responsibility in baby-sitting (Beta = -.15), and experience with responsibility in day/summer camps (Beta = -.11). The higher the degree of experience pre-service teachers had with Sunday School teaching, the more likely they were to have higher (more custodial) PCI scores. The higher the degree of experience pre-service teachers had with baby-sitting or taking responsibility at day and summer camps, the more likely they were to have more humanistic PCI scores. These variables did not contribute to a

higher R^2 score in the multiple regression analyses subsequently conducted in relation to the Emergent variable cluster and were therefore not retained for further consideration.

Table 9. Beta Coefficients for the Multiple Regression Analysis Utilizing the Informal Teaching Experience Variable Cluster

Variable	Standardized Coefficients Beta	t	Sig.
EXPERIENCE WITH RESPONSIBILITY IN			
SCOUTS/GUIDES	.000	.005	.996
SUNDAY SCHOOL	.112	2.104	.036
BABY SITTING	-.147	-2.980	.003
DAY/SUMMER CAMPS	-.112	-2.032	.043
CADETS	.021	.453	.650
4H CLUBS	.005	.098	.922
YOUTH GROUPS AND CLUBS	.008	.140	.889
COACHING	.051	1.038	.300
LIFE-GUARDING	.049	.965	.335
MUSIC LESSONS	-.035	-.710	.478
TUTORING	.059	1.211	.227

Philosophical orientations variable cluster.

The philosophical orientations variable cluster included three variables. The Educational Beliefs Questionnaire (EBQ) identified scores of participants in relation to these variables, which were the romanticist, progressivist, and traditionalist philosophical orientations. These variables were entered into the regression function of SPSS as independent variables. The dependent variable was the PCI scores.

The philosophical orientation variable cluster was significant in predicting the PCI scores of the participants, $R^2 = .207$, $F(3, 678) = 59.11$, $p < .01$. The variable cluster summary indicated that the philosophical orientation variable cluster appeared to account for 20.7% of the variance in the PCI scores of pre-service teachers. See Table 10 for the standardized Beta values.

Each of the three philosophical orientations appeared to contribute significantly to the R^2 score, total romanticist score (Beta = -.120), total progressivist score (Beta = -.231), and total traditionalist score (Beta = .433). As pre-service teachers score higher on romanticist and progressivist philosophical orientation measures, their PCI scores tend to indicate a more humanistic orientation. As they score higher on traditionalist philosophical orientation measures, their PCI scores tend to indicate a more custodial orientation.

Table 10. Beta Coefficients for the Multiple Regression Analysis Utilizing the Philosophical Orientations Variable Cluster

Variable	Standardized Coefficients Beta	t	Sig.
ROMANTICIST SCORE	-.120	-3.017	.003
PROGRESSIVIST SCORE	-.231	-5.671	.000
TRADITIONALIST SCORE	.433	12.125	.000

Based on the statistical evidence presented above, it appears that the best predictor for pre-service teachers' PCI at the beginning of the B. Ed. program may be the philosophical orientations variable cluster. It also appears that each of the variables in the cluster are significant in relation to PCI scores.

Multiple Regression Analyses – Emergent Variable Cluster

Thirdly, given these effects, an emergent issue arose. It was logical to ask what a composite variable cluster could contribute to exploring such effects. To address this question, a Multiple Regression Analysis was conducted in order to arrive at a variable

cluster composed primarily of variables that contributed to the ability of the four preceding variable clusters to account for PCI score variances. Two additional variables were added to the variable cluster. These variables were 'Christian' and 'no religion'. Of the religion variables, 'Christian' (N = 384) was most representative of the sample, and the 'no religion' variable was the other most frequently noted (N = 66). Moreover, 'no religion' had a significant correlation with PCI scores, $r = .10$, $p < .05$. The variables included in the variable cluster were: traditionalist score, progressivist score, romanticist score, gender, no religion, Christian religion, undergraduate major, and location of elementary education. The regression analysis was significant, $R^2 = .278$, $F(8, 290) = 13.96$, $p < .001$. It accounted for 27.8 of the variance. Table 11 shows the standardized Beta values for this variable cluster.

Table 11. Beta Coefficients for the Multiple Regression Analysis Utilizing the New Predictive Variable Cluster

Variables	Standardized Coefficients Beta	t	Sig.
TRADITIONALIST SCORE	.332	6.230	.000
PROGRESSIVIST SCORE	-.132	-2.136	.034
GENDER	-.151	-2.912	.004
NO RELIGION	.157	2.171	.031
CHRISTIAN	.135	1.860	.064
UNDERGRADUATE MAJOR (1 = natural sciences, human body, or humanities) OR 2 = (creative arts, psychological studies or sociological studies)	-.188	-3.584	.000
TOTAL ROMANTICIST SCORE	-.102	-1.693	.091
LOCATION ELEMENTARY EDUCATION	.143	2.815	.005

A Forward method regression was then used to determine the most predictive variable cluster arising from this set of variables. Using this method, the 'romanticist score', 'no religion', and 'Christian' variables were excluded. The variable cluster was

significant, $R^2 = .259$, $F(5, 293) = 20.53$, $p < .001$. It accounted for 25.9% of the variance. Table 12 shows the standardized Beta values for this variable cluster.

Table 12. Beta Coefficients for the Forward Multiple Regression Analysis Utilizing the New Predictive Variable Cluster

Variables	Standardized Coefficients Beta	t	Sig.
TRADITIONALIST SCORE	.345	6.492	.000
UNDERGRADUATE MAJOR	-.211	-4.067	.000
PROGRESSIVIST SCORE	-.202	-3.775	.000
GENDER	-.163	-3.129	.002
LOCATION ELEMENTARY EDU	.157	3.101	.002

Summary

Noteworthy Relationships

It is clear from the variable clusters presented above that demographic, experiential, and philosophical orientation variables relate to PCI. Several of these relationships are noteworthy.

Firstly, at least one demographic, experience, and philosophical element is represented by the variables in the 'new' predictive variable cluster. Males, those whose elementary education was in urban settings, those whose undergraduate major was in the natural sciences, study of the human body, or the humanities, and those with a high traditionalist philosophical orientation had higher PCI scores, or were more custodial. Females, those whose elementary education was in non-urban settings, those whose undergraduate majors were in the creative arts, or psychological or sociological sciences,

and those with a high progressivist philosophical orientation had lower PCI scores, or were more humanistic.

Secondly, the emergence of two variables measuring experiences of participants prior to their entering the pre-service program (undergraduate major, location of elementary education) presents a rationale for further exploration of the role of experience in shaping PCI during the pre-service program. Exploration of experiences encountered during the pre-service program would also be of interest.

Thirdly, two of the top three predictors of PCI are philosophical orientation variables, based on their Beta scores (traditionalist, Beta = .345; progressivist, Beta = -.202). These variables provide directionally opposite influences on PCI, with progressivist being associated with more humanistic PCI and traditionalist with more custodial PCI. This presents a rationale for further study of these variables.

Fourthly, the participants are described by many of these variables in concert. It would therefore be relevant to consider the possibility of interaction effects. Such effects may exist among philosophical orientations and demographic and experiential variables within the socialization process experienced by beginning teachers during the pre-service program.

Socialization and Changing PCI

The role of teachers' beliefs and orientations in relation to classroom control, as mediated by experience and demographic variables during the socialization process, is a key theme in the literature. For instance, with respect to beliefs and orientations, the presence of a high degree of openness (Rokeach, 1960) seemed to be predominant in

pupil control ideology for some teachers. Hoy and Jalovick (1979) indicated that 'open' education involved maximizing experiences of the student in a classroom where discovery was facilitated by the teacher. In this regard, openness is closely aligned with romanticist and progressivist orientations to education. Hoy and Jalovick reported that the more open the teacher's orientation, the lower the PCI scores, and vice versa.

With respect to the socialization process that pre-service teachers experience, it is important to understand the role that educational policy plays in shaping pre-service teacher socialization into the educational system. As reviewed earlier, the very presence of educational policy, according to Bottery (1999), Brooks (1996), and Pal (1997), is usually indicative of traditionalist views of education and mimeticist methodologies. The socialization of beginning teachers in schools involves recognition of the systematized goals of education (Hansen, 1994). Effective teaching is often viewed as furthering these traditionalist aims of educational organizations.

Creemers and Reezigt (1996) indicated a strong linkage between education policy and classroom level assumptions, roles, and norms. Predominantly traditionalist views of education held by educational policymakers were reflected in expectations placed on teachers in the classroom.

As suggested in the literature, changes in PCI during the pre-service program may be the result of interactions between the socialization process, pre-service teachers' beliefs, and demographic and experiential factors. Based on findings of Study 1 (e.g., the philosophical orientations cluster was most predictive; experiential and demographic variable clusters were predictive to a lesser degree) and the literature, the next logical

question concerns those demographic, experiential, and philosophical orientations variables that impact the stability of PCI during the pre-service experience.

Research Question for Study 2

Of primary concern in Study 2 is the impact of particular philosophical orientations, experiential, and demographic variables, in relation to PCI scores during teacher education programs. The following research question is a logical outcome of the literature and the findings of Study 1, and contributes to the development of theoretical underpinnings of teacher change. Of particular interest is the area of stability of pre-service teachers' PCI during the pre-service program.

- How does the pre-service experience impact pre-service teachers with respect to their pupil control ideology?

Study 2

Introduction

To examine the impact of the pre-service teacher education program experience on the PCI scores of pre-service teachers, a second study was planned. Given the results of the first study linking various demographic, experiential and philosophical orientations variables to PCI, the literature reviewed, and informed conjecture, it was reasonable to generate a number of working hypotheses concerning the impact of potentially important variables on PCI.

Hypotheses

As working hypotheses, the following predictions are made.

1. Concerning classroom conditions:
    a. The PCI of participants who rated the presence of ESL in the practicum classrooms as high will become significantly more custodial (The rationale for this hypothesis is consistent with the conclusions of Markham (1999) and Olivo (2003), reported earlier.)
    b. The PCI of participants who rated SES as low in the practicum classrooms will become significantly more custodial (The rationale for this hypothesis is consistent with the conclusions of Dixon-Floyd and Johnson (1997) and Skiba, Reece, and Peterson (1997), reported earlier.)
    c. The PCI of participants who identified behaviour problems as high in the practicum classrooms will become significantly more custodial. It is generally accepted that 'good teachers' control behaviour problems.
2. Concerning classroom management style:
    a. Some participants indicated in the Experiential Questionnaire that the predominant classroom management style practiced and promoted both at the university and in the practicum classroom was student-centredness. This student-centredness perception will serve as a stabilizing PCI influence. The PCI of these participants will show a smaller shift towards custodialism than the PCI of other participants;
    b. Some participants indicated in the Experiential Questionnaire that the predominant classroom management style practiced and promoted both at the

university and in the practicum classroom was collaborativeness. This collaborativeness perception will serve as a stabilizing PCI influence. The PCI of these participants will show a smaller shift towards custodialism;

c. Some participants indicated in the Experiential Questionnaire that the predominant classroom management style practiced and promoted both at the university and in the practicum classroom was teacher-centredness. This teacher-centredness perception will influence a larger change in PCI and will indicate a shift towards even more custodialism.

(The rationale for these hypotheses is based on the Social Impact theory of Latané (1981), reported earlier)

3. Concerning undergraduate major:

   a. PCI of participants with people-oriented majors will experience a larger degree of change towards custodialism than those with text-oriented majors;

   b. PCI of participants with text-oriented majors will experience a smaller degree of change towards custodialism than those with people-oriented majors.

(Since the PCI scores of participants with text-oriented majors were already in the more custodial range, if any group was in a position to change, it was more likely to be the people-oriented group. This group tended to be in the more humanistic range. Since the PCI Form instrument identifies ideological extremes as scores approach the higher and lower limits[5], it is unlikely that group mean scores will approach the upper extreme. Scores that are higher at the beginning therefore have less room than lower beginning scores to increase.)

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[5] Willower et al. (1967) referred to positions identified by highest and lowest scores as ideological extremes. Gaffney and Byrd-Gaffney (1996) indicated it was unlikely scores would reach such extremes.

4. Concerning location of elementary education:

   PCI of participants whose elementary education occurred in a non-urban setting will undergo a larger shift to a more custodial PCI than the PCI of participants whose elementary education occurred in an urban setting;

   (Since the PCI scores of participants whose elementary education occurred in an urban setting were already in the more custodial range, if any group was in a position to change, it was more likely to be the participants whose elementary education occurred in a non-urban setting. This group tended to be in the more humanistic range. Since the PCI Form instrument identifies ideological extremes as scores approach the higher and lower limits, it is unlikely that group mean scores will approach the upper extreme. Scores that are higher at the beginning therefore have less room than lower beginning scores to increase.)

5. Concerning gender:

   a. PCI of females will undergo a larger shift to a more custodial PCI.

   b. PCI of males will undergo a smaller shift to a more custodial PCI

   (Since the PCI scores of males were already in the more custodial range, if any group was in a position to change, it was more likely to be females. This group tended to be in the more humanistic range. Since the PCI Form instrument identifies ideological extremes as scores approach the higher and lower limits, it is unlikely that group mean scores will approach the upper extreme. Scores that are higher at the beginning therefore have less room than lower beginning scores to increase.)

6. Concerning philosophical orientations:

a. PCI of participants who are high romanticist will undergo a smaller shift towards custodialism (the rationale for this hypothesis is based on the expectation that teachers whose beliefs about education are somewhat defined and more consistent with a humanistic approach to the classroom will be less likely to respond to socialization pressures to become more custodial);
b. PCI of participants who are high progressivists will undergo a smaller shift towards custodialism (the rationale for this hypothesis is based on the expectation that teachers whose beliefs about education are somewhat defined and more consistent with a humanistic approach to the classroom will be less likely to respond to socialization pressures to become more custodial);
c. PCI of participants who are high traditionalists will undergo a larger shift towards custodialism (the rationale for this hypothesis is based on the expectation that teachers whose beliefs about education are somewhat defined and more consistent with a custodial approach to the classroom will be more likely to respond to socialization pressures to become more custodial).

To test these working hypotheses pre-service teachers were surveyed following their practicum experience.

Participants

The same 746 pre-service teachers who were asked to participate in Study 1 were again asked to participate in Study 2 during the second week of March, 2004, at the completion of the number of practicum days required for certification by the Ontario College of Teachers. The data provided at time 2 allowed for an examination of the

impact of the pre-service experience. Approximately 30% of eligible participants were male, and 70% female. Of those that participated in both Study 1 and Study 2, 33% were male and 67% were female. With regard to level, approximately 58% of eligible participants were primary/junior, 25% were junior/intermediate, and 17% were intermediate senior. Of those that participated in both Study 1 and Study 2, approximately 51% were primary/junior, 27% were junior/intermediate, and 22% were intermediate/senior. Table 13 indicates the participation rate of these groups of students.

Table 13. Participation Rate

Level	Participants at time 1 and time 2		Total	Participation Rate
	Males	Females		
Primary/Junior	55	185	240	56%
Junior/Intermediate	55	74	129	69%
Intermediate/Senior	45	60	105	83%
Total	155	319	474	64%

Instruments

The Pupil Control Ideology (PCI) Form was used again in Study 2 (see Appendix B). Willower et al. (1967) developed the PCI Form as a means of locating the positions of educators' pupil control ideologies on a humanistic-custodial continuum. Lower scores are more humanistic and higher scores are more custodial (Hoy & Jalovick, 1979; Jones, 1982). A complete description of this instrument in available in Study 1.

