

NOTE TO USERS

This reproduction is the best copy available.

UMI[®]



uOttawa

L'Université canadienne
Canada's university

**FACULTÉ DES ÉTUDES SUPÉRIEURES
ET POSTDOCTORALES**



**FACULTY OF GRADUATE AND
POSTDOCTORAL STUDIES**

Will Bowins

AUTEUR DE LA THÈSE / AUTHOR OF THESIS

M.A. (Human Kinetics)

GRADE / DEGREE

School of Human Kinetics

FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

**The Adaptability of Experienced Physical Education Teachers to a New Curriculum: An Interpretive
Understanding of Facilitators and Inhibitors**

TITRE DE LA THÈSE / TITLE OF THESIS

C. Beaudoin

DIRECTEUR (DIRECTRICE) DE LA THÈSE / THESIS SUPERVISOR

CO-DIRECTEUR (CO-DIRECTRICE) DE LA THÈSE / THESIS CO-SUPERVISOR

EXAMINATEURS (EXAMINATRICES) DE LA THÈSE / THESIS EXAMINERS

D. Ste-Marie

B. Young

Gary W. Slater

Le Doyen de la Faculté des études supérieures et postdoctorales / Dean of the Faculty of Graduate and Postdoctoral Studies

THE ADAPTABILITY OF EXPERIENCED PHYSICAL EDUCATION TEACHERS TO A
NEW CURRICULUM: AN INTERPRETIVE UNDERSTANDING OF
FACILITATORS AND INHIBITORS

by

WILL BOWINS

B.Sc. Human Kinetics, University of Ottawa, 2007

THESIS

Submitted to the Faculty of Graduate and Postdoctoral Studies

In partial fulfillment of the requirements

for the degree of Master's of Arts in Human Kinetics

School of Human Kinetics

University of Ottawa

June 2009



Library and Archives
Canada

Published Heritage
Branch

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque et
Archives Canada

Direction du
Patrimoine de l'édition

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file *Votre référence*
ISBN: 978-0-494-58221-3
Our file *Notre référence*
ISBN: 978-0-494-58221-3

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

■ ■ ■
Canada

This thesis is dedicated to my two grandparents, Valerie and John Pettit. My grandmother, who never ceases to amaze me, and continues to be an inspiration to everybody; and my grandfather, who passed away before this paper could be completed.

ACKNOWLEDGEMENTS

I would like to extend my gratitude to all the people who helped me during the progression of this paper. First and foremost, I would like to thank my thesis supervisor, Dr. Charlotte Beaudoin, for her tireless efforts throughout the entire thesis process. My two years under her supervision have been an enlightening journey, and without her insight and exceptional knowledge in the area, this thesis would not be the same. Secondly, my committee members, Dr. Brad Young and Dr. Diane Ste-Marie, for putting the commitment into evaluating my thesis; it was with their input and feedback that this thesis was able to reach such high standards. I would also like to express gratitude for the ten teachers who took the time to participate in this study. Furthermore, I would like to thank my parents for molding me into the person that I am today, always believing in me, and motivating me not just during my Master's degree, but through the course of my entire life. In addition, the time spent with my fellow graduate students, whom I was given the pleasure to study with over the past two years, has been an unforgettable experience which fostered many new friendships. I would also like to thank my best friend, Kristen, for being the person that she is and being there for me during the process of this research. Finally, I would like to thank the School of Human Kinetics at the University of Ottawa for providing me with the opportunity to study at the undergraduate and graduate level. I have spent the past six years studying in this department, and the knowledge that I have acquired is an asset to my future endeavors.

ABSTRACT

Physical education (PE) teachers are expected to learn throughout their careers in order to effectively educate their students. However, researchers have stated that the methods used to ensure continuous learning amongst PE teachers are inadequate because they do not meet the needs of experienced teachers (Fullen & Stiegelbauer, 1991; Johns, 2003). Within such a context, the present study was motivated by the need to better understand the adaptation process for experienced PE teachers. Thus, the purpose of this study was to understand how experienced PE teachers perceived the process of adapting to a new curriculum. Using an interpretative approach, this study examined the facilitators and inhibitors that affected the adaptation process for PE teachers during the major 1999 Ontario curriculum change. Bechtel and O'Sullivan's (2007) study and Fullen, Bennett and Rolheiser-Bennett's (1990) conceptual framework were used to guide the interpretation of the facilitators and inhibitors experienced by the participants. Data were collected from ten experienced PE teachers from high schools in Ottawa, Ontario. Results spawned the categorization of the perceived facilitators and inhibitors into the Pyramid Model, comprised of four levels: the Personal Level, School Level, School Board Level, and the Upper Level. The specific effect of experience on the adaptation process appeared to mainly affect the confidence of the participants; and this increase in confidence was found to facilitate the adaptation process. Results from the study suggest a need for a bottom-up approach to curriculum design, whereby aspects from the Personal Level are taken into account during the planning and implementation phases of curricula. Furthermore, the results suggest that schools, school boards, and ministries should offer direction and resources, and should provide opportunities for support and collaboration to facilitate the adaptation process of experienced PE teachers to a new curriculum.

TABLE OF CONTENTS

	Page
DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
ABSTRACT.....	v
LIST OF TABLES.....	x
LIST OF FIGURES.....	xi
CHAPTER	
I INTRODUCTION	1
II RESEARCH CONTEXT.....	3
Curriculum Change in Ontario.....	4
Education Improvement Commission.....	5
Ontario College of Teachers.....	6
Experienced Teachers in Ontario.....	8
III LITERATURE REVIEW.....	10
Educational Change	10
Teaching and the Processes of Change.....	13
Beliefs and Values.....	13
Personality.....	15
Collaboration and Support.....	15
Planning.....	18
District Policies and Administration.....	19
Professional Development.....	21

Experienced Teachers.....	24
Confidence.....	26
Fullen's Conceptual Framework.....	26
Conclusion of Literature Review.....	29
IV METHODOLOGY.....	31
Research Paradigm.....	31
Interpretivism.....	31
Phenomenology.....	34
Research Design.....	38
Participants	38
Sampling.....	39
Recruitment, Consent and Anonymity.....	39
Methods.....	40
Data Collection.....	40
Data Analysis.....	42
Methodological Issues.....	44
Trustworthiness.....	44
Limitations.....	45
V RESULTS AND DISCUSSION.....	47
The Pyramid Model.....	47
Personal Level.....	49
Confidence.....	49
Experience.....	52

Personality.....	55
Planning.....	58
Beliefs.....	60
Research.....	66
School Level.....	70
Collaboration.....	70
Colleague Support.....	75
Principal Support.....	78
School Board Level.....	80
District Support.....	80
Professional Development.....	83
Upper Level.....	86
Problems with the Ministry.....	87
Outside Support.....	92
OPHEA and other Organizations.....	92
VI Conclusion.....	95
Personal Reflections.....	99
REFERENCES.....	101
APPENDIX.....	108
A Fullen, Bennett, and Rolheiser-Bennett (1990)'s Conceptual Framework.....	108
B Ethics Approval.....	110
C Procedure Outline.....	121

D	Semi-Structured Interview Guide.....	124
E	Number of Coding Instances for Coded Themes.....	127

LIST OF TABLES

Table	Page
1. Experience in PE during Curriculum Change and Gender of Participants.....	39
2. Number of Coding Instances for Coded Themes.....	127

LIST OF FIGURES

Figures	Page
1. The Pyramid Model: A Pictorial Representation of the Facilitators and Inhibitors for Experienced PE Teachers when Adapting to Curriculum Change.....	48
2. A Pictorial View of the Beliefs of Participants.....	61

CHAPTER I

INTRODUCTION

Physical education (PE) teachers are expected to continuously learn throughout their careers in order to effectively educate their students. Standards set by the Ontario College of Teachers (OCT) and the Ministry of Education in Ontario dictate that “all teachers – beginning teachers, experienced teachers, principals, supervisory officers, teacher educators and teacher leaders – engage in professional learning appropriate to their interests, needs, perspectives and responsibilities” (OCT, 2006, p. 4). This continuous professional learning is often referred to as professional development and is employed because initial teacher training cannot contain all of the knowledge that is needed throughout the career of a teacher (Knight, 2002). Therefore, continuous learning is necessary amongst teachers to ensure that they are capable of adapting to the ever-changing curriculums that they are expected to teach (Armour, 2006). However, it has been stated that the methods used to ensure professional development amongst PE teachers are inadequate in that they simply do not meet the needs of experienced teachers (Armour & Yelling, 2004; Borko, 2004).

The potential inadequacy of the professional development programs may eventually lead to a decline in the effectiveness of experienced PE educators’ teaching abilities (Armour, 2006). The problem with the possible decline in effectiveness of experienced PE educators is that “teachers do not become obsolete... instead, they continue to practice for many years, perhaps unaware that they may be failing to meet their professional commitments to the pupils in their care” (Armour & Yelling, 2007, p. 182).

When PE teachers are not provided with sufficient professional development programs to meet their needs, their methods of conveying appropriate subject matter can decline (Wirszyła,

2002). When teaching effectiveness in a PE class decreases, the quality of PE declines and students are not provided with “the skills and knowledge they need to lead a physically active lifestyle” (Wirszyla, p. 4). Therefore, Armour (2006) argued that researching and improving career long learning and professional development programs will provide experienced PE teachers with the resources they need to continuously learn how to teach. Though Armour comes to this conclusion, she also described that “to date, the primary focus of both policy and research has been the relatively brief process of initial teacher training” (Armour, p. 203). Armour and Yelling (2004) indicated that the reason professional development programs do not succeed is because such programs fail to “take sufficient account of the process of teacher change” (p. 101).

Teacher change is a complex process to which all teachers react differently. Hargreaves (2005) indicated that “when educational change occurs or is attempted, teachers do not all respond in the same way... amongst the most important of these influences is teachers’ age, as well as their career status” (p. 967). The purpose of the research conducted in this study was to examine how experienced PE teachers adapt to curriculum change. In order to accomplish this, the current research examined the facilitators and inhibitors perceived by experienced PE teachers when implementing a new curriculum and the specific effect of experience on this adaptation process. Results from this study could aid those in charge of design and implementation of new curricula by exposing factors involved in the adaptation process for experienced PE teachers; leading to a smoother transition.

CHAPTER II

RESEARCH CONTEXT

Many factors are experienced by teachers who are faced with adapting to the implementation of a new curriculum. These factors are often divided into facilitators and inhibitors of the teacher change process. Research indicated that there have been few studies examining these facilitators and inhibitors from the perspective of PE teachers (Dwyer et al., 2003; Fullen, 2003). Furthermore, within these few studies, there has been no research on how *experienced* PE teachers adapt to the implementation of a new curriculum. This is a very important question to be answered because experienced PE teachers may be subjected to different facilitators and inhibitors when adapting to a new curriculum. Howey and Corrigan (1980) acknowledged that “experienced teachers frequently have more difficulty than their younger colleagues in bringing about change in their own teaching behavior” (p. 17), but no insight was provided as to why this is, and how this concern pertained to PE teachers. In order to better understand these issues, the current research examined the complexities of change and, more specifically, adaptation to curriculum change in a sample of experienced PE teachers. Literature will first be presented to illustrate the process of change amongst PE teachers. Next, a literature review will portray these processes and how they may change with experience because of teachers being continuous learners. Before any studies in the field are presented, however, a context of the most recent Ontario curriculum change will be given. Following that, documents issued by the government of Ontario describing the strategies for change and standards of teaching will be discussed to provide the research context for this study.

Curriculum Change in Ontario

The most recent curriculum change in Ontario began its planning phases in early 1995. Written by the Ministry of Education (1996) in Ontario, a document entitled Curriculum for Ontario Secondary Schools was released, indicating that “Curriculum Guidelines for Ontario secondary schools ha[d] not been re-written in almost a decade” (Ministry of Education, p. 1). This document, and others similar to it proposing the change, presented the major changes that were to be implemented in the following years (Winter & McEachern, 2001). In the early planning days of this proposed new curriculum, the reformation was called the ‘Common Curriculum’ and parts of it were set to be initiated in October of 1997 (Winter & McEachern). Later in 1995, however, a new government was elected in Ontario, which proposed more drastic changes to the curriculum, causing delays in the proposed implementation date. Elements of this curriculum were implemented into elementary and intermediate schools (grades one to eight) in 1997 and 1998, but no changes were made to the secondary school curriculum until 1999 (Winter & McEachern). As Winter and McEachern indicated, these new changes seemed “to have left teachers and school boards feeling considerable pressure without the necessary support” (p. 685). This led to the teacher resistance to implement the change, causing massive ‘work-to-rule’ situations amongst Ontario as school boards “struggle[d] to negotiate teacher contracts within the legislative reforms” (Winter & McEachern, p. 686).

The change to PE was long overdue. Two documents released in 1999, which replaced the guidelines specified by previous documents in 1995 (for grade nine) and 1978 (for grades ten to twelve) were released. The documents specified the specific goals, expectations and outcomes of the new curriculum of PE in Ontario high schools. These goals were to promote: physical activity, active living, healthy living, and living skills in order to generate a “commitment and a

positive attitude to lifelong healthy active living and the capacity to live satisfying, productive lives” (Ministry of Education, 1999, p. 2).

Education Improvement Commission

The Education Improvement Commission (EIC) created a School Improvement Planning Handbook that identified the “specific goals and strategies for change” (EIC, 2000, p. 6). These strategies specifically described the key individuals and their specific roles during a period of change. The document provided by the EIC was imperative to the current study since it was necessary that the researcher acquire a thorough understanding of the governmental procedures when attempting educational change. The EIC indicated that the goal of educational change is “to improve student achievement levels by enhancing the way curriculum is delivered, by creating a positive environment for learning” (p. 6). The handbook acknowledged that “real change takes time” and that “incremental improvements are significant, and they should be celebrated, but they do not constitute lasting change” (p. 6).

The EIC (2000) indicated that improving a curriculum cannot occur solely with a teacher attempting to initiate change. Instead, an effective change occurs when many bodies within the school work together, including principals, teachers, school councils, parents, community members and superintendents. Principals, as indicated by the EIC, play a key role during the change process. During a time of an improvement or change of a curriculum, the EIC indicated that principals have four roles to play regarding professional development, which are to: “encourage staff to lead the development and implementation of the plan,” “provide leadership and professional development/training opportunities to staff,” “establish professional development goals with staff that focus on the goals and strategies in the school improvement

plan,” and to “ensure that professional development activities that focus on achieving the school’s improvement goals are part of every staff meeting” (p. 14).

The EIC (2000) specified that the individual who has the greatest impact on students during a period of curriculum improvement is the teacher. The EIC indicated that teachers should execute the following tasks when improving or changing a curriculum:

Actively participate and assume leadership roles in establishing priorities, setting goals, and formulating implementation strategies for the plan; work closely with school councils and parents to implement the plan; ensure that classroom strategies for improvement address the needs of students at all levels of learning; assess students in a variety of ways and develop strategies for improving the level of student achievement; and set and pursue professional development goals that focus on the goals and strategies identified in the plan. (p. 15)

Ontario College of Teachers

In 2006, the OCT issued revised guidelines for the “Foundations of Professional Practice” which “outline the principles of ethical behaviour, professional practice and ongoing learning for the teaching profession in Ontario” (OCT, 2006, p. 3). These guidelines ensured that “all teachers – beginning teachers, experienced teachers, principals, supervisory officers, teacher educators and teacher leaders – engage in professional learning appropriate to their interests, needs, perspectives and responsibilities” (p. 4). The standard of professional learning amongst teachers was the focus of the current research because the study investigated the processes that facilitated or inhibited continuous learning and subsequently effected how an experienced teacher adapted to a curriculum change.

The Professional Learning Framework imposed by the OCT is “based on the premise that teachers move through a variety of career stages that will influence the multiple ways teachers live out the standards in their professional practice” (OCT, 2006, p. 4). As teachers move through different career stages, the ways in which they go about their teaching practices will differ based on individual levels of experience (Hargreaves, 2005). Therefore, commitment to ongoing professional learning through the Professional Learning Framework is the OCT’s method of providing career-long growth and development to the professional teacher. Educators are offered this professional development from the Ministry of Education, faculties of education, professional organizations, federations and subject associations. In addition to this, the OCT indicated that ongoing learning should be a collaborative effort between ‘principals, supervisory officers, directors and teacher educators, parents, members of the community and the government’ (p. 19). These collaborative efforts amongst constituents are essential for professional growth in teachers and developing curriculum outcomes in schools (OCT). Thus, according to the standards set by the OCT, ongoing professional development opportunities are a means to facilitate curriculum change.

A research context has been provided thus far regarding how a school should implement an improvement or change in a curriculum as outlined by the government of Ontario. Therefore, the current research is now able to situate itself as to what the government states should be conducted during a time of curriculum change, but has yet to provide a ministerial definition of an experienced teacher. This definition is provided in the next section.

Experienced Teachers in Ontario

The Ministry of Education (2007) in Ontario released a document describing the performance appraisal system of experienced teachers. The appraisal system was “designed to foster teacher development, provide meaningful appraisals that encourage professional learning and growth, and identify opportunities for additional support where required” (Ministry of Education, p. 5). The performance appraisal document for experienced teachers also indicated what the government of Ontario views as an experienced teacher. As per the Ministry of Education, “a teacher ceases to be a new teacher once he or she successfully completes the New Teacher Induction Program or, subject to any extension provided for in the regulations, his or her 24-month new teaching period has elapsed” (p. 5).

Teachers are able to learn as beginning teachers or as experienced teachers. Beginning teachers are often called preservice teachers and are taught using Physical Education Teacher Education (PETE) courses. These PETE courses are provided to help preservice teachers obtain skill and content knowledge for teaching PE (Oslin, Collier, & Mitchell, 2001). It is important to recognize that preservice learning is an important stage of teacher training but it does not encompass all that teachers need to learn throughout their careers. Rather, the learning and development of teachers should be career long and focus on teachers being *continuous* learners during the inservice phase of their careers (Conkle, 1997).

The research done in the current study focused on the process of learning and development of teachers during the inservice phase of teaching. It was indicated by Conkle (1997) that it is “critical for physical educators to receive pertinent and high quality in service opportunities” that “enhance personal or professional knowledge, skills, or attitudes and improve student instruction” (p. 50). There are connections between the standards defined by the OCT’s

Foundations of Professional Practice and the EIC, in that they both regard professional development as an essential component to the intertwined processes of teacher learning, curriculum development, and subsequently, teacher adaptation. Because of this, the current researcher will later present literature regarding inservice professional development and discover if these programs facilitated or inhibited the adaptability to curriculum change for the sampled experienced PE teachers. First, however, literature describing the complexities of the educational change process will be addressed.

CHAPTER III

LITERATURE REVIEW

Educational Change

In order to understand the mechanisms behind teacher change, the researcher of the current study must first present the complexities of change. This will be done in order to understand why teachers often do not want to consider adapting to changes as a result of the hardships that they may face. Literature indicated that “fundamental change results from a major dissatisfaction with present arrangements” (Wirszyla, 2002, p. 15). Therefore, in order for educational or curricular change to be needed, the district or overarching ministry must perceive something to be faulty with the state that it is in; such is the case when curriculum strategies become outmoded and stale. It is important to note that the individual implementing the change is not necessarily the individual or body that is proposing the change. Often, what was seen with teachers from previous research are districts *imposing* change, and teachers being left scrambling to adapt (Wirszyla). Once a change has been implemented, individuals faced with the change must now react to the modification in their lives. What often occurs is people not wanting to adhere to these changes and be subject to the hardships that come along with them (Marris, 1975) because “*all* real change involves loss, anxiety, and struggle” (Fullen & Stiegelbauer, 1991, p. 31). Modifying an aspect of life requires that an individual learn something new because of this change. This modification is what is often difficult for people, let alone for those who have been previously successful with a certain strategy (Fullen, 2003). Change in an educational setting is just as difficult and complex as change anywhere else in life, and this is often the reason why teachers have difficulty adapting to changes in curricula (Fullen).

It was indicated that “the purpose of educational change presumably is to help schools accomplish their goals more effectively by replacing some structures, programs and/or practices with better ones” (Fullen & Stiegelbauer, 1991, p. 15). The problem, however, was that “there has been no consensus on specifically what is involved in the restructuring of education” (Johns, 2003, p. 345) and because of this, “times of change are generally times of uncertainty for teachers and their usual response is to resist attempts to change and to hold on to existing practices” (Johns, p. 358). The implication that teachers resist change and instead hold on to their existing practices has been examined in many studies (Armour & Yelling, 2004; Faucette, Nugent, Sallie, & McKenzie, 2002; Fink & Stoll, 1998; Hargreaves, 2005; Johns). These studies indicated that there were so many complexities within the change process that fully understanding all the variables to elicit positive change was impossible for teachers.

Literature has suggested that the waves of change that are attempted over the years demonstrated how little educational change has been thought-out during this time. Johns (2003) described curricula as:

“A series of repeated invasions of organizing ideas that command attention for a while before they are turned out by the next invasion” (Cherryholmes, 1988, p. 141). Clearly, teachers have been “bombarded by an unrelenting plethora of changes over a short period” and “tend to be exhausted, and find it difficult to keep up their energy,

enthusiasm and ultimately, willingness for change” (Fink & Stoll, 1998, p. 299). (p. 360)

Johns indicated that these constant waves of change are causing teachers to become weary and cynical of incoming attempts to change a curriculum because of the lack of support they receive during this time.

The series of repeated invasions described in the excerpt is often referred to as the time of “adoption mania” (Faucette et al., 2002). Once reform after reform had failed, officials in charge of implementation began deducing reasons for these failures and subsequently developed “more robust theories or paradigms to enhance development efforts” (Faucette et al., p. 288). Faucette et al. indicated that what was needed to be done was to plan these “change efforts to be incremental and evolutionary rather than expecting substantive innovations to occur quickly” (p. 289). As previously indicated, the government of Ontario concurs with this research by Faucette et al. in that they both agree that time will allow efforts for systematic change to occur within curricula (EIC, 2000, p. 6). Literature from Faucette et al.’s study further indicated that this poor planning resulted in a barrage of curricula that made it exhausting for teachers to accommodate such demands for change.

Additional literature on educational change continued to specify that little is known about the implementation of curricula (Johns, 2003). Often times the assumptions and abstraction of proposed curricula did not make sense in the world of the teacher and that these programs never addressed the problems regarding students, scheduling, support and boundaries (Fullen & Stiegelbauer, 1991). Fullen and Stiegelbauer attributed difficulties with curriculum change to insignificant procedures, inappropriate strategic planning, and a lack of consideration for the needs of the school or the working conditions of teachers. Furthermore, many attempts at implementing curriculum did so “without either a careful assessment of its strengths and weaknesses, or of how or whether it can be integrated with what is already going on” (Fullen, 1993, p. 51). Often, as a result, teachers are unable to adapt to a new change, and schools end up with an educational system which is fundamentally conservative (Fullen). Therefore, in order to

aid the adoption of a new curriculum, curriculum policy-makers should consider the needs and processes of teachers when adapting to such a change. (Bechtel & O'Sullivan, 2007; Fullen).

Teaching and the Processes of Change

Bechtel and O'Sullivan (2007) explored the facilitators and inhibitors that affected four secondary PE teachers who experienced curricular changes in their programs. The investigators were interested in learning about the catalysts for positive teacher change amongst secondary PE teachers. The results of the study indicated that there were two facilitators and an overarching inhibitor that affected the adaptability of PE teachers to a curriculum change. The two facilitative processes identified for teacher adaptation were the beliefs and values of a teacher, as well as the collaboration and support they received. Conversely, teachers in the study identified that district policies and the marginalization of PE from the district inhibited positive teacher change. They also concluded that "beginning teachers often have different concerns than experienced teachers, so the stage of one's career might have an impact on the teacher change process" (p. 233). Furthermore, the researchers indicated that "career stage and the impact this has on the teacher change process is an area to be addressed by future research" (p. 233). The current research used Bechtel and O'Sullivan's study as a foundation to guide the investigation of the processes that an experienced PE teacher would face when adapting to a curriculum change. Thus, in the following section of this review of literature, previous research on these processes will be identified.

Beliefs and Values

There is a body of research that shows that the beliefs and values of PE teachers have an affect on their adaptability to new curricula (Butler, 2005; Fullen, 2003; Fullen & Stiegelbauer,

1991; Ha, Lee, Chan, & Sum, 2004; Johns, Ha, & Macfarlane, 2001; Wirszyła, 2002). Having ‘belief’ in the curriculum was indicated as teachers trusting that the curriculum would bring about positive changes in their students (Bechtel & O’Sullivan, 2007). Specifically, curriculum change was more effectively implemented when PE teachers believed that the change in the curriculum would enhance the learning of their students (Bechtel & O’Sullivan; Butler; Ha et al.; Johns et al.). Bechtel and O’Sullivan examined four practicing PE teachers during an implementation of a new curriculum. They found that the three teachers who had beliefs and values in favor of the curriculum and subsequently, the implementation of it, attempted to make “changes in their programs, and teaching practices” (Bechtel and O’Sullivan, p. 228) that reflected the proposed change. Conversely, the one PE teacher whose beliefs were not aligned with the change in the curriculum had different outcomes than the other three participants.

Fullen (2003) indicated that adaptive change would not be possible unless teachers “believe they are doing something worthwhile... [and are] willing to put in the extra sacrifices and effort” (p. 34). One study found that PE “teachers’ openness to change might depend on their attitudes toward new educational ideas” (Ha et al., 2004, p. 423). However, generally very little “consideration is given to the teachers’ pre-existing beliefs and their perceptions of the need to change” (Ha et al., p. 423). Individuals in charge of implementing a change need to realize that PE teachers “can benefit from the opportunity to discuss core beliefs, to examine ways in which they translate into practice” (Butler, 2005, p. 237) because “how the teachers perceive, interpret, or bend the curriculum due to preexisting beliefs or practices will affect the fidelity of the implementation” (Wirszyła, 2002, p. 16). It has been contended that beliefs in favor of curriculum change are associated with teachers’ motivation to produce innovative materials and approaches (Johns et al., 2001). Indeed, Fullen and Stiegelbauer (1991) advocated that policy-

makers must consider the beliefs and values of teachers when implementing any new curriculum. Although beliefs are extremely important in the adaptation process, even when PE teachers had beliefs that corresponded to a curriculum change, the individuals in charge of the implementation underestimated the role of the situational and personal-social factors that would influence a PE teacher's adaptation to a change in a curriculum (Johns et al.), which will be discussed next.

Personality

In addition to the beliefs and values of the individual teacher, studies have indicated that a facilitator or inhibitor to implementing curriculum change is the teacher's individual personality. Curtis and Cheng (2001) indicated "personal qualities or personality characteristics appear in the educational change literature less frequently" (p. 141). However, they make the point that personality characteristics are an important aspect of teacher change. Richardson (1990) indicated that often times the reason for a curriculum not being implemented is simply because of "teachers being resistant to change" (p. 11). It was specified that some teachers are simply unwilling, and thus, unable to adapt, whereas others embrace changes (Richardson).