The second demographic questionnaire, described in Study 1, was used to collect demographic data concerning age, number and gender of children, siblings, religion,

primary location of participants' elementary and secondary education, undergraduate major, and informal teaching experiences such as coaching and day/summer camps. The questionnaire also asked participants to share information about their experiences during the pre-service program. It examined two specific areas. First, it collected data on classroom management styles perceived by participants to be prominent during both the university component of the program, and the three practica that comprised the practice component. The second area was the practicum classroom conditions such as perceptions of the degree of ESL in the classrooms, perceptions of relative SES levels of students in the classrooms, and perceptions of behaviour problems in the classroom (see Appendix D).

Data concerning experiences of the pre-service teachers that occurred before they entered the pre-service program were gathered. These experiences may have influenced choices during the program such as the level of the program that they chose to enter (P/J, J/I. I/S). Data were also gathered concerning the taking of responsibility in areas such as Scouts/Guides, baby-sitting, and coaching, and in the area of undergraduate major.

Procedure

Basic demographic data and data concerning the PCI scores and philosophical orientations of pre-service teachers were collected at the beginning of the pre-service program. These served as baseline data. Immediately prior to the second data collection period, appropriate ethics approval was obtained from the Ethics Review Board of the university. Participants were informed of the voluntary nature of their participation, their right to withdraw from the study, and the confidentiality of their responses (see Appendix

E). Upon receiving this approval the PCI Form was administered again, along with the second demographic questionnaire (see Appendix D). Data were gathered in six individual classes taught by four professors.

Based on the data gathered at time 1 and time 2, and the Study 1 data analysis, several PCI predictive variables were identified. These variables were seen as potential predictors of the direction and degree of the shift in PCI during the pre-service program. As such, gender, location of elementary education, and undergraduate major were examined over time primarily within the context of the philosophical orientations variables.

In addition to the significant variables arising from Study 1, data identifying specific characteristics of the classrooms in which pre-service teachers worked, including English as a second language (ESL), socio-economic status (SES), and behavioural issues, and participants' perceptions of classroom management styles (student-centredness, collaborativeness, and teacher-centredness) were also collected. The impact of these variables on pre-service teachers was examined as well. Data were examined using analyses of variance.

Results – Study 2

Introduction

In order to address the research question, that is, to gain a clearer understanding of the impact of the pre-service teachers' experiences during the teacher-training program on Pupil Control Ideology, the additional data were analyzed using multivariate analyses. In order to test hypotheses 1 and 2, relevant data were re-structured into variables that

quantified pre-service teachers' experiences during the pre-service program in relation to both classroom management styles and levels of ESL, SES, and behaviour problems in the practicum classrooms.

Hypotheses 3 to 6 pertain to single variables and main effects, and do not take into account interactions that may occur among the variables during the pre-service program. To examine the relationship between these prominent variables arising from Study 1 (philosophical orientation, gender, location of elementary education, and undergraduate major) and changes in pre-service teachers' pupil control ideologies during the pre-service program, a series of four-way ANOVAs with time as the repeated measure was conducted. These four-way ANOVAs were structured so that each of the philosophical orientations (traditionalist, progressivist, and romanticist) were examined, with time and gender as givens, in relation to undergraduate major and then in relation to location of elementary education. This is consistent with a primary purpose of the study, as stated in Chapter 1, to examine the predictive capacity of the philosophical orientations. These tests are directly related to Hypotheses 3 to 6, but take into account the interactions that may occur among the independent variables.

Hypotheses 1 and 2 (Classroom Characteristics and Classroom Management Styles)

Participants were asked to identify their exposure to three classroom management styles of student-centredness, collaborativeness, and teacher-centredness during the pre-service program (including each of three practica, from their faculty advisor, and during their coursework at the university) on a four point scale. Each participant's scores, ranging from 'never' to 'often', were then totalled for each practicum, yielding a range

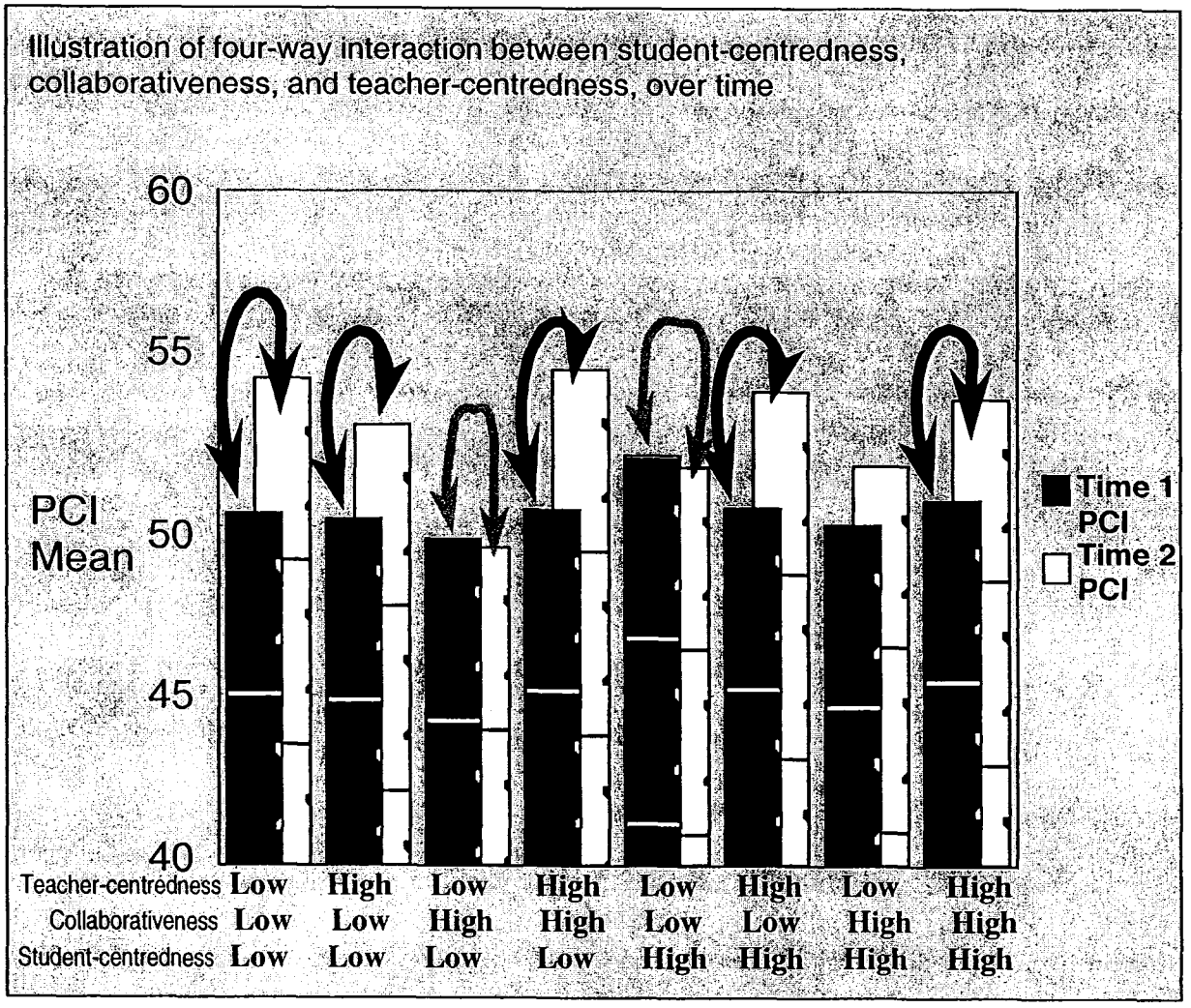
for each participant's perception of exposure to each of the classroom management styles of 3-12. Scores equalling 8 or greater were considered high. The resulting variables described the participants' exposure as low or high for each of the three classroom management styles. Participants were also asked to identify the classroom characteristics of ESL, SES, and behaviour problems for each of the three practica in which they participated. Variables for these classroom characteristics were constructed in a similar manner to that described for classroom management style, in order to describe the exposure of the participants to each of these conditions as low or high.

In relation to Hypothesis 1, repeated measures ANOVAs were conducted on the PCI scores, with time as the repeated measure, using ESL, SES, and behaviour variables as independent variables. Since no significant main effects or interaction effects were evident for ESL, SES, and behaviour ($p > .05$), these variables were not considered further.

In relation to Hypothesis 2, to examine the impact of classroom management styles with respect to PCI, a four-way repeated measures ANOVA was computed, with student-centredness (low, high), collaborativeness (low, high), teacher-centredness (low, high), and time (T1, T2) as the independent variables and PCI as the dependent variable. Time was a repeated measures variable. There was a main effect for time, $F(1, 401) = 21.04$, $p < .001$, a two way interaction for time by teacher-centredness, $F(1, 401) = 4.124$, $p < .05$, and a four-way interaction for time by student-centredness by collaborativeness by teacher-centredness, $F(1, 401) = 4.05$, $p < .05$ (see Figure 1). To explain the four-way interaction effect, post-hoc simple effects tests (t tests) were computed. These tests showed that PCI scores became significantly more custodial at time 2 when teacher-

centredness was at least as high as both collaborativeness and student-centredness (black arrows). PCI scores become significantly more humanistic when teacher-centredness was lower than at least one of collaborativeness or student- centredness (grey arrows).

Figure 1. Exposure to Classroom Management Styles

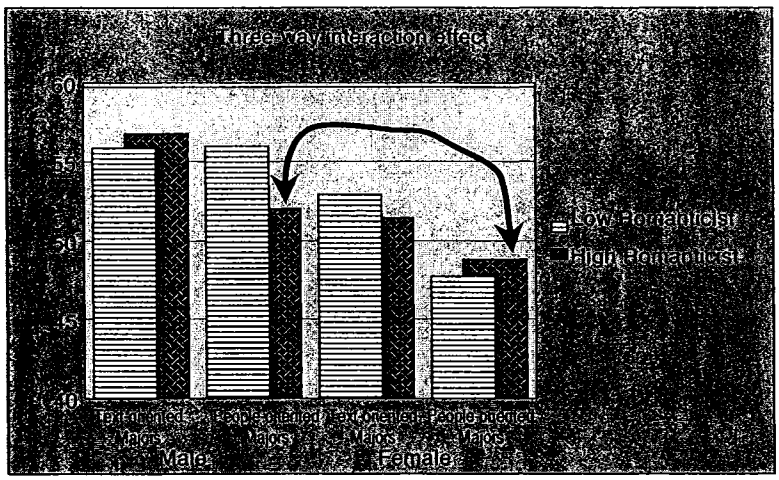


Romanticist Orientation and Undergraduate major

To examine the impact of undergraduate major with respect to the romanticist orientation, a four-way repeated measures ANOVA was computed, with romanticist orientation (low, high), undergraduate major (text-oriented, people-oriented), gender (M,

F) and time (T1, T2) as the independent variables, and PCI as the dependent variable. Time was a repeated measures variable. Main effects for undergraduate major, $F(1, 287) = 11.99$, $p < .001$, and gender, $F(1, 287) = 30.42$, $p < .001$, were qualified by a three way interaction effect for gender by romanticist orientation by undergraduate major, $F(1, 287) = 4.30$, $p < .05$. There was a main effect for time, $F(1, 287) = 57.54$, $p < .001$, with higher PCI scores at time 2. To explain the three-way interaction effect, post-hoc simple effects tests (t tests) were computed. As may be seen in Figure 2, females show lower PCI scores than males when degree of romanticism and undergraduate major are the same; however, when participants are both high romanticist and people-oriented majors, there is no significant difference between males (mean = 52.04) and females (mean = 48.86) (black arrow), $p > .05$. This would explain the three-way interaction.

Figure 2. Gender, Undergraduate Major, and Romanticist Orientation



Romanticist Orientation and Location of Elementary Education

The location of elementary education variable was restructured into two groups, with 'rural' and 'suburban' forming group one. This group will be referred to as non-

urban. The second group will be urban. The rationale for this re-grouping was based on the demographic similarities between suburban and rural schools, when compared to urban schools, and the need to increase cell sizes for analysis purposes.

To examine the impact of location of elementary education with respect to the romanticist orientation, a four-way repeated measures ANOVA was computed, with romanticist orientation (low, high), location of elementary education (non-urban, urban), gender (M, F) and time (time 1, time 2) as the independent variables, and PCI as the dependent variable. Time was the repeated measures variable. There was a main effect for location of elementary education, $F(1, 420) = 8.83$, $p < .05$. Students who received their elementary education primarily in urban schools were more custodial than those from non-urban schools. There was a main effect for gender, $F(1, 420) = 41.78$, $p < .001$. Males showed higher custodial scores than females. There was a main effect for time, $F(1, 420) = 63.52$, $p < .001$. PCI scores were more custodial at the end of the pre-service program. There were no interaction effects.

Progressivist Orientation and Undergraduate major

To examine the impact of undergraduate major with respect to the progressivist orientation, a four-way repeated measures ANOVA was computed, with progressivist orientation (low, high), undergraduate major (text-oriented, people-oriented), gender (male, female) and time (T1, T2) as the independent variables, and PCI as the dependent variable. Time was the repeated measures variable. There was a main effect for undergraduate major, $F(1, 284) = 9.05$, $p < .05$. Pre-service teachers with text-oriented majors tended to be more custodial than those with people-oriented majors. There was a

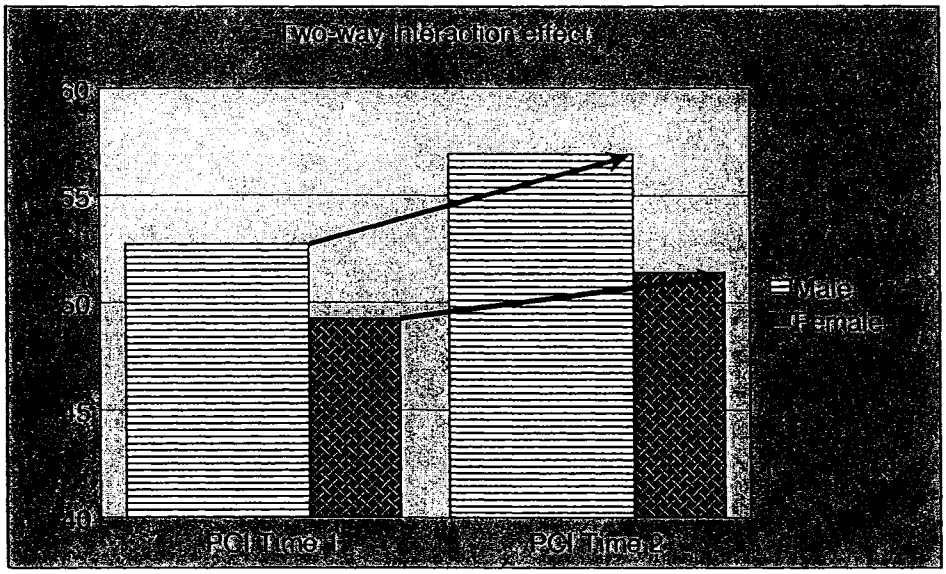
main effect for gender, $F(1, 284) = 24.56$, $p < .001$, with males showing higher PCI scores, and a main effect for time, $F(1, 284) = 61.95$, $p < .001$, due to increased PCI scores at time 2. There were no interaction effects.