Collaboration and Support

In their study of PE teachers' facilitators and inhibitors to change, Bechtel and O'Sullivan (2007) indicated that the support that teachers received was a key theme that served as a catalyst for the change process. Bechtel and O'Sullivan found that, after the beliefs and values of a teacher, the support that the educators received and the collaborative work they did with other teachers were the most important factors in their effectiveness of adapting to curriculum change. An essential component of an effective curriculum implementation was support from colleagues

and meetings with other teachers undergoing change as a part of professional development programs. In addition, the same study indicated that not all support that PE teachers received had to come from other teachers. Their research showed that positive change was also facilitated by support from principals and students. The study indicated that PE teachers who perceived their principal as supportive of the new PE program improved their efforts to change. As an example of the types of support that could be given, one participant in the study indicated that when her principal gave her financial and emotional support during an implementation of a new curriculum, she was more encouraged to persevere with the changes. In addition, “support of students is also beneficial in order for change to occur and be sustained” (p. 232-233).

Additional literature described similar discoveries to the Bechtel and O’Sullivan (2007) study, stressing the importance of collaboration with colleagues during curriculum change (Butler, 2005; Fullen 1993, 2003; Johns, 2003; Johns et al., 2001; Kirk & Macdonald, 2001). The importance of collaboration was explained by Fullen (2003), as he described that there was only so much teachers were able to learn if they kept to themselves. He indicated that “teachers must work in highly interactive and collaborative ways [and work] productively with other teachers” (Fullen, 1993, p. 81). A study conducted by Butler interviewed PE teachers going through a curriculum change to examine the barriers that the teachers had in adapting to the change. The participants in that study indicated that they needed support from their colleagues via healthy dialogue and the exchange of ideas. A study by Johns et al. found that it was not necessarily that the physical education teachers did not *want* to adapt to a new curriculum, rather it was the absence of support and a rigid organizational structure to facilitate change that made the retention of the status quo a preferred option.

Further literature that supported the collaboration of colleagues when going through a PE curriculum change can be found in other studies (Armour & Yelling, 2004; Armour & Yelling, 2007; Fullen, 1993). Armour and Yelling (2004) for example, indicated that collaboration amongst colleagues “allows teachers ways to talk with each other about their classrooms and their students” (p. 108). The study stressed that teachers learned by interacting and collaborating with other teachers but schools often prevented such learning by not providing enough time to discuss and share their lessons with each other. Fullen specified that when teachers experienced change as a group, the collegiality that occurred allowed teachers to adapt more effectively. Collegiality encouraged change in Fullen’s research because teachers realized they were not isolated in their need to learn. According to Armour and Yelling (2004), the problem was that few schools supported teachers to work together and this professional isolation contributed to a form of pedagogical reductionism that decreased the ability of a PE teacher adapting to a curriculum change.

WestEd (2002) suggested that collaboration amongst teachers could aid in the effectiveness of professional development programs. The study indicated that professional development programs were enhanced when they “shifted from isolated learning and the occasional workshop to focused, ongoing organizational learning built on collaborative reflection and joint action” (p. 11). A teacher from a recent Armour and Yelling (2007) study indicated that, in an ideal world, “it would be great to meet up with other PE teachers’ to enhance the professional development programs” (p. 189). Yet what is often the case is that teachers are isolated in their learning, and it is the traditional model of professional development that prevails in schools (Armour & Yelling).

Researchers of other studies argued that teachers also need ‘outside’ support to be able to effectively initiate and implement a change in curriculum (Faucette et al., 2002; Fullen, 1993; Fullen & Stiegelbauer, 1991; Ha et al., 2004; Wirszyla, 2002). Another factor to consider is having problematic students who resist change. These students can inhibit the adaptability of a PE teacher going through change (Wirszyla). Support from principals was further shown to influence the likelihood of change (Fullen & Stiegelbauer), confirming Bechtel and O’Sullivan’s (2007) results.

In addition to receiving support from principals and students, Ha et al. (2004) concluded that PE teachers should collaborate between the school and a wide range of health-professionals in the community, including “nutritionists, pediatricians, exercise physiologists, psychologists, and sociologists, so that they work together as a team to promote physical and health education” (p. 423). Faucette et al. (2002) also indicated that, when going through curriculum change, teachers should “interact frequently with parents, other teachers, facilitators and data collectors, administrators, and chroniclers throughout the process” because this would create “a sense of collaboration and collegiality with others working towards similar goals” (p. 304). Also stressed was the collaboration between PE teachers and university faculties in order to aid in the preparation of teachers going through change (Wirszyla, 2002).

Planning

Briscoe and Peters (1998) conducted a study that investigated possible reasons as to why collaborative work amongst teachers facilitated the change process. Their research indicated that collaborative work allows for teachers to share ideas, discuss their teaching practices and it gives them an “opportunity to plan together” (p. 57). A participant from their study discussed that

planning allowed her to get “everything out and get [their] ideas together” (p. 58) and that this facilitated her adapting to change. Furthermore, research by Hall and Hord (1987) indicated that planning was useful for facilitating change in schools because it allowed teachers “to handle unanticipated occurrences and to utilize more effectively his or her limited time and resources” (p. 9).

District Policies and Administration

Bechtel and O’Sullivan (2007) indicated that district policies were inhibitors to teacher change. Though the beliefs and values of a teacher and the collaboration amongst colleagues facilitated a PE teacher’s adaptability to change, they found that “the lack of professional development for physical education teachers in the district” (p. 230) and “the marginalization of physical education by the school district” (p. 231) were key barriers to teacher change. It was indicated by all four teachers in the study that “the district had not met their professional development needs” (p. 230). This issue of the district not providing effective professional development will be discussed later in this section.

There is further literature that indicated how an unsupportive district influenced the adaptability of PE teachers during an implementation of a curriculum (Cothran, 2001; Dwyer et al., 2003; Fullen & Stiegelbauer, 1991; Johns, 2003). These researchers showed that school districts often gave PE a “low priority in the school system” (Dwyer et al., p. 449). This often tempted teachers to return to more familiar former programs (Cothran). It appeared however, that “in situations where the school board and the district are *actively* working together, substantiated improvements can be achieved, compared to conflictful or uninvolved boards” (Fullen & Stiegelbauer, p. 75).

Johns' (2003) study investigated the "asymmetry that exists between curriculum planners... and [PE] teachers" (p. 349). Johns indicated that when district policy-makers implement a program there is often no measurement of how well the curriculum will fit with the current practicing teachers. The findings revealed that the PE "teachers identify change as something that is being done to them as opposed to something done with them" (p. 349). Johns identified the reason for this asymmetry:

Invariably, teachers are expected to "adjust to structures" that are imposed upon them "while remaining silent about the power within those structures" (Cherryholmes, 1988, p. 186). To ignore teachers, it appears, is to ignore the problems associated with implementation of curriculum change. (p. 346)

Therefore, it became clear that policy-makers were disconnected from the teachers who were going to have to adapt to the curricula that were being imposed (Johns).

Dwyer et al. (2003) also investigated PE teachers' perspectives of administrative barriers to the implementation of a new curriculum named the Health and Physical Education Curriculum (HPE). Conducted in Ontario, the study found that "participating teachers perceived physical education to be a low priority in the educational system, making it difficult for them to meet the HPE curriculum expectations" (p. 448). Because of this lower priority given to PE, there were often no workshops for PE teachers and there was a lack of a sufficient infrastructure for PE in general (Bechtel & O'Sullivan, 2007; Dwyer et al.). Faucette et al. (2002) indicated that:

Rather than imposing growth on subordinates, administrators [should] serve as nurturing providers and teachers accept or decline such opportunities with no negative consequences... [this] employee centered approach can help reduce the sense of

violation often felt by those undergoing development in a more hierarchal system. (p. 288)

By induction, it could be assumed that a lack of nurturance by administration, and a top-down approach by policy-makers were barriers to adaptive curriculum change on the part of the teachers.

Professional Development

Research has suggested that in order to help PE teachers overcome the barriers of curriculum change, school districts should provide these educators with continuing and relevant professional development (Armour & Yelling, 2004). Studies suggested that ineffective professional development programs issued by the school district are a mechanism that could affect the teacher change process (Bechtel and O'Sullivan, 2007). Specifically, Bechtel and O'Sullivan indicated that ineffective professional development for teachers was seen as an inhibitor to teacher change. This notion, in addition with the emphasis on experienced teachers in the current study prompted the investigation of this topic in the current study.

Armour and Yelling (2007) defined professional development as "all types of professional learning undertaken by teachers beyond the initial point of training" (p. 178). Professional development programs allow experienced teachers to be continuous learners throughout their careers (Armour & Yelling; Knight, 2002; Fullen, 2003) and display the potential to substantially improve classroom teacher's physical education (Faucette et al., 2002). The authors further indicated that continuous professional development for PE teachers should "be designed to connect to previous teacher learning and future goals, be aligned with policy,

national standards and assessments, and encourage communication with colleagues” (Armour & Yelling, p. 101).

Knight (2002) further described the importance of an ongoing professional development program:

Continuing professional development is needed because initial teacher education cannot contain all of the propositional knowledge that is needed and certainly not that procedural “how to” knowledge which grows in practice... [and that] professional obsolescence will soon enfold all except those engaged in life-long learning. (p. 230)

Armour (2006) argued that providing effective PE professional development programs and subsequently solving the problem of experienced teachers becoming obsolete, was “pivotal to improving the quality of physical education” (p. 203). The problem, however, was that “the professional development available both within PE, and more generally, simply did not meet their needs as experienced teachers” (Armour & Yelling, 2004, p. 96). Because of this, the teachers were unable to effectively adapt to, and subsequently, instruct, the proposed curriculum change. Armour and Yelling recommended that it was time to reconsider professional development into a program that generated a different perspective on the method in which experienced PE teachers learn throughout their careers.

Many issues are present in the literature with the current professional development programs that are provided to teachers (Armour, 2006; Borko, 2004; Conkle, 1997; Fishman, Marx, Best, & Tal, 2003). Armour indicated that the knowledge that we have for providing effective professional development is patchy, and that we are left with more questions than answers about effective professional development. Experienced PE teachers told Armour that many programs lacked coherence, relevance, challenge and progression, and they were often

delivered out of context in such a way that learning could not be transferred to their schools. Further reports from experienced teachers described the state of professional development as deficient (Fishman et al., 2003) and “woefully inadequate” (Borko, pg. 3). Experienced teachers complained that professional development programs were not meeting their needs because one-day courses were not fundamentally effective to support teachers in learning how to enhance practice (Armour & Yelling, 2007; Conkle, 1997; Wilson & Berne, 1999).

A study conducted by Conkle (1997) quantitatively addressed what PE teachers would have liked to have seen regarding PE professional development programs. The results concluded that 79 percent of the teachers preferred one-day seminars, once each school term, as the format for inservice activities. Conkle indicated, however, that this finding is contrary to what previous literature recommended as best for teacher development, as he indicated that previous “literature is filled with calls to end one-shot attempts at teacher development” (p. 54). Contrary to the teachers’ preferences indicated above, Armour (2006) suggested that PE professional development should be established on a better understanding of teacher learning and adaptation rather than on ‘one-shot’ attempts to better the process.

Armour and Yelling (2004) suggested that professional development programs should be “systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students” (p. 101). The authors further suggested that the reason why professional development programs did not allow experienced PE teachers to learn how to adapt was because the services did “not take sufficient account of the process of teacher change” and that they should “attempt to change teachers’ attitudes and beliefs in the hope that this will lead to changes in practice” (p. 101). Furthermore, the authors suggested that

professional development programs should be aligned with policy and government standards to meet the needs of experienced teachers.

Experienced Teachers

There is vagueness in the literature regarding the definition of an ‘experienced’ teacher. Armour and Yelling (2004) defined their participants as teachers with more than five years of teaching experience. The research that has been conducted on the adaptability of teachers to curricula with samples that meet this criterion, however, is often patchy, outdated and generic (Conkle, 1997). The focus of most research to date has been on educating teachers at the beginning of their instructional career; “it is as if, once trained to statutory standards, teachers’ learning is no longer a pressing concern” (Armour, 2006, p. 203).

The little research that has been conducted on experienced teachers suggested that these teachers find it more difficult to adapt to new curricula than their less-experienced counterparts (Howey & Corrigan, 1980). Howey and Corrigan described that adults develop continuously, just as children do. Furthermore, they indicated that the ‘stage’ or ‘level’ of development of a teacher can affect how “one teaches or at least prefers to teach” (p. 26).

Hargreaves (2005) conducted a study that examined the subjective experiences of experienced PE teachers in Ontario. He indicated that the reason why educational change is often difficult is because of the individuality within the teachers implementing the change. He concluded that “when educational change occurs or is attempted, teachers do not all respond in the same way” (p. 967). Different factors can influence teachers’ adaptabilities; however, “amongst the most important of these influences is teachers’ age, as well as their career status” (Hargreaves, p. 967). Hargreaves revealed the subjective experiences of a teacher: “you come in

with the ideas of ‘I want to change everything and I’m going to be amazing’” but that only “lasts about two classes” (Hargreaves, p. 972). Hargreaves also discussed that the age difference of teachers would create a difference in adaptability between experienced and non-experienced teachers. In an excerpt from another experienced participant in Hargreaves’ study:

“They [new teachers] have grown up being involved in and accustomed to several changes in their school life... constant change,” as they have moved from school to school then on to university and beyond.... younger counterparts “deal with change every single day and they thrive on it. It makes the world very exciting for them.” (p. 972)

The study by Hargreaves (2005) also suggested that experienced teachers have more problems dealing with insensitive administration policies. For experienced teachers in his study, “the magic of teaching had literally gone as their optimism and idealism had been crashed on the rocks of capricious reform processes [and] repetitive change syndromes” (p. 975). These continuous reform attempts made teachers nostalgic for the times when they experienced brief innovative and pedagogical success in the past. When change was proposed to these experienced teachers, they were reminded of the continuous influx of “incoming administrators and gung-ho reformers who have no memory, knowledge, curiosity about or respect for these teachers’ past experiences and achievements” (p. 975). It is suggested by Hargreaves that all of these problems caused a decrease in energy and willingness for experienced teachers to change. Though the difference in the ability for experienced teachers to adapt to curriculum change was shown to be because of a decrease in energy, other literature suggested an additional rationale for the discrepancy (Armour, 2006; Fullen, 1993; Johns, 2003; Wirszyla, 2002).

Johns’ (2003) examination of experienced PE teachers revealed that they were often unable to transform their practices because they preferred to not change what they had been

doing for years. Other studies have revealed that experienced teachers did not put enough emphasis on the continuous inquiry needed to be a life-long effective educator (Armour, 2006; Fullen, 1993).

Confidence

Though some literature indicated that experienced teachers could possibly have more difficulty adapting to a curriculum change; Veenman's (1984) study suggested that the confidence levels of these teachers may influence their adaptation process. In a meta-analysis of 83 studies, Veenman indicated that beginning teachers were not confident in their disciplinary practices, classroom management, and class control. Additionally, Veenman's study saw that the high work-load consumed much of the preparatory period of the beginning teacher and that these teachers had "doubts and worries about [their] own competence" (p. 156). Conversely, these issues of perceived professional competence were not reported in experienced teachers in this study.

Fullen's Conceptual Framework

A framework created by Fullen, Bennett, and Rolheiser-Bennett (1990; Appendix A), was created in order to aid in the understanding of the broad spectrum of educational reform. Though the framework is to help individuals understand educational reform on a large scale, it is proposed that these concepts could be applied to the specific aspect of curriculum change. The framework added to the understanding of the change process in the current study by illustrating main processes of change, as well as illustrating the interrelatedness and the complexities between these processes. More specifically, Fullen et al. identified the three overall processes

that are involved in educational reform: classroom improvement, teacher development and school improvement.

The framework is depicted as an image of three gear cogs that are connected to each other. The leftmost cog is 'classroom improvement,' the middle cog is 'teacher as learner,' and the rightmost cog is 'school improvement' (Fullen et al., 1990). The teeth of the middle 'teacher as learner' cog are intertwined with the teeth of the cogs to the left and to the right. The framework was created like this in order to "understand classroom improvement on the one hand, school improvement on the other, and then to identify systematic links between the two" (p. 14). This appears to be simple, but as Fullen et al., indicate:

Taken literally, this imagery is misleading - teaching is not mechanistic, and one cog does not necessarily start another. Nor do the framework's components simply move in one direction or the other. Different and contradictory initiatives affect different parts, moving them in different directions at the same time -indeed, this is part of the complexity. (p. 13)

Classroom improvement is comprised of the four inner-cogs of content, instructional strategies, instructional skills, and classroom management (Fullen et al., 1990). Although this cog is important in the process of educational change, it did not directly relate to the present research question and subsequently, will not be presented thoroughly in this review; instead, the current study will focus more on the middle and rightmost cogs.

Teacher as learner was described as "the centerpiece" and "includes anybody at the school level who is a professional educator, for example, classroom teachers, teacher leaders, head teachers, vice-principals and principals" (Fullen et al., 1990, p. 15). This major cog is also composed of four inner-cogs, which are: technical repertoire, teacher as researcher, reflective

practices and collaboration. Fullen et al. described the process of each inner-cog: “*technical repertoire* increases instructional certainty; *reflective practice* enhances clarity, meaning, and coherence [to teaching]; *research* fosters investigation and exploration; *collaboration* enables one to receive and give ideas and assistance” (p. 15). McKernan (1996) discussed the idea of the ‘teacher as a researcher’ in his book. He indicated that teachers sometimes need to investigate different areas of resources in order to improve their teaching. This allows teachers to try out new “ideas in practice as a means of improvement and as a means of increasing knowledge about the curriculum, teaching, and learning” (Crookes, 1993, p. 131). It was proposed by the current researcher that the inner cogs of Teacher as learner are important to PE teachers adapting to changes in curricula, and thus, these main concepts were explored.

School improvement reflects the administration and district policies of the school and how they influence educational change. The first inner cog, shared purpose, “includes vision, mission, goals, objectives, and unity of purpose” and refers to the “shared sense of purposeful direction of the school relative to major educational goals” (Fullen, 1990, p. 14). The shared purpose of the school will change based on the other cogs in the framework, such as with the norms of collegiality. Norms of collegiality refer to “ways in which mutual sharing, assistance, and joint effort among teachers is valued and honored in the school” (p. 14). Norms of collegiality subsequently “must be linked to *norms of continuous improvement* and experimentation in which teachers are constantly seeking and assessing potentially better practices inside and outside their own schools” (p. 14). Finally, norms of continuous improvement are linked to structure, which “refers to organizational arrangements, roles, and formal policies which explicitly create working conditions that support and inspire movement in other cogs” (p. 14). Similar to the teacher as learner cog, it was proposed by the current

researcher that the inner cogs of school improvement were important to PE teachers adapting to changes in curricula and therefore, were considered in the investigation. Though all four inner-cogs were explored in this study, each process has already been seen in the middle cog, or in Bechtel and O'Sullivan's (2007) study. For example, the norms of collegiality discussed in this wheel are the ways in which sharing and collaboration is honored in the school. This cog, most certainly relates to the inner cog of collaboration in the middle wheel, as well as the process identified by Bechtel and O'Sullivan as a facilitator of curriculum change. Therefore, though these inner-cogs were not explicitly investigated, they all fit under different umbrella processes that were each thoroughly investigated.

Conclusion of Literature Review

Literature has been presented suggesting the complexities of change and subsequently, educational change. Within these complexities, a study conducted by Bechtel and O'Sullivan (2007) was presented, organizing the foremost processes that influenced a change for PE teachers. The three main processes that were proposed to influence teacher adaptability to a new curriculum were: having beliefs that were congruent to the new curriculum (Bechtel & O'Sullivan, 2007; Butler, 2005; Johns et al., 2001; Ha et al., 2004; Wirszyla, 2002), collaborating and receiving support from a variety of stakeholders within the curriculum change (Armour & Yelling, 2004; Bechtel & O'Sullivan; Butler; Fullen 1993; Johns, 2003; Johns et al., 2001; Kirk & Macdonald, 2001), and having a supportive district and administration that facilitated change (Cothran, 2001; Dwyer et al., 2003; Fullen & Stiegelbauer, 1991; Johns, 2003). A conceptual framework was discussed, which presented additional areas of

investigation; such as how a teacher performing research, as well as an increase in instructional certainty can influence the change process (Fullen et al., 1990).

Ensuring that teachers are continuous learners (Armour, 2006; Armour & Yelling, 2004; Armour & Yelling, 2007; Faucette et al, 2002; Hargreaves, 2005) was also presented in the literature as being an important aspect to facilitate growth amongst experienced PE teachers. In order for PE teachers to be continuous learners, professional development programs that enable experienced teachers to receive inservice training are provided. Literature indicated that experienced PE teachers need these professional development programs because the way in which they learn and adapt is different than their younger, less experienced colleagues (Faucette et al.; Hargreaves; Howey & Corrigan, 1980). The problem identified by researchers, however, was that professional development programs are fundamentally flawed; both generally, and towards PE teachers (Armour, 2006; Armour & Yelling, 2004; Armour & Yelling, 2007; Borko, 2004; Conkle, 1997; Fishman, et al., 2003; Wilson & Berne, 1999). Therefore, even though these development programs are provided, they are unable to effectively help experienced PE teachers learn, develop, and subsequently adapt to incoming curriculum changes. These findings coupled with the research on how experienced PE teachers are not able to adapt in the same way as their less-experienced counterparts suggest that there are different processes that could occur when an experienced PE teacher is adapting to a curriculum change. Thus, the purpose of the current research was to understand the facilitators and inhibitors perceived to affect experienced PE teachers when adapting to a curriculum change.

CHAPTER IV

METHODOLOGY

Research Paradigm

Literature on educational change has been presented indicating many factors involved in facilitating or inhibiting PE teachers when experiencing a change (Armour & Yelling, 2007; Bechtel & O'Sullivan, 2007; Dwyer et al., 2003; Fullen et al., 1990). The current research attempted to identify the perceptions of the facilitators and inhibitors during a curriculum adaptation process for experienced PE teachers. The way in which the study was conducted was dependant on the specific paradigm of the researcher. Bassey (1995) indicated that a research paradigm is a “network of coherent ideas about the nature of the world and the functions of researchers which... conditions the patterns of their thinking and underpins their research actions” (p. 12). A researcher needs a paradigm in order to guide him or her through all the processes of the upcoming study. For the current research, an interpretivist epistemology and a phenomenological methodology were employed in order to generate a thorough understanding of the subjective experiences of experienced PE teachers adapting to a curriculum change.

Interpretivism

Macdonald, Kirk, Metzler, Nilges, Schempp and Wright (2002) indicated that “interpretive research has made a significant contribution to the physical education pedagogy body of knowledge as it has led to insights into meanings that participants give to their sport and physical education experiences” (p. 140). The perspective has been used in many areas of education and pedagogy inquiry, including “curriculum change” (p. 140) to attempt “to understand how teachers’ work and school cultures shape change processes” (p. 139).

Neshila (2004) conducted a study on educational change in which she “investigate[d] participants’ experience and perceptions of the process and outcome of an OD [Organizational Development – a planned educational change theory] intervention in a secondary school” (p. 3). She indicated that though her study was “concerned with change, [her] interest was to listen, to share and to understand how the participants experienced and perceived the process and outcome of an OD intervention in their school” in order to generate a “deeper understanding of [her] participants” (p. 32), and the interpretivist paradigm was well suited for this.

Previous research on educational change pertaining to Fullen’s (1990) framework has also employed the interpretivist paradigm. For example, Earnest (2004) investigated the factors that influenced school effectiveness, teacher professional development and students’ outcomes from the perspective of the principal. In her study, Earnest utilized Fullen’s framework in her investigations from the perspective of an interpretivist. Earnest included that, with the implementation of the ‘school improvement program,’ teacher collaboration and cohesiveness increased, district and school board management had a clear vision of what needed to be accomplished, and professional development became more focused.

Using the interpretivist paradigm, the researcher in this study was able to obtain a ‘deeper understanding’ of how experienced PE teachers adapted to change. Eisner (1991) indicated that an interpretive paradigm aids in the appreciation of what “meaning events have for those who experience them” (p. 35). It was assumed that the *participants* in the study had the knowledge that the researcher attempted to uncover; and it was the goal of the researcher to uncover the meanings that experienced PE teachers had regarding the adaptation process to a curriculum change. Murray (2003) used a phenomenological methodology with an interpretivist perspective ‘in order to attempt to describe what the experiences meant *to* the participants.’ Phenomenology

used with an interpretivist paradigm assisted the current study in understanding what it meant to adapt to a curriculum change from the perception of an experienced PE teacher.

Though the current research was conducted from an interpretivist perspective, elements of constructivism were used as well. In their study on the different theoretical perspectives that have been employed in educational research, Macdonald et al. (2002) discussed constructivism under the heading of the interpretivist perspective, thereby indicating their similarities and interrelationships. Though the current study investigated subjective experiences, the interview process consisted of an interaction between the interviewer and the interviewee. Guba and Lincoln (1994) indicated that this interaction is a fundamental aspect of constructivism, where “the investigator and the object of investigation are assumed to be interactively linked so that the “findings” are *literally created* as the investigation proceeds” (p. 111). Additionally, the use of the study by Bechtel and O’Sullivan (2007) and the conceptual framework by Fullen et al. (1990) in this research gives the impression that the researcher constructed a meaning with the participants based on previous knowledge. Rather, the functions involved in curriculum change identified previously by Bechtel and O’Sullivan’s study and Fullen et al.’s framework were used simply as a foundation to ground the current research, and to provide information to generate probes if the participant did not provide much information from the initial questions of the interview. Based on these prior findings, the current researcher knew and recognized the experiences that PE teachers had when adapting to new curricula. However, the researcher *did not* know and understand the perceptions of experienced PE teachers when adapting to the process of curriculum change.

Phenomenology

The current research studied the processes that experienced PE teachers perceived during a curriculum change, and what it meant to have actually lived through this process. In order to uncover these perceptions, it was necessary for the researcher to understand the phenomenon of how PE teachers adapt to a new curriculum. By applying a phenomenological methodology, the researcher in this study used the rich, deep information generated to identify and describe the facilitators and inhibitors that ten PE teachers experienced during the 1999 Ontario curriculum change.