Progressivist Orientation and Location of Elementary Education

To examine the impact of location of elementary education with respect to the progressivist orientation, a four-way repeated measures ANOVA was computed, with progressivist orientation (low, high), location of elementary education (non-urban, urban), gender (M, F) and time (T1, T2) as the independent variables, and PCI as the dependent variable. Time was the repeated measures variable. There was a main effect for progressivist orientation, $F(1, 416) = 7.2$, $p < .01$, with low progressivists being more custodial, a main effect for location of elementary education, $F(1, 416) = 8.3$, $p < .01$, with the urban group being more custodial, a main effect for gender, $F(1, 416) = 34.23$, $p < .001$, with males being more custodial and a main effect for time, $F(1, 416) = 64.99$, $p < .001$, with time 2 scores being more custodial.

There was a two-way interaction effect for time by gender, $F(1, 416) = 6.79$, $p < .01$. To explain the two-way interaction effect, post-hoc simple effects tests (t tests) were computed, which showed that the interaction was a result of the difference in degree of increase in PCI scores at time 2 between males and females. The increase in mean scores of males (4.20) is greater than the increase for females (2.15), but both increases are significant ($p < .01$) (see Figure 3).

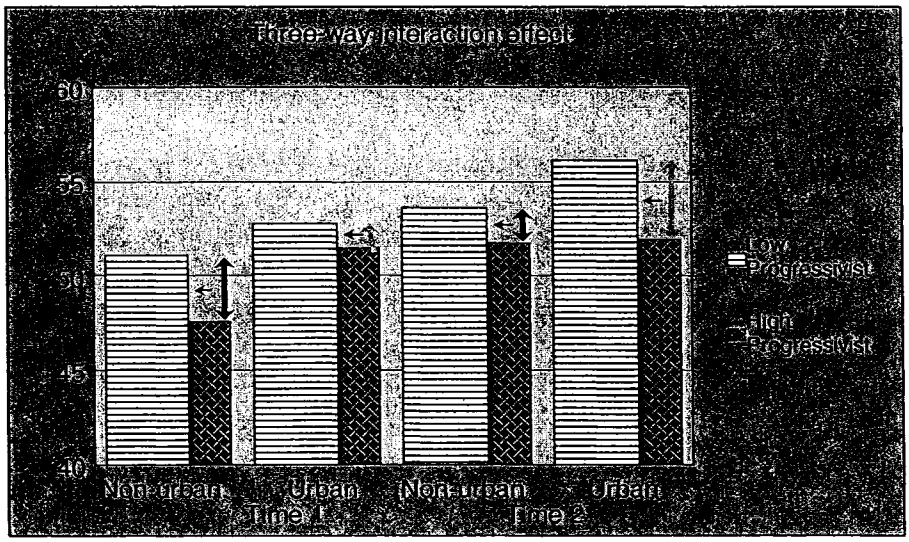
Figure 3. Gender and Time



There was a two-way interaction effect for time by location of elementary education, $F(1, 416) = 4.27$, $p < .05$. This interaction was qualified by a three way interaction effect for time by location of elementary education by progressivist orientation, $F(1, 416) = 6.63$, $p < .01$ (see Figure 4). To explain the three-way interaction effect, post-hoc simple effects tests (t tests) were computed, which showed that the interaction effect for these variables may be explained by the significant difference (3.51) at time 1 between low and high progressivists ($p < .001$) (Large black arrow) for pre-service teachers whose elementary education was in non-urban schools. At time 2, this difference decreases (1.88) but remains significant ($p < .05$) (Small black arrow).

For pre-service teachers whose elementary education was in urban schools, the difference between low and high progressivist scores (1.33) is not significant at time 1 (Small grey arrow). However, at time 2 the difference increases (4.23) and is significant ($p < .01$) between low and high progressivists (Large grey arrow).

Figure 4. Location of Elementary Education, Progressivist Orientation, and Time



Traditionalist Orientation and Undergraduate major

To examine the impact of undergraduate major with respect to the traditionalist orientation, a four-way repeated measures ANOVA was computed, with traditionalist orientation (low, high), undergraduate major (text-oriented, people-oriented), gender (M, F) and time (T1, T2) as the independent variables, and PCI as the dependent variable. Time was the repeated measures variable. There was a main effect for traditionalist orientation, $F(1, 288) = 21.65$, $p < .001$. Participants with high traditionalist orientations were likely to be more custodial than those with low traditionalist orientations. There was a main effect for undergraduate major, $F(1, 288) = 11.75$, $p < .001$, with the text-oriented group being more custodial, a main effect for gender, $F(1, 288) = 32.27$, $p < .001$, with males being more custodial, and a main effect for time, $F(1, 288) = 56.91$, $p < .001$, with time 2 PCI scores being more custodial.

There was a two-way interaction effect for time by gender, $F(1, 288) = 10.71$, $p < .001$. The interaction effect is explained by the difference in degree of increase in PCI

scores between males and females. The increase in mean scores of males is greater than the increase for females (see Figure 3).

Traditionalist Orientation and Location of Elementary Education

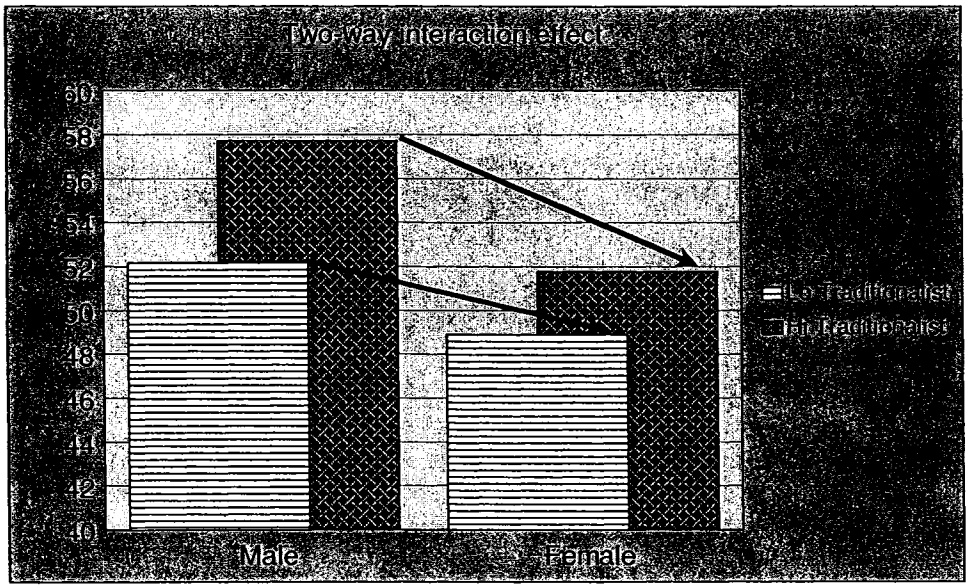
To examine the impact of location of elementary education with respect to the traditionalist orientation, a four-way repeated measures ANOVA was computed, with traditionalist orientation (low, high), location of elementary education (non-urban, urban), gender (M, F) and time (T1, T2) as the independent variables, and PCI as the dependent variable. Time was the repeated measures variable. There was a main effect for traditionalist orientation, $F(1, 419) = 42.49$, $p < .001$, with high traditionalists being more custodial, a main effect for location of elementary education, $F(1, 419) = 4.28$, $p < .05$, with 'urbans' being more custodial, a main effect for gender, $F(1, 419) = 39.74$, $p < .001$, with males being more custodial, and a main effect for time, $F(1, 419) = 63.72$, $p < .001$. Time 2 PCI scores were more custodial.

There was a two-way interaction effect for time by gender, $F(1, 418) = 6.36$, $p < .01$. The interaction effect is explained by the difference in degree of increase in PCI scores between males and females. The increase in mean scores of males is greater than the increase for females (see Figure 3). Males become more custodial than females over time.

There was a two-way interaction effect for gender by traditionalist orientation, $F(1, 419) = 5.47$, $p < .05$. To explain the two-way interaction effect, post-hoc simple effects tests (t tests) were computed, which identified the cause of the interaction effect. While PCI scores of males are higher than those of females, regardless of traditionalist

orientation, male high-traditionalist PCI mean scores are associated with a larger difference in PCI scores (5.56) than in females (2.86) (see Figure 5).

Figure 5. Gender and Traditionalist Orientation



Hypothesis 6 (Philosophical Orientations)

Given the prominence of the philosophical orientations variable cluster in this study, with respect to Hypothesis 6 (philosophical orientations) a new variable was computed. This variable identified which participants were high in romanticist orientation but low in progressivist and traditionalist orientations (time 1 mean = 49.49; time 2 mean = 53.78, N = 49, SD = 7.94), high in progressivist orientation but low in romanticist and traditionalist orientations (time 1 mean = 47.45; time 2 mean = 50.29, N = 21, SD = 6.74), and high in traditionalist orientation but low in romanticist and traditionalist orientations (time 1 mean = 54.95; time 2 mean = 57.58, N = 71, SD = 8.28). A two-way repeated measures ANOVA was then computed, with the new variable and time as the

independent variables and PCI as the dependent variable. Time was the repeated measures variable.

There was a main effect for time, $F(1, 141) = 27.55, p < .01$. There were significant increases in PCI scores of pre-service teachers, regardless of whether they were 'high romanticist', 'high progressivist', or 'high traditionalist'. There was no interaction effect between time and the philosophical orientations variable, $F(1, 141) = 1.08, p > .05$.

Summary

In summary, Hypothesis 1 regarding the predictive nature of SES, ESL, and behaviour was not supported. Hypothesis 2 was supported in that pre-service teachers' perceptions of classroom management styles did predict changes in PCI. Pre-service teachers who reported their experiences at the university and in schools as teacher-centred were more likely to become more custodial. They were less likely to become more custodial if they reported strong student-centred or collaborative experiences. The remaining hypotheses were either not supported or only partially supported. The ability of each of the remaining variables (gender, undergraduate major, location of elementary education, romanticist philosophical orientation, progressivist philosophical orientation, and traditionalist philosophical orientation) to predict changes in PCI during the pre-service program was qualified by interactions with one or more of the remaining variables. For instance, the impact of gender, undergraduate major, and location of elementary education in moving PCI of pre-service teachers towards a more custodial PCI appears to be moderated in some cases by the presence of high romanticist and

progressivist orientations. Conditions that would make the PCI scores more humanistic appear to be moderated by the presence of high traditionalist orientation, which exerts a custodial influence on PCI.

CHAPTER IV - DISCUSSION

Study 1

As hypothesized for Study 1, all three variable clusters (demographic, experiential, philosophical orientations) were predictive of PCI at the beginning of the pre-service program, with the philosophical orientations cluster being most predictive. Not all variables within each of the clusters were determined to be significant in contributing to the degree of variance accounted for by the cluster. For instance, while the demographic variable cluster contained 15 variables, and accounted for 12.1% of the variance ($R^2 = .121$, $p < .01$), only two of the variables in the cluster were significant in accounting for the variance.

The findings concerning specific demographic and experiential variables are consistent with the results of a number of research studies. These studies suggested that males (Hoy & Rees, 1977; Smyth, 1977) tended to be more custodial. They also suggest that, in relation to location of elementary education, educators in urban schools tend to be more custodial, while those in non-urban schools tend to be more humanistic (Furlong, Babinski, & Poland, 1996; Shen, 2001). When this relationship is considered in light of Tabachnick and Zeichner's (1984) finding that the influences of thousands of hours spent as a student in the classroom was the primary influence in shaping teachers' practices, it seems likely that pre-service teachers who attended a non-urban elementary school would have been exposed to more humanistic approaches to the classroom, and as teachers, would tend to be more humanistic in their approach to their own students. Finally, in as much as one may expect to find a strong relationship between undergraduate major and school subjects being taught, 'text-oriented' teachers tended to be more custodial (Abd-

El-Khalick, Bell, & Lederman, 1998; Dar, 1981; 1985). It is noted that in relation to the two latter variables, the studies cited described in more general terms the relationship between these variables and educators' approaches to pupil control issues. The findings of Study 1 concerning these variables are new in that they define the relationship between PCI and these variables, and the degree of PCI variability accounted for by them.

A number of earlier studies which examined a variety of demographic and experience variables together (Bartlett, 1976; Brown, 1975; Smyth, 1977) suggested that the predictive value of demographic and experiential variables would be in the 5% to 8% range, based on the R^2 scores emerging from the multiple regression analyses. In Study 1, not only were additional demographic and experience variables considered, but these variables were separated into demographic and experience clusters. Study 1 findings indicated that demographic and experience variables accounted for approximately 12% and 7% of the PCI variance respectively.

The finding that more variance is explained by the demographic cluster in Study 1 than in earlier studies may be linked to the location of the earlier studies. Most of the studies reported in the literature review are based in the United States. To illustrate, the U. S. is often referred to as a 'melting pot', where ethnic groups are integrated into mainstream culture. Homogeneity is more valued. The Canadian 'mosaic' is often seen as placing a higher value on heterogeneity. As a result, ethnicity of pre-service teachers may play a significant role in shaping PCI in Canadian settings. The potential predictive value of this national metaphor may have been magnified by the location of this study in an Ontario university with a particularly high ethnic student mix. In the 'mosaic' context, it may be reasonable to expect that there would be a higher reflection of these ethnic

influences. This is an area that researchers may wish to examine more closely in the future.

The increased predictive power of the demographic variables may also be accounted for by considering the range of demographic variables used in this study, as compared to earlier studies. The Modified Willower Demographic Questionnaire and the Experiential Questionnaire provided a broader range of variables for Study 1 than were available for previous studies. Variables such as location of elementary education, location of secondary education, number and gender of children, and religion of participants were included. Of these variables, location of elementary education emerged as a significant predictor of PCI scores within the demographic variable cluster.

In the philosophical orientations variable cluster, each of the variables (romanticist orientation, progressivist orientation, and traditionalist orientation) contributed significantly to prediction of PCI scores. As pre-service teachers scored higher on romanticist and progressivist philosophical orientation measures, their PCI scores tended to indicate a more humanistic orientation. As they scored higher on traditionalist philosophical orientation measures, their PCI scores tended to indicate a more custodial orientation.

There are no studies relating directly to the ability of philosophical orientations to predict PCI. Several studies that considered aspects of belief systems did, however, identify the likelihood that teachers with a higher degree of openness, higher autonomy, or a lower degree of bureaucratic orientation tended to have more humanistic PCI. Those who were more dogmatic, control-oriented, or bureaucratic tended to be more custodial (Willower et al., 1967; Hoy & Rees, 1977; Hoy & Woolfolk, 1990). The findings of

Study 1 go beyond these aspects of belief systems into areas that are specifically related to education. They further understanding of the predictive ability of beliefs systems by demonstrating that philosophical orientations based on beliefs about educational concepts are predictive of pre-service teachers 'beginning' PCI scores.

Understanding of findings in this research may be enhanced by considering them in the context of theory. Demographic and experiential variables such as location of elementary education and undergraduate major, both of which were descriptive of 'external' contexts within which participants' experiences were shaped, could be seen as consistent with Bandura's (1977) social learning theory, and Latané's (1981) social impact theory. These theories suggest that individuals react to external influences around them in order to become successfully socialized into new settings.