Phenomenology is defined as being a way of studying or describing phenomena (Hammond, Howarth, & Keat, 1991). The phenomenon being described is “simply anything that appears or presents itself to someone” (Hammond et al., p. 1). The philosophical world sees phenomenology as a way that people are able to study the experiences of certain perceptions such as colours, objects, sounds or anything else that presents itself to humans; therefore phenomenology is the study of an individual’s experience of “perception – seeing, hearing, touching, and so on” (Hammond et al., p. 2). However, what was studied in the current research was more complex: something that cannot just be encompassed with a simple description of what an individual perceives an object to be. This is where it is important to note that phenomenology can describe more complicated experiences that can be perceived by humans. These are experiences such as: “believing, remembering, wishing, deciding and imagining things; feeling apprehensive, excited, or angry at things; judging and evaluating things; the experiences involved in one’s bodily actions, such as lifting or pulling things; and many others” (Hammond et al., p. 2). Generating and investigating these complex experiences were the goals the current research. Crotty (2003) gives an excerpt on this nature of phenomenology:

Here, phenomenology is generally seen as a study of people's subjective and everyday experiences. For a start, researchers claiming to be phenomenological talk of studying experience from the 'point of view' or 'perspective' of the subject. What these researchers are interested in is 'everyday' experience, experience as people understand it in everyday terms. If they talk at all of 'phenomenon', it is either used interchangeably with 'experience' or presented as an essence distilled from everyday accounts of experience, a total picture synthesized from partial accounts. (p. 83)

In the current study, the researcher specifically looked at the 'everyday' experiences of PE teachers during a time of curriculum change and what personal meaning they gave to the experience during the adaptation process. The way in which a PE teacher describes how he or she adapted to a curriculum change may vary based on his or her subjective understanding and knowledge of that change. Therefore, the descriptors given by an *experienced* teacher might differ from what is described by a teacher of less experience (Johns 2003; Wirszyla, 2002).

There are a number of procedures that phenomenology requires a researcher to follow in order for the phenomenon to illustrate itself completely during the inquiry of a participant. Crotty (2003) suggested that in order get ample meaning from a participant's experience, it is best if the researcher 'brackets' his or her presumptions of the phenomena as it is being described by an interviewee. The use of a conceptual framework and a study being used as a foundation for this research does not mean the researcher could not bracket. Instead, this framework and this study provided the current researcher with a path to be investigated, whilst allowing the perceptions of the participants to be elicited in the research. Crotty indicated the importance of bracketing in the following excerpt:

If we lay aside, as best we can, the prevailing understandings of th[e] phenomena and revisit our immediate experience of them, possibilities for new meaning emerge for us or we witness at least an authentication and enhancement of former meaning. (p. 78)

Therefore bracketing allowed the current researcher to gain these 'new meanings' that were desired from the participants in this study. By employing a phenomenological methodology, new meanings and understandings came to light that did not fit into any of the research that had been previously conducted.

Researchers are able to bracket themselves by throwing out their conscious and intentional representations of the world to eliminate their thoughts "that [their] judgments are true, [their] experiences veridical" (Thomasson, 2005, p. 124). The use of bracketing however, "does not mean we are to deny or ignore the world around us" (Smith, 2005, p. 101) instead, as was conducted in the current study, bracketing allowed the use of previous information to generate probes and interview questions, but during the interpretation of meanings this knowledge was set aside. Einklammerung, as cited in Thomasson (2005) described phenomenological bracketing as a type of design for knowing and understanding a phenomenon, and throwing it out at the same time:

We do not abandon the thesis we have adopted, we make no change in our conviction, which remains in itself what it is so long as we do not introduce new motives of judgment, which we precisely refrain from doing. And yet the thesis undergoes a modification-while remaining in itself what it is, we set it as 'out of action.' We 'disconnect it,' 'bracket it.' It still remains there like the bracketed in the bracket, like the disconnected outside the connexional system... (p.124)

This is an important aspect of phenomenology that was performed by the researcher in the current study in order to generate these ‘new and enhanced meanings.’ The researcher of the current study was biased in that he believed experienced PE teachers would react negatively to change. Furthermore, based on previous literature on PE teachers and curriculum change, the researcher had an understanding of what could facilitate or inhibit the adaptation process of the participants in the current study. When interpreting the data from the interviews, the researcher bracketed these biases to allow the phenomenon to be fully exposed (Crotty, 2003). In this manner, the current study did not simply generate a superimposed experience of a phenomenon as seen through the views of the researcher. Crotty (2003) indicated that this provides research with new, full and renewed meaning and it is “is precisely what we as phenomenologists are after” (p. 82).

The process of bracketing was effective in limiting biases and previous knowledge from influencing the perceptions generated by the participants in the current study. The tools of journaling, reflection and discussion were used as a means to bracket in the current study. A journal was kept prior to, and after each interview in order to reveal the biases that the researcher had towards any aspect of the phenomenon. Furthermore, these biases were reflected upon and discussed with the research supervisor in an attempt to set these biases and previous knowledge aside. Though some of the findings corresponded to previous areas of research, and were derived in direct response to the interview guide; these were overshadowed by discoveries of topics that were not included in the interview guide. For example, prior to conducting the interviews, the current researcher had no preconceptions that the personality of a teacher would facilitate or inhibit the adaptation process; and thus, this topic was not included in the interview guide. However, personality emerged as one of the more significant themes from the perceptions of the

participants, and exemplifies the use and importance of interpretivism, phenomenology, and subsequently, bracketing.

In order to understand the subjective experiences of PE teachers when presented with a curriculum change, open-ended semi-structured interviews were conducted with experienced PE teachers. It was indicated by Crotty (2003) that a less-rigid interview is often used in phenomenology in order “to ensure that the subjective character of the experiences is not prejudiced” (p. 83). Semi-structured interviews were employed to ensure that the data collected in the current study actually arose out of the participants and were not imposed on them (Crotty).

Research Design

Participants

Ten secondary school PE teachers from the Ottawa-Carleton District School Board (OCDSB) and the Ottawa Catholic School Board (OCSB) agreed to participate in this study. Six of the participants were teachers from the OCDSB, whereas four of them taught in the OCSB. All schools are, as per their individual school profile, ethno-culturally diverse, and represent an urban school in the City of Ottawa. The number of students in each school ranged from 550 to 1300, with a mean of 1071 students. An experienced PE teacher was defined as a teacher who has been teaching PE for “more than five years” (Armour & Yelling, 2007, p. 182). Selected participants were experienced PE teachers at the time of the most recent Ontario curriculum change, in 1999, with an average experience of 11.2 years (Table 1). The teachers selected were proficient in speaking and understanding English, as all interviews were conducted in this language.

Table 1

Experience in PE during Curriculum Change and Gender of Participants

Pseudonym	PE Experience at Time of Curriculum Change (Years)	Gender
A	6	Male
B	12	Male
C	9	Male
D	6	Female
E	14	Female
F	20	Female
G	7	Male
H	11	Female
I	6	Female
J	21	Male

Sampling

Due to the fact that the participants were required to be experienced PE teachers in 1999, purposeful sampling was used in this study. Purposeful sampling was used to obtain “information rich-cases” in order to generate an “in depth understanding” (Patton, 2002, p. 230) of the population being researched.

Recruitment, Consent and Anonymity

Ethics approval was received from the University of Ottawa and the Ottawa-Carleton Research Advisory Committee (Appendix B). Upon approval, letters of intention for purposes of

recruitment were sent to principals of schools in Ottawa. The message included a description of the study, indicated that the study was voluntary and described the preferred participants. Also included was a pre-addressed and pre-posted letter to acquire their written consent to recruit PE teachers from their school. E-mails with a letter of information for purposes of recruitment for teachers were sent to principals of schools where the researcher had permission to recruit. The principal was asked to forward this document to any PE teachers in his or her school that met the described selection criteria. When an e-mail was returned with a teacher agreeing to participate, the researcher discussed confidentiality and anonymity procedures, as well as arranged a one-hour time period to perform an interview. The researcher was made available if any participants chose to extend the interview. Provided in the Appendix is a pictorial outline of the entire procedure of recruitment, data collection, and analysis (Appendix C).

On the agreed upon date with each teacher, confidentiality and anonymity procedures were individually explained to the participants in person (Bechtel & O'Sullivan, 2007). Consent forms reviewed and accepted by the Protocol Officer for the Ethics in Research at the University of Ottawa, and the ethics board from the Ottawa-Carleton Research Advisory Board were distributed to the participants for them to express written consent. Teachers in the study were given pseudonyms to protect their privacy during data collection and analysis.

Methods

Data Collection

The researcher used one semi-structured interview per participant as a method of data collection. All interviews were audio-recorded and notes were taken by the researcher during the interview. Macdonald et al. (2002) indicated that research using the interpretivist paradigms have

allowed for the investigation of a wide range of questions. These questions often “encompass the *hows* of people’s lives... as well as the traditional *whats*” (Fontana and Frey 2005, p. 698). In this study, the researcher was interested in ‘*how* an experienced PE teacher perceives the adaptation process to a new curriculum’ and ‘*what* processes facilitated and inhibited this adaptation?’ In order to obtain this information, the researcher posed questions to the interviewees as well as played a semi-active role in the interview. Fontana and Frey indicated that “interviewing is not merely the neutral exchange of asking questions and getting answers,” rather, “[t]wo (or more) people are involved in this process, and their exchanges lead to the creation of a collaborative effort called *the interview*” (p. 696). Semi-structured open-ended interviews were performed to allow for this ‘semi-active’ process to occur and to allow the researcher to probe for questions and discuss topics with more depth if necessary. Descriptive probes were used when more depth was desired by the researcher on a specific topic. Clarification probes were used to illuminate an area of possible misconception and authenticity probes were used to ensure that the interviewee is content with the amount of information he or she was able to provide on a topic (Rubin & Rubin, 2005).

The advantage of using semi-structured interviews was that both the participant and the researcher were able to discuss open-ended questions without having to strictly adhere to an interview guide, as seen in structured interviews. Due to the semi-structured nature of the interviews, the researcher was able to probe these subjects of interest and was able to generate an understanding of new themes (Patton, 2002).

A semi-structured interview guide (Appendix D) was used in all interviews to ensure that participants were receiving the same base of questions. The interview began briefly with simple, non-threatening questions that were related to the research, but dealt with matters that the

participant certainly knew about and felt comfortable with (Rubin & Rubin, 2005, p. 117). This was done in order to relax the participant and generate a rapport between the participant and the researcher (Bengoechea & Streat, 2007). Following this, demographic questions were asked in order to identify each PE teacher's level of experience and to conceptualize the participant's experiences for the period of curriculum change. In the first round of questioning regarding each participant's experience, the teachers were generally asked to describe what they perceived to have had an affect on them adapting to the curriculum change in 1999. If no mention of any of the processes in Bechtel and O'Sullivan's (2007) study and Fullen et al.'s conceptual framework occurred, questions and probes regarding this study and framework were asked. These included questions regarding the perceived impact of certain factors on the participant's adaptability to the curriculum change. Within these questions, the interviewer probed with questions asking if the presence or absence of these processes had a facilitative or inhibitive effect, as well as the perceived influence of experience.

Data Analysis

All interviews were transcribed verbatim immediately after each individual interview was completed. Once the interview was transcribed, the researcher e-mailed each participant a copy of the transcription to allow for the first round of member checking (Rubin & Rubin, 2005). Each PE teacher was asked to use the track change function on Microsoft Word to make any changes that they felt were necessary. Though participants had the opportunity to make changes to their interview transcript, no changes were made during this process. The transcriptions were analyzed using NVivo 7 software and an inter-analysis process strategy was used to discover emerging themes from the data. Emerged themes from the analysis were organized into separate categories

by the primary researcher. The creation of the themes put into categories were based on the number of times a theme was indicated to have influenced the participants (Appendix E), as well as the depth in the description of each factor. After this initial organization of themes, the categories, and the data within the categories, were reviewed and discussed between the primary researcher and the research supervisor, Dr. Charlotte Beaudoin. This second round of analysis was used to provide a second-look at the categories initially generated, and to provide insight and recommendations to revise certain factors of the organization of themes.

If participants' responses were given spontaneously during the first round of general questioning, it was indicated as such in the results section in order to demonstrate that these were not responses to a probed question. Secondly, if the participants did not mention processes relating to Bechtel and O'Sullivan's (2007) study and Fullen et al.'s (1990) framework during the first round of general questioning, the participants were probed to discuss these processes, and these factors were coded separately, and indicated as such in the results. Common factors were then sent to all participants to allow for a second round of member checking. This was done by providing the participants with an organized illustration of the themes that emerged from the data, which allowed them to indicate their perceptions towards the results.

This cyclical method of data analysis was seen in a study conducted by Côté, Salmela, Trudel, Baria, and Russell (1995) on the experiences of elite gymnastic coaches. Based on grounded theory, an interaction process was "done throughout the course of the research project by using strategies for linking concepts and categories" (Côté et al., 1995, p. 7). The importance of using this method was indicated:

The interrelated process of data collection and data analysis also permitted the thorough examination of the issues perceived as important by the expert coaches. This method

added credibility to the concepts elicited because these concepts were grounded in each coach's reality as opposed to the investigator's reality or to other rigid methodological procedures. (p. 8)

In the current study, this interrelated process was used to identify the facilitators and inhibitors perceived as important by experienced PE teachers by giving the participants further opportunity to express their perceptions on the process.

Methodological Issues

Trustworthiness

Methods were put in place in order to ensure the trustworthiness of the data collection and analysis processes. After each interview with a teacher, two rounds of member checking were performed. All participants were given the opportunity to comment on the results of the study during the second round of member checking, but only three teachers provided their commentary. Of the three teachers that commented on the results, two of them generally stated that they agreed with the findings of the study. The third participant, Teacher B, specified that from his perspective, personality and confidence should be more prominent in the results because of their greater influence on his adaptation process.

Secondly, two rounds of data analysis were conducted to ensure the trustworthiness of the analysis procedure. The data were first analyzed thoroughly and completely by the primary researcher. Then, the process was repeated as the primary researcher and the supervising researcher analyzed the data together. This sequential process was effective in limiting the biases of the primary researcher, as well as identifying factors that were not initially noticed.

Limitations

A few words must be said to discuss the possible limitations of the current study. Because the goal was to investigate the perceptions of experienced PE teachers, there was a wide spectrum of themes that emerged. Because of this wide spectrum, the amount of depth into one area was limited. This is not to say that these results do not have rich, deep meanings, but rather that more research may be needed to investigate the impact of *any one* of these facilitators or inhibitors on the adaptation process for experienced teachers. For example, an entire study could be conducted the personality of an experienced PE teacher, and how this influences the adaptation process to a curriculum change. This research however, achieved its goal to attempt to understand the facilitators and inhibitors an experienced teacher perceived when adapting to a curriculum change.

Defining participants as having a minimum of five years of experience could potentially have limited the results. It is possible that PE teachers of four years experience could have a great deal of perceptions and personal interpretations towards adapting to a curriculum; this hypothetical teacher, however, would not have been selected to participate. The researcher's choice to define an experienced PE teacher as having five years of experience is parallel to what previous research in this field has done. Furthermore, though many factors were found to facilitate or inhibit the adaptation process by the participants in the current study, additional factors could be reported in a sample of other experienced PE teachers. The researcher, however, feels that the facilitators and inhibitors perceived by the participants were accurately generated and described.

Furthermore, because there had not been a major curriculum change in the province of Ontario since 1999, participants were asked to discuss their perceptions towards a phenomenon

which occurred ten years prior to the interviews. Though the recollection of the many factors investigated in the current study appeared to be sufficient, one cannot help but assume that some form of memory decay occurred, which may have affected the themes that emerged from the perceptions of the participants.

Finally, specific characteristics of the participants in the current study may limit the generalizability of the perceptions reported. The teachers in the current study, as shown in their interest in volunteering to participate in research, may represent a more energetic, motivated group of teachers. As such, their energy and motivation to enlighten the body of research may transcend into their ability to work with, implement, and adapt to curriculum change. Furthermore, because of the energetic nature of these teachers, many of the participants indicated that they were involved in a collaborative group to work on the upcoming changes. Though there is no way to prove this, it appears that this group was composed of many teachers from the current study. Therefore, the perceptions of the individual teachers comprised in this collaborative group may be similar to one-another, and thus, different from teachers not included in this group.

CHAPTER V

RESULTS AND DISCUSSION

The Pyramid Model

Factors that were perceived to facilitate or inhibit the adaptation to a curriculum change for experienced PE teachers were investigated. A facilitator was defined as a factor having an aiding affect on a teacher's adaptation process, leading to a smoother transition. Conversely, an inhibitor was defined as a factor having a negative affect on the adaptation process. Factors that were perceived to facilitate or inhibit the adaptation process for these teachers were categorized into four groups: the Personal Level, School Level, School Board Level, and the Upper Level. These four groups led to the creation of the Pyramid Model, which is a representation of the participants' perceptions in the current study (Figure 1). Outside support was also perceived to facilitate or inhibit the adaptation process. Furthermore, experience, which can be seen outside the model, was perceived to affect the confidence level of an experienced PE teacher. The arrows ascending and descending the pyramid illustrate top-down and bottom-up approaches to curriculum design (Jewett, Bain, & Ennis, 1995). The puzzle-piece design is an attempt to illustrate the interconnectedness between each of the levels, and the dotted-lines attempt to illustrate that the factors within levels work in cohesion. The purpose of providing this pictorial representation is to assist the reader by clearly outlining the topics to be discussed in the upcoming sections. Presented in the following sections are results, implications and discussions of each level and topic.

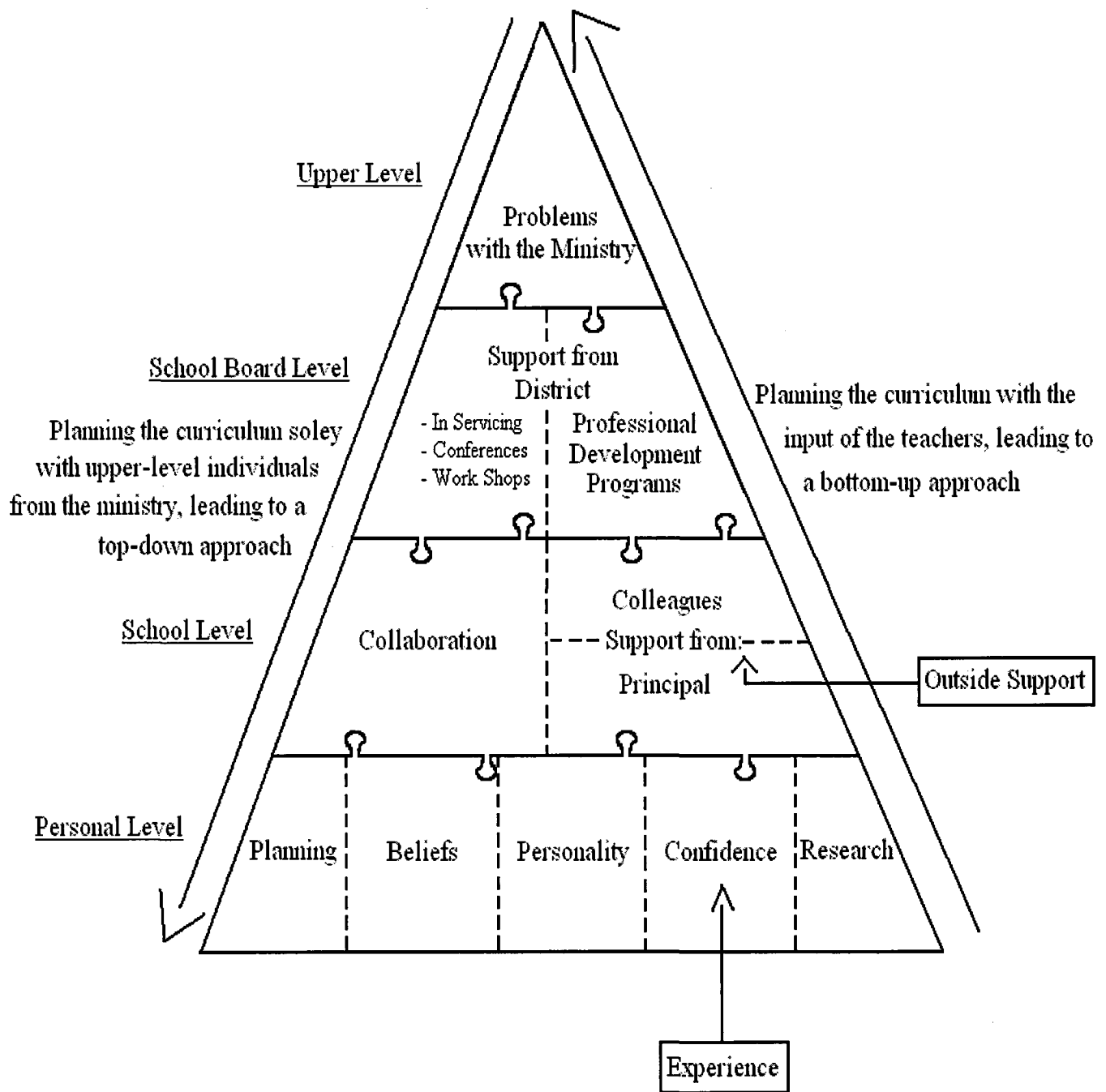


Figure 1. The Pyramid Model: A Pictorial Representation of the Facilitators and Inhibitors for Experienced PE Teachers when Adapting to Curriculum Change.

Personal Level

The following five topics to be discussed (confidence, personality, planning, beliefs and performing research) encompass what was found to facilitate or inhibit the adaptation process for the participants at the personal level. These facilitators and inhibitors represent characteristics of the individual teacher as well as factors that the participants can directly control. For example, the amount of planning or researching for new materials done by a teacher is directly controllable by that individual. Furthermore, though a teacher may not be able to consciously control his or her personality, confidence or beliefs, they are personal characteristics of that individual teacher. These concepts were strategically placed at the bottom of the pyramid to illustrate the bottom-up approach of curriculum design (Jewett et al., 1995; Johns, 2003; Kirk & Macdonald, 2001), which will be discussed later.

Confidence

Confidence in the current study was seen as a teacher being confident in his or her abilities to effectively teach PE and, as such, implement the aspects of the new curriculum. All ten PE teachers reported that they were confident in their teaching abilities in PE as the new curriculum was implemented. Specifically, the teachers indicated that they were confident in matters of: classroom management, class control, disciplinary matters, and generally just ‘dealing with issues’ and ‘being in their routine of teaching.’ Furthermore, these teachers indicated that being confident in these areas of their profession allowed them to have more preparatory time available. A study conducted by Veenman (1984) indicated that beginning teachers often have issues with confidence in these areas of their teaching. Furthermore, Veenman described a link between these beginning teachers, their confidence levels and the

amount of preparatory time they had available. In the current study, participants indicated that being experienced increased confidence levels which, in turn, provided more time for preparatory work, which may or may not facilitate the process of adapting to the new curriculum. As such, though there appears to be a link between confidence levels amongst experienced PE teachers and preparatory time study was specifically investigating whether or not confidence levels would facilitate or inhibit the adaptation process to a curriculum change, which preparatory time may or may not play a part.

Though the current study did not interview beginning teachers, the experienced teachers in the study perceived that beginning teachers are uncertain with their abilities to effectively teach PE. As Teacher D indicated:

I just think that there is more of a confidence level when you have more experience.

You're not as worried about things... you'll do your best and you're okay with that...

whereas I think when you are a less-experienced teacher, you tend to put a lot of pressure on yourself, that you might not know where to go.

The teachers perceived that because of their experience in teaching PE, they were more confident and 'less worried' about aspects of their teaching practices. This validates Veenman's (1984) report that a common characteristic that often plagues beginning teachers is the doubt and worry that they put on their ability to teach their particular subject. This also confirms the reports of Hargreaves (2005), where he indicated that "new teachers who are also young adults are trying to establish their basic confidence and competence as professionals" (p. 970).

During the interviews, all participants were asked to tell the researcher what facilitated or inhibited them when adapting to the new curriculum before being probed to discuss any specific topic. This question will be referred to as the 'general question' for the remainder of this paper.

As indicated, all teachers reported being confident in their abilities. All of these teachers also reported that this confidence facilitated them in adapting to the new curriculum in some form, and half of them did so by simply being asked the general question by the researcher. Therefore, the higher level of confidence perceived by the participants was reported to facilitate the adaptation process for all experienced teachers in the current study when implementing the new curriculum. An example of how an experienced teacher's confidence facilitated his adapting to the curriculum was iterated clearly by Teacher A:

Well, you know what, when you first start, you're dealing with a whole lot of issues, as a beginning teacher, with respect to discipline, with respect to confidence as a teacher with respect to dealing with students and all of those things, I mean it's going to take a couple of years to sort of get some experience and get some confidence to be able to implement certain things. First thing is to be able to get your class in order – once you get your class in order, then you can do pretty well anything. And that's the major issue that I would think plagues a lot of PE teachers – early PE teachers – is if they cannot implement good disciplinary practices, they're not going to be able to teach what they need to.

To further clarify the perceptions of this teacher, the researcher asked if he felt that his confidence facilitated his adapting to the curriculum change. In response, Teacher A indicated:

Absolutely, yeah. If you're already coming in and you already have good control of your class, then you really don't have to really worry about curriculum changes. That won't be an issue. But if you have trouble disciplining your class, then your curriculum change is going to be the last thing on your mind.

Fullen et al. (1990) indicated the importance of a technical repertoire for teachers in their conceptual framework. In a description of this section of their framework, Fullen et al. indicated

that an increase in instructional certainty, or confidence, is one component to ensuring change. The results of the current study fit into Fullen et al.'s framework as participants perceived that their confidence in aspects of their teaching facilitated them in adapting to the curriculum change. Though Fullen et al.'s framework is intended to describe change on a broad scale; the current research indicates the specific importance of confidence for experienced PE teachers adapting to a curriculum change. These results also confirm the research conducted by Faucette (1987). Faucette indicated that "teachers who believed in their own competence-who possessed a sense of efficacy-were more likely to use and maintain an innovation" (p. 439). After analyzing the transcriptions from all of the participants, it appears as though teachers are able to exhibit confidence in their practices because of their experience in teaching PE. Therefore, the current researcher suggests that experience in teaching PE may lead to an increase in confidence for those teachers. Consequently, this increase in professional confidence may facilitate the adaptation process for experienced PE teachers.

Experience. All participants in the study perceived that they were experienced during the time of the investigated curriculum change. Though multiple factors were indicated by the participants in this study to have affected the adaptation process, these teachers perceived that their relative experience only had an influence on their confidence during this change. For example, very few or none of the participants perceived that their experience affected the support they received, the beliefs they had or the planning they did. However, every participant in the current study indicated that because they were so experienced in teaching PE, they were confident in what they were doing, and this facilitated them to adapt to the curriculum change. It appears then, that experienced PE teachers exhibit more confidence, which is the one major difference that separates their adaptation process from teachers of less experience.

Hargreaves (2005) and Howey and Corrigan (1980) discussed that experienced teachers have more difficulty when adapting to a curriculum change because of factors of development, a decrease in optimism, energy and willingness to change. The participants in the current study bring new light to these previous findings, revealing that experienced PE teachers may not find it as difficult to adapt to a curriculum change because the process is facilitated by their confidence in their teaching abilities. In response to the researcher asking what affect her experience had on her adapting to the curriculum change, Teacher D indicated:

I just think that there is more of a confidence level when you have more experience.

You're not as worried about things... you'll do your best and you're okay with that...

whereas I think when you are a less-experienced teacher, you tend to put a lot of pressure on yourself.