The philosophical orientations variables were a representation of the 'internal' beliefs of the candidates about educational concepts. Findings demonstrating the predictive nature of these internal variables are consistent with Festinger's (1957) cognitive dissonance theory. According to this theory, when there is a conflict between beliefs and behaviour, the dissonance may be resolved by acquiring new beliefs or by changing behaviour to be consistent with beliefs. For example, pre-service teachers' beliefs may identify a progressivist orientation. Since this set of beliefs may be predictive of a more humanistic approach to pupil control, pupils in such teachers' classrooms would in theory be more likely to be given a more active role in the workings of the classroom and in their own education. In this situation, though, pre-service teachers may experience dissonance between their practice of minimizing verbal interactions among students and student movement in the classroom (conditions typically associated with the

'well-managed' classroom, Brophy & Good, 1986), and their beliefs that students need to be active verbally and in physical movement within the classroom in order to be consistent with the progressivist beliefs. In such circumstances, teachers may experience a shifting of their behaviours to permit more verbal interaction and classroom movement so that behaviours align with progressivist beliefs about education. Classroom approach has thus changed to reduce the cognitive dissonance between beliefs and behaviours.

It was hypothesized that the most dramatic effects arising from an examination of the predictive nature of the variable clusters would be related to the philosophical orientations variable cluster. This hypothesis was supported by the findings. These 'internal' variables accounted for 20.7% of the PCI variance.

The higher degree of variance accounted for by the philosophical orientations cluster may be explained by the likelihood that in personal preparation for entry into a pre-service teacher education program, pre-service teachers may have already resolved some potential areas of dissonance. Consistent with Hoy's (1967) theory of anticipatory socialization, candidates would have recently pondered the significant factors that they might encounter in the months ahead, including potential dissonance between their beliefs and what they now anticipate that they must do in order to be considered successful in the classroom. Such reflection may have caused beginning pre-service teachers to consciously consider how their beliefs could be adjusted to support consonant approaches to the many new challenges ahead, including classroom management and pupil control.

Study 1 Conclusions

Study 1 goes beyond existing findings that demographic and experience variables are predictive of pre-service teachers' PCI (Bartlett, 1976; Jones, 1982). Firstly, a broader range of variables is included in these clusters. The demographic and/or experience variable clusters used by many researchers (Bartlett, 1976; Brown, 1975; Jones, 1982; Smyth, 1977; Willower et al., 1967), typically included between 5 and 10 variables, whereas in this study the demographic and experience variables totalled 39. Secondly, other studies have identified that demographic and/or experience variables account for 5% to 8% of the variance in PCI scores. Study 1, on the other hand, shows that when examined separately, the demographic cluster accounted for12.1% of the variance, R^2 = .121, F (15, 424) = 3.88, $p < .01$, while the academic experience cluster, a sub-set of the experience cluster, accounted for 7% of the variance, R^2 = .070, F(10, 455) = 3,45, $p <$ .01.

The empirical evidence from Study 1 indicates that philosophical orientations are most predictive of pre-service teachers' PCI. For instance, romanticist and progressivist orientations significantly predict the degree to which pre-service teachers hold a humanistic view of students as self-motivated and worthy of being trusted. In a similar manner, traditionalist orientations significantly predict the degree to which pre-service teachers generally hold a custodial view of pupil control. Such empirically based knowledge about the predictive value of philosophical orientations is important in that it identifies a significant role of pre-service teachers' beliefs in shaping their approaches to pupil control.

Based on this finding, it may be tempting to include philosophical orientations as an additional criterion for the selection of candidates into teacher education programs. Some candidates may be seen as more desirable if their beliefs about education are romanticist or progressivist, and as such, aligned with a constructivist approach to education, one that values a humanistic approach to pupil control (Kickbusch, 1996; Mortimore, 1992; Stoll & Fink, 1998). In other jurisdictions a more traditionalist set of beliefs about education may be seen as more appropriate for candidates (Bloom, 1987; Hirsch, 1996; O'Hear, 2000). There may, however, be significant challenges to such admissions criteria. Hoy (2001) cautioned that any action taken based on such a rationale may have legal ramifications arising from potential discrimination charges and a denial of the right to work.

A better use of knowledge concerning the predictive nature of philosophical orientations might be as a rationale for giving a higher priority within the curricular components of teacher education programs to pre-service teachers' educational beliefs. Further research in this area may confirm that beginning teachers, as well as students in schools, may be better served as effective classroom strategies based on beliefs shaped by sound reasoning, valid research findings, and experience are encouraged. Top-down mandates that bypass the beliefs level and are aimed directly at behaviours, might, in comparison to such an approach, be seen as less effective in the long term.

Study 2

Participants in Study 2 demonstrated a shift from a more humanistic to a more custodial PCI during their pre-service program. These findings affirm the earlier research.

Since the initial findings of Willower et al. (1967), most of the literature on pre-service teachers' PCI has demonstrated empirically that they tend to be more or less humanistic in their PCI at the beginning of the pre-service program. As they progress through the pre-service program, they tend to become more custodial, as indicated by increasing PCI scores (Hoy, 1967; Hoy & Woolfolk, 1990; Jones & Harty, 1981; Lunenburg, 1986; Stiscak, 1987). Willower et al. provided a rationale for this position by postulating that control was necessary because of the unselected clientele and mandatory participation of students in public schools, because teachers adopted controlling stances when they wished to protect and enhance their status in relation to one another, and because teachers must deal directly with status-threatening students.

This shift towards custodialism identified in Study 2 may have occurred as a result of several inter-connected factors encountered by the participants in the study. Firstly, faculty advisors and associate teachers were likely to be custodial (Hoy & Woolfolk, 1990; Jones, 1982; Stiscak, 1987). Associate teachers are often drawn from the ranks of experienced schoolteachers. Faculty advisors may be university professors who have moved on from successful school teaching or administrative careers or, particularly in larger teacher preparation programs, retired teachers or administrators (Shiveley & Poetter, 2002). Both associate teachers and faculty advisors, especially those drawn from the 'retired' group, are likely to have been identified because they were successful within the school system. These individuals may place a higher value on the traditional norms, roles, and assumptions evident in schools. As a result, the pre-service teachers whom they supervise may believe "that they have very little say in determining their practices"

(Whitney, Golez, Nagel & Nieto, 2002, p. 70) and become socialized towards a higher degree of custodialism because of these influences (Latané, 1981).

Secondly, the participants were in a relatively short 'after degree' one-year B. Ed. program. Two aspects of this program configuration may have influenced the experiences of the participants. As a result of the practicum experiences being compressed into relatively short three-week blocks, pre-service teachers may have felt that there was not adequate time to really respond reflectively to socializing influences. Instead, they may have simply decided that the path of least resistance was to adapt to the custodial norms, roles and assumptions of the school even when such an approach was inconsistent with the theoretical foundations of teaching and learning prominent at the university (Moore, 2003).

Thirdly, students may have felt that they were now approaching the end of the 'university experience', where theory resided in a relatively untested state. Theory was now to be replaced by the pragmatic considerations of the work-a-day world. Consistent with Hoy's (1967) anticipatory socialization theory, beginning teachers may have become more custodial because they believed that a key pragmatic consideration was the gaining of peer approval. They could best accomplish this goal by emulating what they perceived to be the dominant approach of those already established in the workplace. Such experienced 'already established in the workplace' teachers tended to be more custodial than beginning teachers (Hoy, 2001, Jones & Harty, 1981; Lunenburg, 1986).

Fourthly, the evaluation of pre-service teachers' practica experiences included the generation of written assessments from the associate teacher in each of the three-week blocks. Participants likely recognized the wisdom of adapting, since this 'established',

custodial group would be their models and evaluators this year, and their co-workers and colleagues next year. In both cases their approval was important. It seems reasonable to expect in such circumstances that pre-service teachers would attempt to replicate their associate teachers' custodial approach, since they might have believed that favourable reviews of their performance were at stake.

Finally, it is also possible that pre-service teachers experienced an authentic shift in control ideologies. That is, they may have concluded, apart from the influences of custodial associate teachers, practicum time constraints, or evaluation concerns, that student learning and classroom goals appeared to be more easily attained in custodial situations. Learning goals, for instance, may have been more achievable in situations that were more teacher directed, where students were required to be more passive, and where quantification of results made it easier to identify who was and who was not successful at prescribed tasks. This explanation of shift in PCI as the result of 'what works in the classroom' appears to be consistent with Bem's (1979) finding that people's attitudes, as part of their belief systems, were often inferred from their behaviour. Pre-service teachers, in classroom situations and away from theory laden 'university' teaching and learning models, may have adopted Hirsch's (1996) view that facilitating student-centred learning conditions was in fact only an ungrounded complication in the educative process that slowed the acquisition of knowledge.

Hypotheses

Hypothesis 1 (Classroom conditions)

It was predicted that exposure of pre-service teachers to high ESL, low SES, or a higher incidence of behaviour problems in the practicum classroom would be associated with a more custodial PCI among pre-service teachers. These predictions were not supported.

These hypotheses were based on research findings of, for example, Dixon-Floyd and Johnson (1997) concerning SES, Skiba, Rice, and Peterson (1997) concerning behaviour problems, and Olivo (2003) concerning ESL, that teachers tended to become more custodial in the presence of these classroom characteristics. Additionally, according to Whitney, Golez, Nagel, and Nieto (2002), pre-service teachers responded in particular classroom situations in a manner similar to their supervising teachers, since they were more influenced by supervising teachers than others involved in practicum supervision. Their study included interviews with current teachers who were recent graduates of an after-degree teacher education program. These beginning teachers indicated that during their time as student teachers they had found it difficult to approach classroom situations in a manner that was not consistent with the patterns and expectations established by their supervising teachers. In other words, if supervising teachers were custodial in classrooms characterized by ESL, SES, and behaviour issues, pre-service teachers tended to be custodial as well.

The lack of support for the hypothesis may be explained by the fact that students were present in a classroom for a maximum of three weeks, were virtually always supervised by the associate teacher, and, it seems likely, would have created highly-

structured, exemplary lessons plans. Such teaching conditions may have interfered with the ability of the pre-service teacher to have either really perceived the finer points of the associate teachers' methods, or to have placed in higher priority a specific response to the demographic peculiarities of the class. This rationale is consistent with Moore's (2003) finding in a study of 77 pre-service teachers enrolled in a three-week practicum that all participants reported being pre-occupied during the practicum with procedural concerns such as time management, classroom management, and properly planned lessons. These items were perceived by the pre-service teachers as most important to teaching success.

Hypothesis 2 (Classroom management style)

When classroom management perceptions were taken into account, participants tended to become more custodial when they perceived that they were exposed to at least as much teacher-centredness as student-centredness and collaborativeness. Participants became more humanistic (changes in score were small but significant) when the participants reported a perception of being exposed to more collaborativeness or student-centredness than teacher-centredness. It seems that the perception of exposure to classroom management style is a key factor in the shift in PCI scores.

One possible way to account for these shifts in PCI may be the pre-service teachers' response to the socializing impact of the practicum classroom. Latané's (1981) social impact theory postulated that three variables determined how individuals responded to social influence. Individuals respond to socialization pressures based on strength, immediacy, and number of the influencing group. 'Strength' refers to the

importance of the group of people to the subject, 'immediacy' refers to the closeness of the group, and 'number' refers to how many people are in the group.

The routines of pre-service teachers may be influenced by factors prominent in Latané's theory. On a daily basis their approaches to education were impacted by the scholarly, practical, evaluative, and supportive roles (strength) of 5-10 key educators (number) with whom they were involved on a frequent (often daily or weekly) basis (immediacy). The result of the social influence may be evident in the direction in which pre-service teachers' PCI changed.

Hypothesis 3 (Undergraduate major)

It was predicted that participants with people-oriented undergraduate majors would experience a larger degree of change towards custodialism than those with text-oriented majors. Bearing in mind the likelihood that undergraduate major may be a significant predictor of the teacher's area of instruction, this hypothesis was based on literature indicating that teachers with text-oriented subject areas tended to be more custodial (Abd-El-Khalik, Bell, & Lederman, 1998; Dar, 1981, 1985; Silvernail, 1992b). If any group was in a position to change in the direction of greater custodialism, it was more likely to be the people-oriented group, since this group tended to be in the more humanistic range. This hypothesis was not supported.

The actual size of the shift towards custodialism was similar for each of the undergraduate majors groups. This 'similar shift' towards a more custodial PCI for both people-oriented and text-oriented majors indicated that undergraduate major was not

strong enough by itself to alter the pattern of change toward a more custodial PCI over time.

A three-way interaction was found between undergraduate major, philosophical orientation and gender. In effect, there was no difference in PCI scores of males and females when they both had people-oriented majors and manifested a romanticist philosophical orientation. Otherwise, males' PCI tended to be higher than females.

The three-way interaction indicates that when gender, philosophical orientation, and undergraduate major of pre-service teachers are considered, new information is available concerning pre-service teachers' resistance to socialization pressures. Participants whose gender (male) and philosophical orientation (romanticist) aligned with an educational choice ('people-oriented' undergraduate major) tended to resist socialization pressures to become more custodial during the practicum.

There are two possible explanations for this interaction effect. The first is based on the differences to be found between male high-romanticist 'people-oriented undergraduate majors' and males who are high progressivist. This interaction may be an indication that while gender is a strong predictor of pre-service teachers' PCI, its effect is diminished when males have both high romanticist orientations and people-oriented undergraduate majors. In this case there was no difference between males and females with the same romanticist and undergraduate major profile.

It would appear that the progressivist orientation does not hold the same moderating influence as the romanticist orientation on the trend towards higher PCI as experience is gained. The lack of moderating influence by the progressivist orientation may be explained by the overlap in beliefs about education that is more likely to be found

between progressivists and traditionalists than between romanticists and traditionalists. This overlap is illustrated by considering the five key educational concepts (purpose of schooling, function of curriculum, methods of delivery, role of the teacher, and role of the student) in which the philosophical orientations are rooted. Beliefs of traditionalists and romanticists are most likely to be furthest apart. The incompatibility between romanticist beliefs about education, consistent with subjectivist views of the world, and traditionalists', consistent with objectivist views of the world, may have been strong enough to create a resistance to a shift towards custodialism. Since the incompatibility may be less pronounced between traditionalists and progressivists, overlaps in beliefs about educational concepts may have been more likely to occur.

Secondly, this interaction points to the importance of 'people orientation' in relation to predicting pre-service teachers' PCI. It seems logical to conclude that the demonstrated larger increase over time of males' PCI scores, when compared to females', may be mitigated in situations where both academic interests, as demonstrated by people-oriented undergraduate majors, and beliefs about education, as demonstrated by 'student-centred' romanticist philosophical orientations, are centred on people. The co-existence of a people-oriented major and a highly student-centred (romanticist) philosophical orientation tends to diminish the predictive power of gender.

Knowledge that male pre-service teachers' PCI may tend to remain more humanistic in certain circumstances may be important in light of the low number of male teachers, especially in the elementary grades. At the elementary level, more humanistic approaches to pupil control are prominent (Jones, 1982; Hoy & Woolfolk, 1990). In the

U. S., the National Education Association (NEA) articulated the importance of the humanistic approach to education, and its relationship with gender, as follows:

> The prevailing philosophy within education is that men go into teaching to "teach the subject," and women enter teaching to nurture and develop children. Since males tend to gravitate toward secondary teaching, this leaves a critical shortage of male teachers at the elementary level. (NEA, 2002, p. 1)

Steps have been taken to address this shortage of male teachers. The NEA approved measures at their 2002 national conference to "identify, recognize, recruit, and retain" more male teachers, particularly at the elementary level. They reported that only 9% of American elementary level teachers in public schools were male (NEA, 2002). Closer to home, in their Ontario College of Teachers report *Narrowing the Gender Gap: Attracting Men to Teaching*, Bernard, Hill, Falter, and Wilson (2004) indicated that in the 'under thirty' group, only 10% of Ontario primary/junior teachers and 20% of junior/intermediate teachers were male. In the introduction to the report, these researchers stated: "Ontario schools are on a path to an increasingly diminished male presence among teaching staff". Their primary recommendation, similar to the NEA's, was that "the government of Ontario support the development of a three-year, province-wide marketing campaign to attract men to careers in teaching" (p. 3)

Study 2 has identified circumstances in which male pre-service teachers are more likely to remain more humanistic. The 'people-oriented' humanistic characteristics that appear to be important in elementary teaching, however, are identifiable at the point of admission into the pre-service program. In a time of shortage of male teachers, particularly at the elementary level, such information about potential suitability to

teaching may be helpful to male students who are considering the teaching profession. Additional research is encouraged in this area. As the findings of this study are elaborated, males with romanticist philosophical orientations and people-oriented undergraduate majors, and who may be considering elementary teaching, may be more inclined to proceed in this direction. Male and female pre-service teachers alike may come to understand teaching at the elementary level more as the domain of people-oriented, humanistic individuals instead of simply the domain of females.

Hypothesis 4 (Location of elementary education)

It was predicted that all participants, that is, those whose elementary education occurred primarily in either a non-urban setting or an urban setting, would undergo a shift to a more custodial PCI. However, those whose elementary education occurred in an urban setting would undergo a smaller shift. This hypothesis was based on the prediction that the PCI scores of 'urbans' would tend to already be in the more custodial range. If any group was in a position to change, it was more likely to be the 'non-urbans', since this group tended to be in the more humanistic range. Since there was no interaction effect between time and location of elementary education, this hypothesis was not supported.

The pre-service program appears to result in a higher PCI score for high progressivist non-urbans, while this shift is not evident for urban high progressivists. The non-urban pre-service teachers may be experiencing urban schools for the first time during their practicum placements. In many cases 'non-urban' pre-service teachers, while living in urban settings during their undergraduate years, have had no reason to be

exposed to urban schools until this placement occurs. This placement appears to impact 'high-progressivists' from non-urban settings, in that their PCI at the beginning of the pre-service program (mean = 47.68) becomes more custodial (mean = 51.75) and more aligned with the PCI of 'urban' high-progressivist students (51.95) at the end of the program. This conclusion is supported by the nature of pre-service teacher placements. Most are placed in either urban or urban-oriented schools, since these are the schools most often accessible to universities. The same rationale seems to support the experiences of 'urban high-progressivists'. This group of pre-service teachers do not experience an increase in PCI between the beginning of the pre-service program (mean = 51.21) and the end (mean = 51.95). They do not move, do not experience an approach to schooling that appears different from what they experienced as school students themselves, and remain stable in their custodial PCI.

On the other hand, there are no interactions involving either romanticist or traditionalist philosophical orientations and location of elementary education. This may be explained by the fact that 'high romanticist' and 'high traditionalist' participants may hold more highly differentiated views concerning, for instance, the role of the teacher (non-directive or highly directive), the purpose of education (process or product), and the role of the student (active or passive). Since 'high-progressivist' participants appear to be less ideologically distinct, it seems reasonable that their PCI would be more likely to change based on interactions with variables such as location of elementary education, whereas the more differentiated positions would be less likely to be impacted by other factors. Thus, approaches to pupil control are more likely to change in certain circumstances as defined above. However, romanticists' and traditionalists' PCI are less

likely to change, since their beliefs are clearly distinct from each other and more likely incompatible. They may tend to serve as stronger predictors of humanistic and custodial PCI, respectively.

Hypothesis 5 (Gender)

It was predicted that while both males and females would undergo a shift towards a more custodial PCI, female participants would experience a larger shift. This hypothesis was based on Study 1 findings indicating that males' PCI were already more custodial than females', as well as on literature (Smyth, 1977; Hoy & Rees, 1977) demonstrating that PCI tended to shift towards custodialism. If any group was in a position to change, it was more likely to be females, since this group tended to be in the more humanistic range. This hypothesis was not supported.

There was a two-way interaction effect between time and gender that was opposite to what was predicted. A two-way repeated measures ANOVA, with gender and time as the independent variables, PCI as the dependent variable, and time as the repeated measures variable revealed that over time, while both males and females experienced an increase in PCI scores, the degree of change towards custodialism was greater for males than for females.

This interaction may be explained by the different approaches male and female pre-service teachers are likely to take in custodial classrooms, and the approaches females tend to take in school situations requiring leadership. According to Shakeshaft (1989) and Fullan and Stiegelbauer (1991), females are more likely to value teamwork and collaborative decision-making approaches, both consistent with a humanistic

approach. While female pre-service teachers still tend to become more custodial, it seems logical that they would be less likely to become custodial to the same extent as males, since they tend to respond to custodial classroom situations in a more humanistic manner.

Hypothesis 6 (Philosophical orientations)

It was predicted that the PCI of participants who were either 'high-romanticist' or 'high-progressivist' would undergo a smaller shift towards custodialism than the PCI of those participants who were 'high-traditionalist'. This prediction was based on the Study 1 finding that the philosophical orientation variables accounted for more of the variance in PCI scores than demographic or experiential variables. As a result, the rationale used to explain the hypothesized relationship between other less predictive variables, such as location of elementary education or gender, and PCI scores does not apply in this case. That rationale was based on the overall assumption that, despite the impact of the demographic or experiential variable being examined, PCI scores tended to increase during the pre-service program, and that lower beginning PCI scores had more room than higher beginning PCI scores to increase. In this case, it was predicted that the impact of the philosophical orientation variables would be strong enough to overcome any tendency for change that might be explained primarily by the tendency for beginning 'low' or 'high' PCI scores to shift towards custodialism. The hypothesis that the PCI of participants who were either 'high-romanticist' or 'high-progressivist' would undergo a smaller shift towards custodialism than the PCI of 'high-traditionalists' was partially supported.

The prediction assumed that there were similarities between progressivists and romanticists in relation to beliefs about the core educational concepts, when compared to traditionalists. This would result in similar responses in relation to changes in PCI. Progressivist and romanticist views of education have often been lumped together in order to contrast them with traditionalist views (Hirsch, 1996; O'Hear, 2000). There was an expectation that such pre-service teachers, whose beliefs about education were somewhat defined and more consistent with a humanistic approach to the classroom, would be less likely to respond to socialization pressures to become more custodial.

A main effect was found for time, as there were significant increases in PCI scores of pre-service teachers from the beginning to the end of the pre-service program. There were no interactions between time and philosophical orientations. High romanticists, high progressivists, and high traditionalists all became more custodial.

The absence of an interaction effect between philosophical orientations and time may be explained by the socialization pressures that beginning teachers face in bureaucratized schools (Hoy & Rees, 1977; Marshall, 1997; Young, 1999). The 'external' socialization pressures to adapt to the more custodial roles, norms, and assumptions of 'successful' educators, those already established in the education system, appear to create a 'custodializing' effect on participants regardless of their philosophical orientation. These external socialization pressures appear to have a stronger effect than the internal beliefs about education that constitute 'high romanticist' and 'high progressivist' philosophical orientations, and move pre-service teachers with these philosophical orientation, along with 'high traditionalists', toward a significantly more custodial PCI.

Study 2 Conclusions

Study 2 identified an overall shift to a more custodial PCI. Three conclusions are discussed below that qualify and provide a more detailed understanding regarding this shift. Firstly, student-centredness and collaborativeness were seen as more prominent than beliefs, demographics, experience, or classroom characteristics in altering the shift towards a more custodial PCI during the pre-service program. Secondly, when interacting with other variables, 'high progressivists' appeared to be more adaptable than 'high traditionalists' and 'high romanticists' in relation to this shift. Thirdly, if not addressed appropriately, the stress that such a shift might create for beginning teachers could have serious consequences for both individuals and the teaching profession.

The first point to be considered concerning the shift towards custodialism pertains to the pre-service teachers' perceptions of a primarily student-centred or collaborative classroom management style on the part of their pre-service supervisors (university professors, faculty advisors, and associate teachers). As reported earlier, there was no measurable effect on pre-service teachers' PCI in relation to SES, ESL, or behaviour characteristics of the classroom. None of the identified classroom characteristics were strong enough to interact with the socializing tendencies towards custodialism encountered by pre-service teachers. Similarly, participants with high and low romanticist, progressivist and traditionalist beliefs about education all became more custodial over time. This may suggest that of the sets of beliefs about education identified by these philosophical orientations, none are strong enough on their own to override the socializing tendencies toward custodialism that pre-service teachers most often encounter during their practica (Jones & Harty, 1981; Hoy and Woolfolk, 1990; Lunenburg, 1986).

The same is true for prominent demographic and experiential variables, bearing in mind that while gender did impact the degree of change toward a more custodial PCI, it did not reverse the trend.

However, the socializing influence of collaborative and student-centred styles of classroom management perceived by participants during the pre-service program was associated with a lowering of PCI scores. When participants perceived that their pre-service experiences were oriented primarily to a student-centred or collaborative classroom management style, their PCI score became more humanistic. When participants perceived that their pre-service experiences were oriented primarily to a teacher-centred classroom management style, their PCI score became more custodial.

A deeper understanding of the socialization trend to a more custodial PCI may be gained by examining the socializing factors that shape the context within which pre-service teachers develop. Pre-service teachers, in response to either explicit or implicit influences, may have concluded that one of the hallmarks of their success was the degree to which the practicum facilitated their successful socialization, as demonstrated by the adoption of their supervisors' perceived style.

While it may be inappropriate to generalize these findings across all classroom situations, it is difficult not to conclude that the first priority for pre-service teachers is often to respond in a manner that models their more experienced associate teachers. Such teachers have in most cases experienced many years in the classroom, and are generally described in the literature as both custodial (Lunenburg, 1986; Sergiovanni & Starratt, 1998; Smyth, 1977) and the most influential group of individuals that pre-service

teachers encounter during their practicum (Sergiovanni & Starratt, 1998; Shiveley & Poetter, 2002; Whitney et al., 2002).

Findings that experienced teachers tend to be more custodial than beginning teachers, and that pre-service teachers are most strongly influenced by their supervising teachers, are prominent in the literature. However, Lunenburg's (1986) research did not necessarily support these findings. His study included 146 elementary and secondary pre-service teachers. While there was an overall increase in PCI during the practicum, evidence was inconclusive concerning the degree of influence of the supervising teacher on the PCI of the pre-service teacher.

The associate teachers' 'voice of experience' can be helpful to the pre-service teacher as they learn how to manage the classroom in a manner that aligns with the goals of a particular education system. These goals are, however, predominantly aligned with a high degree of pupil control. Such goals may be in conflict with the more humanistic approaches to PCI held by pre-service teachers with different understandings of the purposes of schools. In such cases, the teacher education program appears to be more heavily weighted towards a 'learn to be directed' as opposed to a 'learn to be reflective' approach when it comes to development of pre-service teachers' PCI.

Disagreements exist between proponents and opponents of such views of teacher education. While it may be unwise to view the practicum purposes and methodologies of these groups as mutually exclusive, it would be equally unwise to ignore the differences that exist between these views as well. To some, the practicum should socialize pre-service teachers towards conforming to pre-existing classroom goals and methodologies. To others, it should establish a reflective and authentic practice that is grounded in a set

of educational beliefs, regardless of whether those beliefs are more aligned with a humanistic or a custodial approach.

Similar concerns over the purpose of pre-service practica have been voiced in the literature. Sergioivanni and Starratt (1998) described a clinical supervision model that placed a much higher value on mentorship of the pre-service teacher by in-school supervising teachers, and a significantly reduced role for the university professor as supervisor. The clinical supervision model was more formative than summative in the manner in which it evaluated beginning teachers. This type of evaluation was less concerned with 'quality and standards' control intent on producing systematized teachers, and relied more on professional beliefs of the practice teacher. Practice teaching was less about conforming to pre-conceived criteria or outside standards. The supervising teacher was more concerned with encouraging the ideas and voice of beginning teachers to develop into authentic practice as they strove to meet their own teaching goals. Progress centred on self- and collegial evaluation.

Shiveley and Poetter (2002) reported on several benefits arising from the use of the principles of clinical supervision. The level and consistency of supervision was improved, since all supervising teachers were required to attend workshops at the university. Such workshops focused on developing predispositions and skills necessary to be a successful clinical supervisor. Additionally, the teacher education program was more cohesive, in that instructional practices were consistent with those promoted in the university setting. Finally, the program received regular feedback from the supervising teachers, so that the university instruction remained consistent with the school's expectations regarding individual subject methodology. Shiveley and Poetter reported as

one drawback of such an approach that there still were co-operating teachers involved with the practice teachers who had not taken on the role and did not have the training of a supervising teacher. In such cases conflicts arose. Co-operating teachers viewed their task as training the teacher to fit the traditional role that supported the normal goals and expectations of schooling. Supervising teachers, on the other hand, promoted the development of the teacher by encouraging the building of practice that was consistent with his or her continually tested and reflected upon beliefs about the purposes of education.

The second point to be considered concerning the shift towards a more custodial PCI pertains to the adaptability of 'high progressivists'. Other than the interaction between time and gender, which was prominent throughout the study, there were three interactions among the variables brought forward from Study 1. Each of these interactions involved philosophical orientations variables. The interactions seem to identify the moderating tendency of progressivists.

In the first case, it has been earlier noted that males tended to be more custodial than females at time 1 and time 2. However, male romanticists tended to have lower scores similar to female romanticists when their undergraduate major was people-oriented. Progressivist males in the same category of undergraduate major did not show the same resistance to increases in their PCI scores. Their PCI scores became more custodial to the same degree as the rest of the male PCI scores.

In the second case, the PCI scores of progressivists with 'non-urban' elementary education tended to increase, so that they became as custodial as 'urban' progressivists at the end of the practicum. There was no similar interaction between romanticist 'non-

urbans' and 'urbans' over time. 'Non-urban' romanticists' PCI appeared to be resistant to becoming like 'urban' romanticists' PCI.

In the third case, the interaction between gender and traditionalist orientation indicated that PCI scores of traditionalist males increased to a higher degree than those of traditionalist females from time 1 to time 2. There were no similar interactions for gender and progressivist orientation, or gender and romanticist orientation. Progressivists' PCI scores responded more like romanticists' than traditionalists', regardless of gender, over time.

It is somewhat surprising that in two of these cases, progressivists adopted more custodial PCI scores, when one considers the beliefs of progressivists. Progressivist beliefs seem to be more aligned with those of romanticists, who would be expected to have more humanistic scores, than with traditionalists, who would be expected to have more custodial scores. Further, it seems to be common practice in the literature to consider progressivists and romanticists as one group when comparing their impact on education to the traditionalist position (Hirsch, 1996; Minor, Onwuegbuzie, Witcher & James, 2002; O'Hear, 2000).

It seems that progressivists are less likely than romanticists to resist the socializing influences of the school. Consistent with Festinger's cognitive dissonance theory, progressivists appear to find ways to accommodate a custodial approach that is consistent with the traditionalist orientation when such an approach is seen as improving the likelihood that their educational goals will be accomplished. On the other hand, romanticists seem less likely to accommodate the degree of custodialism held by traditionalists. In the interactions described above, the pattern of change identified for the

PCI of progressivists seems to indicate that progressivist pre-service teachers may tend to be less bound by rigid philosophical orientations and more willing or able to adapt to the socialization pressures of the school. Future research may reveal whether the apparent resistance to 'custodializing' socialization pressures by romanticists is deemed to impact in any manner on their success in the practicum, and, more generally, whether philosophical orientation is significantly predictive of variance in practicum grades.