Furthermore, to illustrate the homogeneity of the responses, Teacher B had similar perceptions as to how experienced teachers are able to exhibit more confidence:

A beginning teacher is just finding their groove. Someone once told me that it takes 10 years for you to learn how to teach properly. And I didn't believe it at the time, but for you to feel comfortable in imparting that knowledge and be able to be confident in what your teaching, and back up what you're teaching, be able to instill into the students that kind of respect for you and for them, it takes a little bit of time.

While these examples were mirrored across all ten participants, some teachers also indicated that though their experience increased their confidence which facilitated their adaptation process, beginning teachers have facilitators that experienced teachers do not possess. One aspect that was discussed by some participants was that because beginning teachers are new, the knowledge they acquired in their undergraduate or graduate degrees and their teacher training

classes is so fresh, and they are able to implement any curriculum. When discussing the issue of confidence amongst experienced PE teachers, Teacher H indicated:

Because some people just starting out are pretty aware of the new changes... at teachers college you are learning about those things right away, so you come out knowing about those changes. Like a lot of the student teachers that I get now... its not like I need to bring them up to speed and everything. Like, they're up to speed, they know what changes are out there, they know where it is, and they're pretty informed. They are well informed. So they know the stuff that they need to know when they step into the classroom, so I don't know if it's so much that... because I think if you've been teaching for a while, yes you can more easily adapt to it, but also, the new teachers are pretty up to speed on what the curriculum is, and what the most recent curriculum is.

Furthermore, as Hargreaves (2005) indicated, beginning teachers “deal with change every single day and they thrive on it. It makes the world very exciting for them” (p. 972). It appears from the data collected from the current study and from the literature in this area that experienced and beginning teachers both have facilitators when adapting to change and implementing a new curriculum. However, experienced PE teachers may possess certain facilitators, such as a confidence in their teaching practices, that beginning teachers have not yet acquired. Conversely, beginning PE teachers may have attributes that their experienced counterparts do not possess, such as the intimate knowledge learned from recent training courses. Therefore, it is not that beginning or experienced PE teachers are more adaptive, but rather that the processes involved in their adaptation processes may be different.

One topic that was discussed for current study was how experienced PE teachers found it difficult to adapt to a curriculum change because it meant changing what they had been doing for

years. Though not a significant theme that emerged amongst all participants, this topic was discussed by some teachers, and because it specifically dealt with experience, it will be mentioned. Certain teachers in the current study mentioned that when the new curriculum was implemented, they did not want to change because it meant that work needed to be done to accommodate the new curriculum. This result confirms Johns' (2003) finding, where the researcher indicated that it was difficult to get experienced PE teachers to change, because it meant changing what they had been doing for years.

Personality

Personality in the current study was defined as traits of the participants that facilitated or inhibited the individual teachers to adapt to the curriculum change. Though teachers were not specifically asked about how personality factors influenced the adaptation process to the curriculum, all ten experienced PE teachers provided unsolicited information that indicated that their personality affected their adapting to the change.

The researcher believes that because the participants were never asked to discuss their personality facilitating or inhibiting them when adapting to the change, the perceptions of the experienced PE teachers in the current study were effectively generated. These perceptions were precisely what the current researcher was seeking in the attempt to apply interpretivism and phenomenology into the study to generate 'new meanings' of experienced PE teachers and curriculum change (Crotty, 2003; Eisner, 1991). There has been very little research conducted on the potential link between personality characteristics of teachers and educational change in general (Curtis & Cheng, 2001). Furthermore, the specific notion that the personality of an experienced PE teacher may have an affect on how that teacher adapts to a curriculum change

has never been explored. Through the use of phenomenology, the researcher was able to bracket his knowledge of this subject and was open to possibilities that were not prolific in the literature (Thomasson, 2005). An example of how personality was brought up in the current study is shown here in a response to the researcher asking ‘what do you think your level of experience in teaching had to do with you adapting to the curriculum?’

For me, I think it depends on the personality. There are a lot of experienced teachers that don’t want to change... they get comfortable, they get into a sort of a routine, so they don’t want to change. Other experienced teachers are always willing to change, always willing to grow. So its not always the experience, it’s the personality of the teacher that I think is really important. You can teach old dogs new tricks. And there are old dogs you can’t teach new tricks too. (Teacher C)

When asked how the experience of a teacher could affect the adaptation process, most of the teachers indicated that the individual personality of the teacher was more important than the level of experience in determining adaptability. It appears as though these teachers perceived that it is not necessarily the experience of the teacher that has an affect on the adaptation process, but it is rather the personality of the individual teacher.

Specific personality traits or characteristics were indicated by all ten participants as having an affect on their adapting to the curriculum change. The personality characteristics iterated by the participants fit into three groups: their openness to change and/or being an adaptive person, their individual motivation to perform their duties as a teacher, and being proactive. For example, Teacher D indicated her openness to change and being an adaptive person facilitated her to adapt to the curriculum:

If you as a person aren't open to change, which, I am. Then, that's going to be a problem for you when you try and change something, whether that be changing the text book that we're going to use next year for health, or we're going to change what you need to teach. But, if you as a person are, you know, you look at change as an opportunity, or for growth, than it is going to make it easier when it does happen.

A study conducted by Richardson (1990) indicated that often times curriculum is not fully implemented or adopted because some teachers are unwilling to change. The current study confirmed the importance of a teacher's willingness to change and this affect on the adaptation process for experienced PE teachers. However, the teachers' perceptions were that their experience had no affect on their personality characteristics and willingness to change. Rather, as discussed previously by Teacher C; some experienced teachers are willing to change, and some are not.

Furthermore, some teachers indicated that they are passionate about their teaching, and that they are motivated to change if that will allow for the betterment of their students:

And then, I guess it's just your own internal motivation. You want to do a good job as a teacher. Like, you want to be competent, and if that means then that you've got to try to make some new stuff for courses that you need to do, then you just do it. (Teacher D)

Finally, some teachers indicated that being proactive about the incoming change facilitated their adaptation process. In response to the general question, Teacher G described being proactive as a facilitator:

I personally was hungry for change. Essentially, because the previous document was released so long ago, we were operating in a vacuum, with little direction. And, I was being really proactive about it – darn right I was proactive. I went and dragged drafts out

of anyone I could get them from. And actually started piloting major changes in the curriculum before they were released.

As seen in the previous quotation, when the participants discussed how their proactive personality facilitated their adaptation process, it often led them to discuss how planning for the upcoming curriculum facilitated their adaptation process as well. The facilitative factor of planning will be discussed in the next section.

Planning

Planning in the current study was defined as teachers performing pedagogical tasks to help with the future implementation of the curriculum. Although teachers were never specifically asked about planning in the interview guide, in response to general questions about what may have affected their adaptation process, the teachers discussed the topic of planning without being directed by the researcher. This further illustrates the importance of the use of interpretivism and phenomenology in the present study. The fact that these teachers revealed that planning may have facilitated or inhibited their adaptation process without being directed by the researcher demonstrates that these are the untainted perceptions of the participants (Hammond et al., 1991).

Most, but not all, participants in the current study indicated that they had planned for the change in the upcoming curriculum. All teachers that indicated that they did some form of planning described that this preparation facilitated them to adapt to the curriculum change. This planning, as presented earlier, sometimes appeared in combination with the personality traits of teachers. The example that was shown in the *Personality* section of these results specified that because Teacher G had a pro-active personality, he was willing to plan for the upcoming change. Teacher G indicated that he planned for the curriculum change by ‘dragging curriculum drafts

out of anyone he could get them from' and 'piloting major changes in the curriculum before they were released,' which facilitated him to adapt to the curriculum change. Furthermore, in response to the general question posed by the researcher, Teacher H indicated:

There were a lot of things that I had already been doing, and we already had in place, and it wasn't that hard of a change. I think, because, we knew where the curriculum was going to be going.... We had already made the steps to lead in that direction, so when we finally got the new curriculum, we had pretty well started the process prior to that.

Similar to the other topics already discussed thus far in these results, there has been little research conducted on the effect of planning on the adaptation process for teachers. Results from the current study indicated that planning for an upcoming curriculum change can facilitate the adaptation process to new a curriculum for experienced PE teachers. Though this confirms Hall and Hord's (1987) notion that planning can be useful to facilitate change in schools, more research is needed in the area to create an accurate depiction of the role of individual teacher planning on the adaptation process. A study conducted by Briscoe and Peters (1998) specified that often times teachers collaborate with each other in order to plan for future changes. Confirming Briscoe and Peters' finding, most of the teachers in the current study specified that though they sometimes planned by themselves, occasionally they collaborated with other teachers in order to plan or prepare for the upcoming changes in the curriculum. In response to a question regarding how collaborating with other teachers affected his adaptation process, Teacher C indicated:

Well we always bounce things off of each other, so when we had to deal with a change in evaluation and summatives and things like that, we had to sit down as a department and

decide what we were going to do as part of those expectations... so we worked together on all of that, in terms of the health units... there were certainly were more teachers active in getting those organized than others. I mean, from my department, [another teacher] was very proactive with getting stuff organized, and I worked with her quite a bit to get health stuff set up.

Therefore, it appears as though planning for an upcoming change in curriculum may facilitate the adaptation process for experienced PE teachers. Furthermore, this planning can be individual, or a collaborative effort amongst more than one teacher. The specific effect of collaboration as a facilitator or inhibitor to the adaptation process for experienced PE teachers will be discussed in a later section.

Beliefs

Beliefs in the current study were seen as positive or negative views that participants had towards the new curriculum or the educational system in general. Half of the participants in the study discussed that their beliefs affected their adaptation process without this information being specifically solicited by the researcher. The other half were probed to discuss how their beliefs may have affected them adapting to the curriculum change in accordance with Bechtel and O'Sullivan's (2007) study.

Positive belief in the curriculum was defined as a participant having views and/or attitudes that were congruent with the curriculum, the educational system and/or agree that the curriculum/system would instill correct knowledge into their students. Most of the participants had positive beliefs towards the new curriculum or the educational system in general, and few had negative beliefs or a mix of positive and negative beliefs. All participants that had positive

beliefs towards any aspect of the new curriculum indicated that these beliefs facilitated them to adapt to the new curriculum. Participants had positive beliefs towards three aspects of the new curriculum: a decrease in the emphasis on skill, an increase in an emphasis on lifelong learning in physical activity, and finally a global positive attitude towards the new curriculum. Figure 2 illustrates the range of beliefs of the participants. Teacher G, for example, believed that a decrease in the emphasis on skill in the new curriculum facilitated his to adaptation to the change:

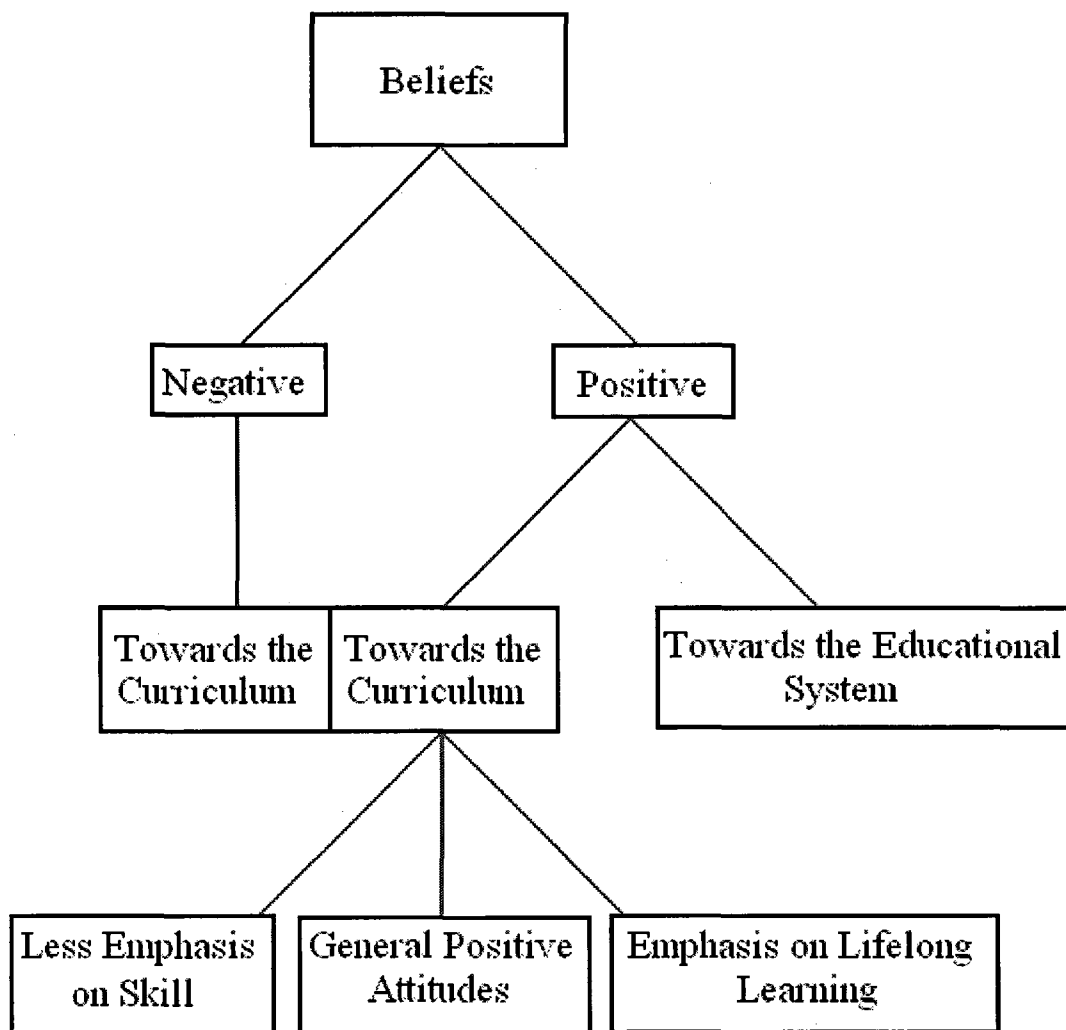


Figure 2. A Pictorial View of the Beliefs of Participants.