The third point to be considered concerning the shift towards a more custodial PCI is related to the impact of this shift on pre-service teachers. Those interested in the actual efficacy of the student teaching process may use these findings as a platform for further research into how the process of teacher education can be improved. This research demonstrates that pre-service teachers' approaches to pupil control will likely be influenced by potentially conflicting (a) realities and interests of the pupil and classroom (SES, ESL, behavioural issues), (b) their philosophical orientations (based on beliefs about educational concepts), (c) their demographic and experiential characteristics (gender, location of elementary education, and undergraduate major), and (d) the socialization norms (primarily custodial influences). The evidence seems to indicate that when conflicts arise among these influences, PCI is primarily shaped by socialization influences. One may conclude that pre-service teachers conform to socialization patterns as the best way to satisfy their short term interests. These interests may include passing the practicum requirements by meeting the custodial expectations of supervisors, which may enhance their chance of getting a job in the 'system'. In so doing, they may not respond as reflectively to the realities of the classroom, and learning needs of students.

Argyris and Schon (1798) indicated that individuals might express popular beliefs in public situations perceived to have the potential for image enhancement (espoused theory). However, when daily routines brought unanticipated pressure and uncovered competing agendas, actions (theory-in-use) might not be consistent with the espoused beliefs. For instance, in an educational context, inconsistency may arise when a pre-service teacher publicly espouses a constructivist approach to learning, and then faces the conflicts that may arise between this approach and the practicum expectations of scheduling, coverage of curriculum, and standardized testing established by the associate teacher, or 'above the classroom' directives. The pre-service teacher may resort to a 'telling' approach in order to meet these expectations when there is potential for a negative performance evaluation if the prescribed teaching goals of the practicum are not accomplished.

The shift toward a more custodial PCI, as a result of socialization pressures, illustrates the practical outcome most often experienced by pre-service teachers during the practicum. They appear to demonstrate changes in their pupil control ideologies, sometimes at the cost of creating inconsistency between 'espoused theory' and 'theory-in-use' (Argyris & Schon, 1978) in the long term. Theoretically speaking, the response to socialization pressures may be explained by Latané's (1981) social impact theory. During the practicum, pre-service teachers appear to respond to groups of people who are important in determining their degree of success in the program, and with whom they are spending considerable time.

Researchers have indicated that the 'typical' shift towards a more custodial PCI may not be in pre-service teachers' best interests when this shift results primarily from

socialization pressures. Such misalignment between beliefs and practices may lead to tension and stress. Dewitt (1999) and Wiley (2000) reported that tension arose for teachers when they attempted to carry out educational practices based on their philosophy of education in a system governed by a differing public philosophy. Situations such as feelings of powerlessness, low autonomy, low participation in decision-making, and punishment by administrators who may be authoritarian and rigid were likely causes of stress.

The results of stress may be serious. Bauch and Goldring (1998), Bobek (2002), and Wiley (2000) reported that throughout teachers' careers, the stress and conflict that they encounter could affect physical health and psychological well-being. Results could be serious, leading to lowered self-esteem, depression, low job satisfaction, and increased likelihood of illness. Such consequences may account for the high degree of teacher attrition. The U. S. Department of Education reported that 22% of teachers leave the teaching profession during the first three years. This rate climbs to 50% after five years. Only 11% of public school teachers report that they are satisfied with their jobs (NCES, 1999).

Nonetheless, despite the potential for stress, the adaptability of progressivists may enable them to make the kinds of adjustments that could reduce such negative consequences early in their teaching careers. They espouse a collaborative, constructivist approach to education that makes them attractive to many prospective employers who wish to at least appear to be operating on these educational principles. They will likely, however, be employed in bureaucratic schools (Hoy & Rees, 1977; Reed, 1999) contextualized by the long established traditions of centralization, standardization,

concentration, synchronization and so forth (Toffler, 1980). Consequently, progressivists, along with other beginning teachers, will be expected to be socialized into the norms, roles, and responsibilities of schooling arising from these traditions. Progressivists may be particularly suited to this task. The 'espoused theory' of progressivists may make them more attractive than traditionalists to employers, and they are more likely than romanticists to minimize the negative consequences by acceding to such socialization pressures. They may be more likely to survive and succeed within the current approach to education. Their success may be partially accounted for by theoretical principles on which Ellis's (1989) rational-emotive therapy is based. Progressivists may have demonstrated that they are more likely to identify dissonance, scrutinize irrational or catastrophic thinking about it, and dispute irrational assumptions. As a result, they are likely to endure less emotional stress. This approach is discussed in more detail in the *Application of Findings* section.

Limitations

A limitation of this study is that it took into consideration data from students at one university. While this group of respondents was quite diverse, its demographics, experiences, and beliefs may be less representative than a broader sample would contain. The impact of this limitation may be reduced, however, by the consistency of findings in this study with the larger body of literature, particularly in the areas of the socialization process.

Limitations exist that are commonly associated with research questionnaires (Gray & Guppy, 1994). For example, due to the nature of this method of data collection,

participants were unable to ask follow-up questions, and some students to whom questionnaires were distributed chose not to complete or return them. There is no evidence to suggest that these limitations would have significantly affected the representativeness ("match[ing of] the distributions derived from your sample with known distributions of the population", Gray & Guppy, 1994, p. 162) of the data, based on a comparison of participation by gender and level (primary/junior, junior/ intermediate, intermediate/senior). Information affirming the consistency between the sample distribution and the population distribution was reported in *Chapter III (Participants)* for both Study 1 and Study 2.

This methodology involved a pre- and post-test procedure, and as such was subject to the mortality threat to validity. There was no pre-announcement of either the first or second data-gathering phase, so while there was a lower number of participants for the second data-gathering phase than the first, it appears that non-participation in the second data collection phase was incidental rather than intentional. This may have minimized the potential negative effects of the mortality threat.

This study was conducted during a time of political transition in Ontario, as the result of the election of a Liberal government. Such change may occur from time to time in any jurisdiction. While it is unlikely that there will be immediate impact on the school socialization milieu as a result of political change, in future years the school milieu may reflect slightly more humanistic or custodial values as a result of such change. Consequently, generalizations concerning the degree to which socialization pressures are towards custodial or humanistic PCI should be made with caution.

Application of Findings

There has been a lack of empirical evidence concerning the predictive nature of both pre-service teachers' 'internal' philosophical orientations and their 'external' socialization experiences in relation to PCI during the pre-service program. This research has addressed this lack of empirical evidence and provided several meaningful findings. It is important that these findings provide a platform for continued research concerning how the variables examined in this study shape pre-service teachers' interactions with pupils in classrooms. As the result of continuing research in this area, educators may develop a deeper understanding of the relationship between internal forces (their beliefs and philosophical orientations) and external forces (such as demographic/experiential variables, educational policy, classroom conditions, and patterns of socialization). They may also come to understand how the interaction of these forces impacts the effectiveness of the teaching/learning process, and the lives of children in classrooms.

Of the variable clusters considered in this study, philosophical orientations had the strongest predictive capacity in relation to PCI at the start of the pre-service program. Philosophical orientations also interacted with a variety of variables in Study 2. Perhaps the most meaningful application of these findings is in relation to teacher education programs. As this knowledge is extended through further research, teacher education personnel may adjust pre-service teacher education programs to reflect the importance of philosophical orientations in shaping practice. They may facilitate the maturing of educational beliefs of pre-service teachers through such approaches as sound reasoning, research findings, and demonstrations of actual classroom experiences. This 'central route' (Petty & Cacioppo, 1986) approach to beliefs building, as opposed to 'top-down'

beliefs manipulation (Parkay, Sanford, & Gougeon, 1996) may serve to reduce cognitive dissonance, and facilitate more sustainable outcomes that meet the purposes of teachers, policymakers, and administrators alike.

Within university faculties of education, curriculum units may be designed that prepare teachers to accommodate both the needs of students in the classroom and the systems needs that often take the shape of educational mandates and socialization pressures. Pre-service teachers may benefit as teacher education programs facilitate understandings of (a) their philosophical orientations, (b) how these orientations need to be grounded in research findings, sound reasoning, classroom demonstrations, and personal experiences, (c) the role these orientations play in developing an authentic teaching practice, (d) the influences of policy, school vision, and so on, on school socialization, and (e) the impact on pre-service teachers of socialization trends. Beginning and experienced teachers alike may benefit from understanding the pressure such socialization may place on aspects of their teaching, including their PCI, their ability to develop a well thought out system of beliefs about education, and their ability to survive and become successful in the classroom. As increased emphasis is placed on the important role of educators' beliefs about education, a variety of potentially clashing paradigmatic orientations of not only teachers but also administrators and policymakers will need to be considered.

Paradigmatic differences exist between the educational beliefs of these groups of educators. Differences may be found not only among teachers, but often between policymakers and administrators as originators of policy and teachers as implementers of policy. For instance, policymakers and administrators may display less diversity than

teachers in their beliefs about education. According to Tong (1986) policymakers that did not deliver objective fact-based direction were considered "myth makers" by those with economic and political power, while those that separated fact and value were heralded as "saviour" (p. 12). From a 'philosophy of science' perspective, policymakers were viewed as operating from within an objectivist, positivistic paradigm (Brooks, 1996; Marshall, 1997; Pal, 1997).

On the other hand, the literature suggests that teachers come to the classroom with a variety of beliefs and philosophical orientations, including more subjectivist as well as objectivist philosophy of science assumptions (Silvernail, 1992a; Parkay, Stanford, & Gougeon, 1996; Samuelowicz & Bain, 2001). These philosophical assumptions provide a paradigmatic foundation for their approaches to the classroom that may or may not align with official educational policy.

The 'clash' of paradigms that may occur is evidenced in Popper's (1968) position that philosophy (in its legitimization of perception as a way of knowing) was irrelevant. In this view, "the advancement of knowledge of the world" was only achieved through "the rationalist tradition" (p. 19). On the other hand, Dewey saw a much larger role for philosophy in education. In *My Pedagogic Creed* (1897), Dewey identified philosophy as the foundation for educational change. It was through such change that social progress and reform could be accomplished. Curricular units that explore the foundations of these paradigms may bring a larger degree of understanding and appropriate changes in attitudes and beliefs to educators at all levels.

The 'elaboration likelihood model' (Petty & Cacioppo, 1986) provides a theoretical foundation for involving educators in such a substantive, deliberative process.

According to Petty and Cacioppo, there are two ways to bring about changes in attitudes and beliefs. The 'central route' identifies the process whereby people weigh logic and content of persuasive messages. When persuasion depends on non-message factors, such as conditioned emotional responses, or attractiveness and credibility of the source, the 'peripheral route' is being taken.

Curriculum units that address educational beliefs and the socialization process may persuade educators to adjust their attitudes on the basis of content and logic. This will likely be the less stressful and more useful path for all concerned. Without such exposure, pre-service teachers in particular may make decisions about their practice via the peripheral route, for example, based solely on emotional reactions to motivational speakers and slogan-based learning initiatives, or the mandated approaches presented by bureaucrats operating from a position of 'credible' authority.

While both the 'central route' and the 'peripheral route' may lead to persuasion, Petty and Wegener (1998) reported that the 'central route' was more likely to be successful. The attitude changes tend to last longer if people have been presented with logical content on which to 'elaborate'. Further, 'central route' attitude changes are better predictors of behaviour than those brought about through peripheral processes.

Such curriculum units may also encourage pre-service teachers to make room for an honourable 'deferment to authority' in situations where beliefs have not been tempered by sufficient experience and an adequate understanding of the jurisdictions' educational goals. This approach may increase the likelihood that pre-service teachers will survive and succeed instead of succumbing to the stresses of teaching (Bauch & Goldring, 1998; Bobek, 2002; Wiley, 2000). When compared to programs focused on

shaping pre-service teachers' practices at the performance level primarily through mandates and exposure to socialization pressures, such programs may be more successful in preparing more contented, lower stressed teachers who are more likely to stay in the profession.

Most importantly, the learning experiences arising from such curriculum units may lead to an understanding of the impact of these often-competing forces on children in the classroom. Such units can examine not only the conflict that beginning teachers may expect to encounter, but also consider potential strategies for reducing the impact of such conflict on teachers, administrators, and children. Teaching units could include a variety of tools, such as videos that demonstrate the impact of socialization on beginning teachers, and an examination of both personal and Ministry level philosophy of education/vision statements. Such tools would facilitate understandings and applications of these findings. However, without further applied research, articulation of methodologies and techniques at this point in time may be premature.

The reality remains, though, that pre-service teachers will often find themselves in educational situations where they have little or no control over the expectations that are placed on them. In such situations, little consideration may be given to potential inner conflicts that beginning teachers may encounter as a result of dissonance between external expectations and their beliefs. The reality, according to the U. S. National Education Association (NEA, 2002) and Wiley (2000), of a high degree of teacher attrition as the result of such dissonance suggests that there is a need for teachers to learn to cope with such stress. Therefore, a secondary application of these findings may be in the area of teacher stress reduction.

Theories of "stress management have multiplied at a furious pace in the last couple of decades" (Weiten, 2004, p. 552). Prominent in this field is Albert Ellis's rational-emotive theory. The key concepts in this theory may, in a general sense, be helpful in providing a rationale for how educators may proceed in classroom situations that conflict with their beliefs. Ellis argues that events and situations in and of themselves do not cause emotional distress. Instead, distress is caused by peoples' catastrophic thinking about the events and situations. Individuals may reach what Ellis calls the irrational conclusion that there is nothing positive in the event or situation, and no alternative way of approaching it positively. This reaction to the situation may be the result of attributing an unrealistically large degree of magnitude to the event or situation as the cause of the stress.

In the sphere of education, for instance, teachers may believe that it will be very stressful to cope in the context of custodial, teacher-centred 'system' expectations that they see as 'diametrically opposed' to their own beliefs about education. Ellis asserted that it was not uncommon for people to turn molehills into mountains, based on a series of faulty assumptions that people hold, such as "It's awful or horrible when things don't go my way" (Ellis, 1989, p. 227). In effect, the event or situation did not cause the stress, but rather it was caused by catastrophic thinking about the event or situation. Ellis theorized that the more rational response was to recognize that the belief system could be reshaped, and the distress minimized, as the result of detecting, scrutinizing, and disputing what was believed about the situation or event.

In the future, pre-service teachers may become not only more aware of the importance of their beliefs in shaping their classroom approaches, but also how those

beliefs may be appropriately developed (through the principles of 'elaboration likelihood' and 'rational emotional' theories, for instance). In such cases, they could recognize the dissonance between expectations placed on them by their employers and their own personal beliefs about education. They may choose to see that such expectations are not catastrophic, and that perhaps their faulty assumptions are magnifying the dissonance. In other words, it may be possible to scrutinize the dissonance, dispute its catastrophic nature, and find ways in less than perfect circumstances to still accomplish meaningful elements of their educational goals.

Implications for Future Research

Future research may expand the range of variables that account for PCI variability. Specifically, ethnicity and geographic location of elementary and secondary schooling of participants may contribute to the predictive value of the demographic variables cluster.

Secondly, in this study PCI was the dependent variable, while philosophical orientations, identified by sets of beliefs about educational concepts, made up an independent variable cluster. Further research is encouraged to examine in both the short and longer term if beginning teachers' beliefs about education change as a result of the way they find themselves responding to classroom experience. Such research would test Bem's (1970) assertion that people infer their attitudes (a key component of beliefs) from their behaviour.

Thirdly, a longitudinal study would also further understandings concerning changes in PCI (and possibly philosophical orientations) when teachers are not constantly

under the watchful eye of practicum supervisors. Whitney et al. (2002) reported that few studies found that teacher education programs actually empowered teachers and promoted change. While the present study identifies predictors of pre-service teachers' PCI change during the pre-service program, it remains to be determined if such new understandings, even as formalized into university curriculum units, would actually empower teachers to be more responsive to the learning needs of students once they move into their own classrooms.

Summary

The 'PCI-predictive' ability of demographic and experiential variable clusters has been strengthened through findings concerning the predictive nature of previously unexamined variables. Both location (urban or non-urban) of one's elementary education, and the type of undergraduate major (people-oriented or text-oriented) have been found to contribute significantly to PCI of pre-service teachers. Additionally, the philosophical orientations variable cluster (romanticist, progressivist and traditionalist) was found to be not only predictive of PCI at the beginning of the pre-service program, but also to account for a higher degree of variance than any of the demographic or experience variables.

The importance of the pre-service socialization process in relation to changes to PCI was demonstrated by the finding of Study 2. When collapsed across all other variables, neither the classroom characteristics of SES, ESL, or student behaviour, romanticist, progressivist, or traditionalist philosophical orientations, gender, undergraduate major, nor location of elementary education were strong enough to reverse

the shift towards custodialism that occurred during the pre-service program. One significant variable, perception of 'student-centred' or 'collaborative' classroom management style of pre-service teachers' supervisors emerged as a predictor of a shift towards a more humanistic PCI. When the perception was of more teacher-centredness, the shift tended to be towards a more custodial PCI.

A key goal of the study, as stated in *Chapter I (Purposes of the Study),* was to provide an empirical foundation that may be used to more accurately predict changes to PCI that may occur during the pre-service program. In particular, the identification of variables associated with the preservation of humanistic PCI of pre-service teachers was important in relation to this goal. This empirical foundation should have a sound theoretical explanation. In this regard, the 'external' theory camp, consistent with Latané's social impact theory, appears to best account for the finding of the predominant shift to a more custodial PCI. On the other hand, the 'internal' theory camp, as exemplified by Festinger's cognitive dissonance theory, may account for findings arising from a more fine-grained examination involving interactions of predictive variables. This theoretical camp seems to account for several anomalous shifts that are not consistent with the move to a more custodial PCI. In situations where interactions reveal a smaller shift toward custodialism during the socialization of the pre-service program, 'internal' beliefs about education are always present. Beliefs were found to interact with location of elementary education, undergraduate major, and gender.

This study encourages continued research concerning interactions of teachers' philosophical orientations and other predictive variables in relation to their pupil control ideologies during the socialization process. It is hoped that such research will lead to the

development and implementation of new components for teacher education programs. Such components would assist pre-service and in-service teachers in understanding (a) their PCI in relation to their educational beliefs, other prominent variables, and socialization trends, (b) the foundation, diversity, changing nature of, and conflicts potentially arising from beginning teachers' philosophical orientations and PCI, and (c) theory and practice that may accommodate clashing educational paradigms and potentially reduce both beginning teachers' stress levels and attrition. Such research and applications of findings may enhance student learning conditions and improve both teacher and student experiences in schools.

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APPENDIXES

Appendix A

EDUCATIONAL BELIEFS QUESTIONNAIRE — David E. Silvernail		Strongly Agree	Agree	Partially Agree	Disagree	Strongly Disagree
1	The curriculum should contain an orderly arrangement of subjects that represent the best of our cultural heritage.	5	4	3	2	1
2	Students learning from other students is an important component of any learning environment	5	4	3	2	1
3	Schools should be sources of new social ideas	5	4	3	2	1
4	Demonstration and recitation are essential components for learning.	5	4	3	2	1
5	Schools exist to foster the intellectual process.	5	4	3	2	1
6	Schools exist to facilitate self-awareness.	5	4	3	2	1
7	There are essential skills all students must learn.	5	4	3	2	1
8	Teaching should center around the inquiry method.	5	4	3	2	1
9	Students should be allowed more freedom than they usually get in the execution of learning activities.	5	4	3	2	1
10	Students need and should have more supervision and discipline than they usually get.	5	4	3	2	1
11	Teachers should be facilitators of learning.	5	4	3	2	1
12	Schools exist to preserve and strengthen spiritual and social values.	5	4	3	2	1
13	Drill and factual knowledge are important components of any learning.	5	4	3	2	1
14	Ideal teachers are constant questioners.	5	4	3	2	1
15	Students should play an active part in program design and evaluation.	5	4	3	2	1
16	There are essential pieces of knowledge that all students should know.	5	4	3	2	1
17	Right from the first grade teachers must teach the student at his/her level and not at the level of the grade he/she is in.	5	4	3	2	1
18	The curriculum should focus on social problems and issues.	5	4	3	2	1
19	The student should be a receiver of knowledge.	5	4	3	2	1
20	The teacher should be a strong authority figure in the classroom.	5	4	3	2	1

Appendix B

PCI FORM

DIRECTIONS: FOLLOWING ARE TWENTY STATEMENTS ABOUT SCHOOLS, TEACHERS, AND PUPILS. PLEASE INDICATE YOUR PERSONAL OPINION ABOUT EACH STATEMENT BY CIRCLING THE APPROPRIATE RESPONSE AT THE RIGHT OF THE STATEMENT.

SA =Strongly Agree **A** =Agree **U** =Undecided **D** =Disagree **SD** =Strongly Disagree

1. It is desirable to require pupils to sit in assigned seats during assemblies..... SA A U D SD
2. Pupils are usually not capable of solving their problems through logical reasoning.....SA A U D SD
3. Directing sarcastic remarks toward a defiant pupil is a good disciplinary technique..... SA A U D SD
4. Beginning teachers are not likely to maintain strict enough control over their pupils.....SA A U D SD
5. Teachers should consider revision of their teaching methods if these are criticized by their pupils.....SA A U D SD
6. The best principals give unquestioning support to teachers in disciplining pupils..... SA A U D SD
7. Pupils should not be permitted to contradict the statements of a teacher in class..... SA A U D SD
8. It is justifiable to have pupils learn many facts about a subject even if they have no immediate application.....SA A U D SD
9. Too much pupil time is spent on guidance and activities and too little on academic preparation.....SA A U D SD
10. Being friendly with pupils often leads them to become too familiar..... SA A U D SD
11. It is more important for pupils to learn to obey rules than that they make their own decisions.....SA A U D SD
12. Student governments are a good "safety valve" but should not have much influence on school policy..... SA A U D SD
13. Pupils can be trusted to work together without supervision..... SA A U D SD
14. If a pupil uses obscene or profane language in school, it must be considered a moral offense..... SA A U D SD
15. If pupils are allowed to use the lavatory without getting permission, this privilege will be abused.....SA A U D SD
16. A few pupils are just young hoodlums and should be treated accordingly..... SA A U D SD
17. It is often necessary to remind pupils that their status in school differs from that of teachers.SA A U D SD
18. A pupil who destroys school material or property should be severely punished..... SA A U D SD
19. Pupils cannot perceive the difference between democracy and anarchy in the classroom.... SA A U D SD
20. Pupils often misbehave in order to make the teacher look bad..... .. SA A U D SD

Appendix C

BIOGRAPHICAL/DEMOGRAPHIC DATA FORM

Instructions:
Please complete the following form by checking the appropriate boxes and filling in the blanks where indicated.

1. Student Number _____

1. Gender:
   - ❒ Male
   - ❒ Female

2. Marital Status
   - ❒ Single
   - ❒ Married
   - ❒ Widowed
   - ❒ Separated or Divorced
   - ❒ Other

3. Age
   - ❒ 19 or younger
   - ❒ 20-29 years
   - ❒ 30-39 years
   - ❒ 40-49 years
   - ❒ 50-59 years
   - ❒ 60-69 years
   - ❒ 70 or older

4. Please identify any country in which you were born **and** have spent 10 or more years.
   _____

5. Pre-service teacher training level
   Primary/Junior

   Junior/Intermediate (Teachable subject _____)

   Intermediate/Senior (Teachable subjects_____ ,

   _____)

6. Highest degree achieved
   - ❒ Bachelor's
   - ❒ Master's
   - ❒ Doctoral

Appendix D

DEMOGRAPHIC QUESTIONNAIRE

Directions: Please provide the most appropriate response for each of the following items

Student # _____ Name _____

1. Age _____

2. Do you have children? ❒Yes ❒No
   a. If so, how many _____
   b. Gender # Male_____ # Female_____

3. Please identify your religion.
   ❒Christian ❒Islamic. ❒Hindu ❒Buddhist ❒Jewish ❒Sikh
   ❒Atheist ❒Other_____ ❒No Religion

4. Siblings?
   a. Brothers: Number Older_____, Number Younger _____
   b. Sisters: Number Older _____, Number Younger_____

5. Please identify the primary location in which your own schooling occurred.
   a. Elementary
      ❒Largely rural
      ❒Largely suburban
      ❒Largely urban
   b. Secondary
      ❒Largely rural
      ❒Largely suburban
      ❒Largely urban

6. What was your
   a. undergraduate major_____
   b. undergraduate minor (if applicable)_____

7. How much experience have you had with positions of responsibility for children/youth in activities such as

	None	A little	Quite a bit	A great deal
a. Scouts/Guides	1	2	3	4
b. Sunday School	1	2	3	4
c. Baby Sitting	1	2	3	4
d. Day/Summer camps	1	2	3	4

e. Cadets	1	2	3	4
f. 4H club	1	2	3	4
g. Youth groups/clubs	1	2	3	4
h. Coaching	1	2	3	4
i. Life-guarding	1	2	3	4
j. Music lessons	1	2	3	4
k. Tutoring	1	2	3	4
l. Other_____	1	2	3	4
m. Other_____	1	2	3	4

Regarding your IN-SCHOOL experiences:

8. What grade(s) were you observing/teaching, or to what non-classroom duties were you assigned (e.g., library, resource, testing, special education resource) in lieu of classroom exposure during
   a. Practicum 1_____
   b. Practicum 2_____
   c. Practicum 3_____

9. Please rate the QUANTITY of your communication with your associate teacher for each Practicum

a. Practicum 1	❒Low	❒Medium	❒High
b. Practicum 2	❒Low	❒Medium	❒High
c. Practicum 3	❒Low	❒Medium	❒High

10. How would you rate your exposure to the following classroom management styles?
    a. Practicum 1

       Student-centred
       ❒Never ❒Rarely ❒Sometimes ❒Often

       Collaborative
       ❒Never ❒Rarely ❒Sometimes ❒Often

       Teacher-centred
       ❒Never ❒Rarely ❒Sometimes ❒Often

    b. Practicum 2

       Student-centred
       ❒Never ❒Rarely ❒Sometimes ❒Often

       Collaborative
       ❒Never ❒Rarely ❒Sometimes ❒Often

       Teacher-centred
       ❒Never ❒Rarely ❒Sometimes ❒Often

c. Practicum 3

Student-centred

❒Never ❒Rarely ❒Sometimes ❒Often

Collaborative

❒Never ❒Rarely ❒Sometimes ❒Often

Teacher-centred

❒Never ❒Rarely ❒Sometimes ❒Often

11. How would you rate the following classroom characteristics for each practicum?

a. Practicum 1

i. Socio-economic status(SES)

❒Low SES ❒Mixed SES ❒Medium SES ❒High SES

ii. Percentage of students with English as a second language (ESL)

❒Low ESL ❒Medium ESL ❒High ESL

iii. Behaviour problems in the classroom

❒Low ❒Medium ❒High

b. Practicum 2

i. Socio-economic status(SES)

❒Low SES ❒Mixed SES ❒Medium SES ❒High SES

ii. Percentage of students with English as a second language (ESL)

❒Low ESL ❒Medium ESL ❒High ESL

iii. Behaviour problems in the classroom

❒Low ❒Medium ❒High

c. Practicum 3

i. Socio-economic status(SES)

❒Low SES ❒Mixed SES ❒Medium SES ❒High SES

ii. Percentage of students with English as a second language (ESL)

❒Low ESL ❒Medium ESL ❒High ESL

iii. Behaviour problems in the classroom

❒Low ❒Medium ❒High

Regarding your experiences OTHER THAN those in your practicum classroom:

12. Please rate the QUANTITY of your communication with your faculty advisor throughout the B. Ed. program to date.

❒Low ❒Medium ❒High

13. How would you rate your faculty advisor's orientation to teaching?

Student-centred

❒Never ❒Rarely ❒Sometimes ❒Often

Collaborative

❒Never ❒Rarely ❒Sometimes ❒Often

Teacher-centred

❒Never ❒Rarely ❒Sometimes ❒Often

14. Please rate how often the following classroom management styles were promoted during your coursework and 'at the university' classes?

Student-centred

❒Never ❒Rarely ❒Sometimes ❒Often

Collaborative

❒Never ❒Rarely ❒Sometimes ❒Often

Teacher-centred

❒Never ❒Rarely ❒Sometimes ❒Often

Appendix E

Student Consent Form (Study 1)

LETTER OF INFORMATION / CONSENT FORM

CONSENT TO PARTICIPATE IN RESEARCH

FACTORS AFFECTING THE PUPIL CONTROL IDEOLOGIES OF PRE-SERVICE TEACHERS: A PILOT STUDY

You are asked to participate in a research study conducted by Glenn W. Rideout, doctoral student, from the Faculty of Education at the University of Windsor. The results of this study may contribute to the researcher's dissertation.

If you have any questions or concerns about the research, please feel free to contact Dr. Larry Morton: Faculty Supervisor at 253-3000 ext. 3835.

- **PURPOSE OF THE STUDY**

The purpose of the proposed research is to provide new information about pre-service teachers' pupil control ideology (PCI) in the Ontario context. A primary focus will be to assess the degree to which pre-service teachers' pupil control ideologies can be attributed to the philosophical orientation of pre-service teachers' beliefs about education, as compared to other models that have been prominent in the literature, such as biographical/demographic and level of practice teaching.

- **PROCEDURES**

If you volunteer to participate in this study, please follow the directions below:

1. Read the attached Letter of Information describing the study;
2. Read and sign this Consent to Participate in Research form;
3. Carefully read the directions for the attached questionnaires, and complete each questionnaire, and the biographical/demographic data at the beginning of the first questionnaire.

- It is anticipated that completion time for the questionnaires and biographical data form will be approximately 10-15 minutes.
- Research findings will be available to participants in the study. Please contact me via email at rideou1@uwindsor.ca if you wish to receive this information.

If the results of this pilot study warrant further investigation, you may be invited to complete both questionnaires, but not the biographical/demographic data, two more time during the course of your pre-service program.

- **POTENTIAL RISKS AND DISCOMFORTS**

Other than the inconvenience of time spent completing the questionnaires, there are no known risks to the participants of this study.

- **POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

The participants will not specifically benefit from participation in this study. In general terms, educators, including participants in the study, may benefit from new knowledge and conclusions drawn from this study that contribute to understanding the education process in Ontario.

- **PAYMENT FOR PARTICIPATION**

Participants will not receive any payment for participation in this study.

- **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

The data will be treated confidentially and the anonymity of the subjects in relation to the findings of the study will be ensured.

- In the event that the researcher is also your instructor, the data will be coded in a double-blind process so that your participation in the study cannot be identified by the instructor.
- The data will be held by the researcher in a secure location on campus, and will only be accessible by the researcher, or his research assistant under the direct supervision of the researcher.
- During the release of the finding, the participants will be referred to as pre-service teacher candidates at a faculty of education in a southwestern Ontario university.
- Data will be retained by the researcher in a secure location for a period of seven years following the release of results of the study.

- **PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. The only foreseeable circumstances under which such withdrawal by the researcher might occur would be if the participant has omitted enough responses from the questionnaires as to restrict the ability of the questionnaire to contribute to the study.

- **RIGHTS OF RESEARCH SUBJECTS**

You may withdraw your consent at any time and discontinue participation without penalty. This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding your rights as a research subject, contact:

Research Ethics Co-ordinator
University of Windsor
Windsor, Ontario
N9B 3P4

Telephone: 519-253-3000, # 3916
E-mail: ethics@uwindsor.ca

- **SIGNATURE OF RESEARCH SUBJECT**

I understand the information provided for the study "FACTORS AFFECTING THE PUPIL CONTROL IDEOLOGIES OF PRE-SERVICE TEACHERS: A PILOT STUDY" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____ _____
Name of Subject *Student Number*

_____ _____
Signature of Subject *Date*

- **SIGNATURE OF INVESTIGATOR**

In my judgement, the subject is voluntarily and knowingly giving informed consent to participate in this research study.

_____ _____
Signature of Investigator **Date**

Student Consent Form (Study 2)

LETTER OF INFORMATION / CONSENT FORM

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: FACTORS AFFECTING THE PUPIL CONTROL IDEOLOGIES OF PRE-SERVICE TEACHERS.

You are asked to participate in a research study conducted by Glenn Rideout from the Faculty of Education, University of Windsor. Results of this study will contribute to the researcher's Ph. D. dissertation.

If you have any questions or concerns about the research, please feel to contact Dr. Larry Morton: Faculty Supervisor at 253-3000 ext. 3835.

$ PURPOSE OF THE STUDY

The purpose of the proposed research is to provide new information about pre-service teachers' pupil control ideology (PCI) in the Ontario context. A primary focus will be to assess the degree to which changes in pre-service teachers' pupil control ideologies during the pre-service program can be attributed to the philosophical orientation of pre-service teachers' beliefs about education, as compared to other models that have been prominent in the literature, such as biographical/demographic and level of practice teaching.

$ PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

1. Read the attached Letter of Information describing the study;
2. Read and sign this Consent to Participate in Research form;
3. Carefully read the directions and complete each questionnaire.
4. It is anticipated that completion time will be approximately 10-20 minutes

$ POTENTIAL RISKS AND DISCOMFORTS

Other than the inconvenience of time spent completing the questionnaires, there are no known risks to the participants of this study.

$ POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The participants will not specifically benefit from participation in this study. In general terms, educators; including participants in the study, may benefit from new knowledge and conclusions drawn from this study that contribute to understanding the education process in Ontario.

$ PAYMENT FOR PARTICIPATION

Participants will not receive any payment for participation in this study.

$ CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

The data will be treated confidentially and the anonymity of the subjects in relation to the findings of the study will be ensured.

- In the event that the researcher is also your instructor, the data will be coded so that your participation in the study cannot be identified by the instructor.
- The data will be held by the researcher in a secure location on campus, and will only be accessible by the researcher, or his assistant under the direct supervision of the researcher.
- During the release of the finding, the participants will be referred to as pre-service teacher candidates at a faculty of education in a southwestern Ontario university.
- Data will be retained by the researcher in a secure location for a period of seven years following the release of results of the study.
- The researcher will personally attend to the disposal of the documents at the end of this period to ensure that anonymity and confidentiality is maintained

$ PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. The only foreseeable circumstances under which such withdrawal by the researcher might occur would be if the participant has omitted enough responses from the questionnaires as to restrict the ability of the questionnaire to contribute to the study.

$ FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS

Research findings will be available to participants in the study. Please contact the researcher via email at rideou1@uwindsor.ca if you wish to receive this information.

$ RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding your rights as a research subject, contact:

Research Ethics Coordinator
University of Windsor
Windsor, Ontario
N9B 3P4

Telephone: 519-253-3000, ext. 3916
E-mail: ethics@uwindsor.ca

$ SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE

I understand the information provided for the study "FACTORS AFFECTING THE PUPIL CONTROL IDEOLOGIES OF PRE-SERVICE TEACHERS as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____
Name of Subject

_____ _____
Signature of Subject Date

$ SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

_____ _____
Signature of Investigator Date

Appendix F

Pearson Product Moment Correlation Coefficients for the variables in the demographic variable cluster

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. POLSCORE	1	-.18**	.10**	.13**	.11*	-.05	-.03	-.05	.06	.01	-.13**	-.07	-.09	-.02	-.11*	.04	.02	.10*
2. GENDER	-.18**	1	-.03	-.04	-.02	-.02	.05	.05	-.15**	-.06	.07	.12*	.07	.02	-.07	.02	.04	.01
3. SINGLE OR MARRIED	.10**	-.03	1	.08	.09	-.51**	-.48**	-.58**	.52**	.08	.01	-.01	.03	-.03	-.16**	-.02	-.06	.01
4. LOCATION ELEMENTARY EDU	.13**	-.04	.08	1	.78**	.00	.03	-.01	.16**	.13**	-.11*	-.07	-.06	-.06	-.07	.03	-.01	-.05
5. LOCATION SECONDARY EDU	.11*	-.02	.09	.78	1	-.04	.04	-.03	.17**	.16**	-.12**	-.05	-.06	-.04	-.09	.01	-.00	-.09
6. HAVE MALE CHILD	-.05	-.02	-.51**	.00	-.04	1	.53**	.80**	-.55**	-.05	.09*	-.04	-.02	.12**	.11*	.02	.09*	-.10*
7. HAVE FEMALE CHILD	-.03	.05	-.48**	.03	.04	.53**	1	.78**	-.49**	.00	.02	.09	-.02	.05	.03	.02	.01	-.07
8. HAVE CHILDREN	-.05	.05	-.58**	-.01	-.03	.80**	.78**	1	-.61**	-.08	.06	.06	-.02	.10*	.12**	.06	.08	-.07
9. AGE IN YEARS	.06	-.15**	.52**	.16**	.17**	-.55**	-.49**	-.61**	1	.09*	-.02	-.02	-.14**	-.10*	-.09*	-.10*	-.02	.02
10. CHRISTIAN	.01	-.06	.08	.13**	.16**	-.05	.00	-.08	.09*	1	-.28**	-.18**	-.08	-.14**	-.25**	-.18**	-.38**	-.68**
11. ISLAM	-.13**	.07	.01	-.11*	-.12**	.09*	.02	.06	-.02	-.28**	1	-.02	-.01	-.01	-.02	-.02	-.03	-.06
12. HINDU	-.07	.12*	-.01	-.07	-.05	-.04	.09	.06	-.02	-.18**	-.02	1	-.00	-.01	-.01	-.01	-.02	-.04
13. BUDDHIST	-.09	.07	.03	-.06	-.06	-.02	-.02	-.02	-.14**	-.08	-.01	-.00	1	-.00	-.01	-.00	-.01	-.02
14. JEWISH	-.02	.02	-.03	-.06	-.04	.12**	.05	.10*	-.10*	-.14*	-.01	-.01	-.00	1	-.01	-.01	-.02	-.03
15. SIKH	-.11*	-.07	-.16**	-.07	-.09	.11*	.03	.12**	-.09*	-.25**	-.02	-.01	-.01	-.01	1	-.01	-.03	-.06
16. ATHEIST	.04	.02	-.02	.03	.01	.02	.02	.06	-.10*	-.18**	-.02	-.01	-.00	-.01	-.01	1	-.02	-.04
17. OTHER	.02	.04	-.06	-.01	-.00	.09*	.01	.08	-.02	-.37**	-.03	-.02	-.01	-.02	-.03	-.02	1	-.08
18. NO RELIGION	.10*	.01	.00	-.05	-.09	-.10*	-.07	-.07	.02	-.68**	-.06	-.04	-.02	-.03	-.06	-.04	-.08	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix G

Pearson Product Moment Correlation Coefficients for the variables in the academic experience variable cluster

UNDERGRADUATE MAJOR IN	1	2	3	4	5	6	7	8	9	10	11	12
1 PCI SCORES	1	-.18**	-.05	-.03	.12*	.11*	.14**	-.08	-.00	-.01	.16**	.16**
2 NATURAL SCIENCES	-.18**	1	-.15 **	-.16 **	-.15 **	-.12 **	-.13 **	-.13 **	-.10 *	-.12 **	-.26 **	-.14 **
3 STUDY OF THE HUMAN BODY	-.05	-.15 **	1	-.17 **	-.16 **	-.13 **	-.13 **	-.14 **	-.11 *	-.12 **	-.21 **	-.04
4 SOCIAL SCIENCES	-.03	-.16 **	-.17 **	1	-.17 **	-.13 **	-.14 **	-.15 **	-.11 *	-.13 **	.14 **	.02
5 PSYCHOLOGICAL STUDIES	.12*	-.15 **	-.16 **	-.17 **	1	-.12 **	-.13 **	-.14 **	-.11 *	-.12 **	.24 **	.07
6 SOCIOLOGICAL STUDIES	.11*	-.12 **	-.13 **	-.13 **	-.12 **	1	-.10 *	-.11 *	-.08	-.10 *	.08	.07
7 CREATIVE ARTS	.14**	-.13 **	-.13 **	-.14 **	-.13 **	-.10 *	1	-.11 *	-.09	-.10 *	-.09 *	.08
8 HUMANITIES	-.08	-.13 **	-.14 **	-.15 **	-.14 **	-.11 *	-.11 *	1	-.09 *	-.11 *	-.06	.02
9 BUSINESS	-.00	-.10 *	-.11 *	-.11 *	-.11 *	-.08	-.09	-.09 *	1	-.08	.16 **	.03
10 ENGLISH	-.01	-.12 **	-.12 **	-.13 **	-.12 **	-.10 *	-.10 *	-.11 *	-.08	1	.04	-.09 *
11 LEVEL PA/ M/ OR VS	.16**	-.26 **	-.21 **	.14 **	.24 **	.08	-.09 *	-.06	.16 **	.04	1	.15 **
12 HIGHEST DEGREE UNDERGRAD, GRAD	.16**	-.14 **	-.02	.02	.07	.07	.08	.02	.03	-.09 *	.15 **	1

** correlation is significant at the 0.01 level (2-tailed)

* correlation is significant at the 0.05 level (2-tailed)

Appendix H

Pearson Product Moment Correlation Coefficients for PCI scores and the variables in the informal teaching experience variable cluster

EXPERIENCE WITH RESPONSIBILITY N	1	2	3	4	5	6	7	8	9	10	11	12
1 TIME 1 PCI SCORES	1	-.00	.02	-.22**	-.10*	.03	-.04	-.02	.05	.06	-.01	.02
2 SCOUTS/GUIDES	00	1	.24 **	.09 *	.22 **	.07	-.02	.17 **	.10 *	.19 **	.21 **	-.02
3 SUNDAY SCHOOL	02	.24 **	1	.22 **	.29 **	-.02	.05	.41 **	.01	.03	.23 **	.16 **
4 BABY SITTING	-.22**	.09 *	.20 **	1	.25 **	-.02	.13 **	.26 **	.06	.12 **	.15 **	.22 **
5 DAY/SUMMER CAMPS	-.10*	.22 **	.29 **	.25 **	1	.10 *	.05	.41 **	.19 **	.32 **	.21 **	.22 **
6 CADETS	.03	.07	-.02	-.02	.10 *	1	.19 **	.02	.04	.11 *	.03	.10 *
7 4H CLUBS	-.04	-.02	.05	.13 **	.05	.19 **	1	.11 *	-.02	.00	.06	.01
8 YTH GROUPS/CLUBS	-.02	.17 **	.41 **	.26 **	.41 **	.02	.11 *	1	.16 **	.17 **	.24 **	.16 **
9 COACHING	.05	.10 *	.01	.06	.19 **	.04	-.02	.16 **	1	.27 **	.12 **	.07
10 LIFE GUARDING	.06	.19 **	.03	.12 **	.32 **	.11 *	.00	.17 **	.27 **	1	.20 **	.11 *
11 MUSIC LESSONS	-.01	.21 **	.23 **	.15 **	.21 **	.03	.06	.24 **	.12 **	.20 **	1	.13 **
12 TUTORING	.02	-.02	.16 **	.22 **	.22 **	.10 *	.01	.16 **	.07	.11 *	.13 **	1

** correlation is significant at the 0.01 level (2-tailed)
* correlation is significant at the 0.05 level (2-tailed)

Appendix I

Number of participants in each category, Score, Mean, and Standard Deviation for each category for each of the variables in the philosophical orientations variable cluster

Romanticist philosophical orientation

NUMBER	CATEGORY (SCORE)	MEAN	STANDARD DEVIATION
2	2.00	59.00	.00
3	2.17	52.33	8.08
1	2.33	41.00	.
14	2.50	57.07	5.08
16	2.67	52.69	7.28
32	2.83	52.16	7.29
33	3.00	52.70	6.84
74	3.17	51.19	6.78
84	3.33	50.92	6.11
72	3.50	51.56	7.41
105	3.67	50.09	6.47
97	3.83	49.97	7.07
65	4.00	49.98	6.80
53	4.17	49.15	6.91
33	4.33	49.24	8.88
11	4.50	51.00	8.09
4	4.67	48.25	12.38
5	4.83	52.70	6.54
2	5.00	45.50	2.12
709	Total	50.76	7.06

Progressivist philosophical orientation

NUMBER	CATEGORY (SCORE)	MEAN	STANDARD DEVIATION
3	2.83	51.33	11.31
6	3.00	55.83	4.916
18	3.17	52.95	6.03
32	3.33	52.53	8.41
60	3.50	51.92	6.953
46	3.67	51.50	6.86
98	3.83	51.10	5.81
116	4.00	51.55	7.243
101	4.17	49.12	6.44
75	4.33	49.88	7.59
54	4.50	51.20	7.016
8	4.67	47.16	7.22
20	4.83	47.55	8.46
4	5.00	48.75	10.813
701	Total	50.71	7.138

Traditionalist philosophical orientation

NUMBER	CATEGORY (SCORE)	MEAN	STANDARD DEVIATION
2	2.25	38.50	3.536
1	2.50	37.00	.
9	2.63	43.89	7.424
17	2.75	42.00	5.323
11	2.88	47.91	5.449
18	3.00	47.17	5.555
29	3.13	47.34	6.930
45	3.25	47.49	5.949
67	3.38	49.52	6.248
77	3.50	50.30	5.194
88	3.63	50.13	6.819
73	3.75	50.51	7.186
80	3.88	52.16	7.027
66	4.00	52.41	6.054
51	4.13	52.59	6.667
37	4.25	55.49	7.148
25	4.38	55.28	7.156
10	4.50	56.70	7.631
8	4.63	50.37	11.413
4	4.75	62.00	4.690
Total	708	50.77	7.063

Appendix J

Pearson Product Moment Correlation Coefficients for PCI scores and the variables in the philosophical orientations variable cluster

	1	2	3	4
1 TIME 1 PCI SCORES	1	-.16**	-.17**	.36**
2 TOTAL ROMANTICISTSCORE	-.16**	1	.51(**)	.20(**)
3 TOTAL PROGRESSIVISTSCORE	-.17**	.51(**)	1	.28(**)
4 TOTAL TRADITIONALISTSCORE	.36**	.20(**)	.28(**)	1

** correlation is significant at the 0.01 level (2-tailed)

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