I have to say I am fully supportive of the concept that it's an inclusive curriculum, as opposed to the old school PE, which was really an athlete class, where you have to be a good athlete to pass...All we're asking for is improvement. If you come to class and work everyday, then you will do that [improve].

When asked if this positive belief towards a decrease in the emphasis on skill facilitated his to adaptation to the new curriculum, Teacher G indicated 'yes, it is hard to push a curriculum if you don't believe in it.'

Secondly, some teachers indicated that believing in the increase in promotion of lifelong learning in physical activity facilitated the adaptation process. The emphasis on lifelong learning in physical activity was a commitment of the Ministry of Education (1999) in order to provide a "positive attitude... and the capacity to live satisfying, productive lives" to the students in Ontario (p. 2). Teacher J demonstrated this belief:

Well... I think, my, I looked at it positively in that I fully agree with the idea that we should try and make this a life-long thing for kids and its something that, I think with our moving away from focus on necessarily individual skills in sports, for the kid who isn't all that coordinated, or a little bit clumsy, or, weak in just competitive sports.

When asked by the researcher if these positive beliefs facilitated his adaptation to the curriculum, Teacher J responded: "Oh sure... Yup." This example also demonstrates how interrelated these beliefs in the curriculum are, as that specific teacher described how his beliefs in both the decrease in emphasis on skill and increase in promotion of lifelong learning facilitated his adaptation to the new curriculum.

Finally, some teachers did not explicitly indicate what aspects of the new curriculum they believed in, but they indicated that having general positive beliefs towards the curriculum facilitated their adaptation process:

If you were positive towards the new curriculum and liked the changes that were being done – Then I think you are going to, it helped me embrace it more. If I looked at it and said “oh I think this is a bunch of garbage and why are they doing this?”, then I’m going to be a lot more resistant to making the changes in my classroom for that new curriculum.
(Teacher D)

The perceptions of the experienced PE teachers in the current research confirm the findings and notions of many studies (Bechtel & O’Sullivan, 2007; Butler, 2005; Fullen, 2003; Fullen & Stiegelbauer, 1991; Ha et al., 2004; Johns et al., 2001; Wirszyla, 2002). These studies indicated that when teachers had beliefs that were congruent with the incoming change, it facilitated their adapting process. Bechtel and O’Sullivan’s results suggested that a teachers’ “beliefs and visions of physical education constituted a key theme that served to enhance the change process” (p. 227). There appears to be many aspects of a curriculum that a teacher can have positive beliefs towards that will facilitate adaptation to change. As seen in the participants in the current study, different PE teachers had positive beliefs towards different aspects of the new curriculum. Whether it is the increase of lifelong learning or a decrease in skill evaluation, believing that the incoming curriculum will positively affect one’s teaching and students in some way will likely facilitate adaptation. Similar to the current study, the participants in Bechtel and O’Sullivan’s study also had a range of beliefs, but each of these positive beliefs facilitated the specific individual independently.

Aside from having beliefs in the curriculum, having a general positive belief towards the educational system seemed to facilitate the experienced PE teachers to adapt to the curriculum change in the current study. Though not all teachers reported that this belief had an impact on their adaptation, Teacher H indicated how her beliefs in the educational system facilitated her adaptation process:

I'm assuming that there is some basis behind it. It's now been put out as curriculum – there's got to be some kind of reasoning behind it. And the stuff that I've been seeing about the new curriculum is that they've really researched it – they've really looked into – has it been effective.

The idea that a teacher's belief in the educational system may facilitate or inhibit their adaptation process to a new curriculum has yet to be researched, and thus, is an area to be studied in the future.

Negative beliefs in the current study were defined as participants having views and/or attitudes that disagreed with the curriculum, the educational system and/or did not believe that the curriculum/system would instill the correct knowledge into their students. Although most participants had positive beliefs, some participants expressed negative beliefs towards the incoming curriculum. Teacher C indicated that he did not believe that the grade ten health curriculum was satisfactory for his students. When the researcher asked Teacher C what affect this had on him adapting to the change in curriculum, he responded:

But I still do it, right?... But if you don't believe in something... then, you're not going to, certainly do it as well as it could be done.

The teachers that had negative beliefs towards the incoming curriculum, as illustrated, perceived that these negative beliefs inhibited them when adapting to the new curriculum. This confirms

the finding by Bechtel and O'Sullivan (2007), where it was shown that the PE teacher whose beliefs were not as strong as the other participants, adapted less successfully to change.

The general consensus of the participants in the current study was that their relative experience had no affect on the beliefs that they had. Most participants indicated that their experience had no affect on their beliefs, compared to few who ambiguously mentioned that it may have an influence. For example, Teacher B indicated his perception that the beliefs of all PE teachers would be similar:

I'd like to think that anybody coming in to the PE field would have the same belief towards PE being a non-athlete centered class.

Therefore, though it appears that the beliefs of an experienced PE teacher can facilitate or inhibit their adaptation process to a new curriculum, more research is needed to investigate the effect of experience on PE teacher beliefs.

Though it was not specifically investigated in the current study, other studies have suggested that taking teacher beliefs into consideration when planning and implementing a new curriculum can facilitate the adaptation process (Butler, 2005; Fullen & Steigelbauer, 1991; Guskey, 2002; Ha et al., 2004). Ha et al. indicated that it is "imperative that both university scholars and government agencies take account of the teachers' perspectives when initiating any curriculum change" (p. 423). Though this is imperative for curriculum change to occur, Johns et al.'s study on PE teacher change addressed the gap between the curriculum creators and practical realities of those who are left scrambling to implement the change. Johns et al. discussed that curriculum changes could be better installed if the implementers looked at what the changes "subjectively mean to the teachers who employ or ignore them" (p. 205). This, as Armour and Yelling (2004) indicated, does not happen by simply trying to change the beliefs of the

individual teachers. Rather, “teachers need to see evidence of an initiative resulting in improved pupil learning *before* they will change their attitudes and beliefs” (p. 101). The notion of planning an implementation with the input and/or collaboration of the PE teachers who will be in charge of putting the change into practice is referred to the bottom-up approach of curriculum design (Jewett et al., 1995; Kirk & Macdonald, 2001). The current research has shown the affect of experienced PE teacher beliefs when adapting to a new curriculum, and previous literature has shown the importance of the beliefs of PE teachers in general when adapting to a new curriculum. Previous research coupled with the results from the current study suggest that when teacher beliefs are taken into account during the planning stages of a new curriculum, this bottom-up approach can act to facilitate the adaptation process. This idea is shown in the Pyramid Model (Figure 1), illustrated by the arrow ascending the right side of the pyramid.

Research

Research in the current study was defined as teachers taking time to search for new documents or materials to help implement the new curriculum. These documents came from newspapers, the internet, academic journals, books, text books, novels, or any other source of information. All but one teacher indicated that they went out and performed some form of research when the new curriculum was being implemented. Teacher B was the one teacher who did not perform any research, and he indicated that he simply did not have enough time, because:

At the time, I had just had, by 1999, we had our fifth son, so finding time to research much... there really isn't a heck of a lot of time in my own.... because of the commitments here at school and also at home.

However, when asked by the researcher if he felt as though conducting research would have facilitated him adapting to the new curriculum, Teacher B agreed because 'we've got to continue to educate ourselves.'

The nine participants who specified that they engaged in some form of searching for new materials indicated that this research facilitated them when adapting to the new curriculum. Though the teachers used many media, much of the research by the participants was done on the internet. In 1999, as most participants indicated, the internet was beginning to proliferate across schools, and this allowed teachers to investigate new topics. When Teacher D was asked what may have facilitated or inhibited her to adapt to the change, she indicated that she went out and researched many areas because the district did not provide her with enough resources. Though this individual teacher searched for new ideas, she indicated that many teachers in her department did not. When asked if doing this research facilitated her adapting to the new curriculum, Teacher D indicated:

Oh yeah. Because you end up finding things that, you know fit nicely within the new curriculum, and help you to... it kind of helped you, if you had to let go of some of your old stuff that you didn't want to, but you found something really good that matched with the new curriculum, then you were happy with it... and then it wasn't so hard to let go of your old stuff.

Most teachers stated that the reason this research facilitated them to adapt to the new curriculum was because it helped them learn about new topics in which they were less knowledgeable. For example, a mental health unit was installed into the new health curriculum, but the teachers had never previously taught, and thus were not very knowledgeable on this subject. These findings confirm the importance of the Teacher as Learner cog from Fullen et al.'s

(1990) conceptual framework. Within the Teacher as Learner cog, Fullen et al. illustrated the involvement of performing research as a component to continuous learning of a teacher and subsequently, the ability to achieve change in schools. The results of the current study fit into Fullen et al.'s framework as participants perceived that researching new teaching topics facilitated them in adapting to the curriculum change. Though Fullen et al.'s framework is intended to broadly describe the factors of change; the results of the current study indicate the specific importance of "teacher research" for experienced PE teachers when adapting to curriculum change. This continuous learning and inquiry for a teacher is also referred to as professional development (Armour and Yelling, 2007). The OCT (2006) indicated that it is the responsibility of all teachers, including those of experience, to engage in professional development (or learning) throughout their career. This responsibility to learn presents itself when a change is in progress because times of change are often times of discovery for teachers (Fullen, 2003). The teachers in the current study who engaged in research to investigate different subject areas attempted to improve their knowledge on new topics (Crookes, 1993; McKernan, 1996). Therefore, the participants who performed research are following the guidelines set by the OCT.

Some teachers also indicated that doing research facilitated them to adapt to the new curriculum because it 're-energized and re-focused' them. As Teacher H iterated:

And I think that's good for me, because sometimes you think, you get in a rut and you're doing the same kinds of things, and then all of a sudden, there is this new light that you see – new changes – and you say "yeah, I want to go that direction, I want to find out more about that kind of approach, and do things a little bit differently in that way." And, I

think that does actually happen... I'm looking at them like "wow, that's another good way to go", you know, and I'm looking forward to them.

It was discussed in a previous section that the personality traits of an experienced PE teacher may have an affect on how that individual adapts to a curriculum change. One area that was discussed was how a pro-active personality could lead to a teacher planning for the new curriculum, which may facilitate the process of adapting to a new curriculum. Teacher D discussed how these pro-active personality traits influenced her to research new areas where she was less knowledgeable:

I mean, I did a lot of searching on the internet myself. I was pro-active about it, and got on the internet, and searching up different things and finding websites and, you know that's when you start getting on to rubric sites and finding out how to create a rubric or how to use some of the new achievement chart type activities.

The teachers were asked if they perceived that their experience had any affect on them performing research and searching for new materials. Most participants perceived that their experience had no affect on the research they engaged in. Provided is an example of one teacher who believes that performing research was not related to experience, but her personality. In response to the researcher asking 'do you think you going out and doing research had to do with your level of experience?' Teacher D responded:

No, I disagree on that one, I think it's a personality thing. Because I know first year teachers who are very keen and they go and they look for things, and they try and find resources, and I know experienced teachers who don't. They just stick to the same old same old that they're doing.

Though a few participants perceived that it might be easier as an experienced teacher to perform research because they would have more time, this was contradicted by the one participant who indicated that he did not have any time to search for new materials. Therefore, though researching new topics and for new materials appeared to facilitate experienced PE teachers to adapt to a curriculum change, experience did not seem affect the individual from conducting this research. The important factor rather, appears to lay on the personality teachers, which can lead them to perform research on areas in which they are less acquainted.

School Level

During a time of curriculum change, personal aspects of the teacher are not all that can influence the adaptation process for PE teachers. Teachers were found to collaborate and seek the support of their colleagues and principals in order to facilitate the adaptation to the curriculum. The following were perceived to affect the adaptation process for experienced PE teachers at the school level.

Collaboration

Collaboration in the current study was defined as two or more teachers getting together to discuss the change and/or its ramifications to work on aspects of the incoming change, whereby all teachers were offering their input to a final goal for the betterment of the group, or teachers outside the group. This is not to be confused with *Colleague Support*, which was defined as one teacher receiving assistance from another teacher (or multiple teachers) in a particular area where he or she needed help or clarification. Collaboration, rather, occurs when multiple teachers share and receive ideas to foster growth of the group (Fullen et al., 1990). In response to the general

question from the interview, half of the participants reported that collaborating with other teachers had an affect on their adaptation process. The remaining five participants also reported that collaboration affected their adaptation process, but they did so after being provoked by the researcher to discuss this topic.

There were two participants where it was not clear whether the collaborative work with other teachers facilitated or inhibited the adaptation process to the new curriculum. The eight other participants were able to collaborate with teachers from their own school, as well as with teachers from different schools and identified such collaboration as facilitating to the adaptation process. In response to the general question from the interview, Teacher D discussed the effectiveness of collaborating with another teacher from her school:

Okay, things that helped me to make the changes that I needed to was to, work with another teacher in my department. And kind of sit down and split some things up and say “okay, I’ll work on the grade 11 health unit for stress, and if you work on the grade 11 health unit for injury prevention.” So you’re sharing... collaborating with other teachers definitely helped. That depends on if you have somebody who wants to do that or not.

Furthermore, when asked if this collaborative work amongst teachers in the same school was effective in facilitating the adaptation to the new curriculum, Teacher C responded:

Oh, well, effective... you have to do it. It’s got to be done. You need feedback from everybody. Everybody brings ideas to the table. So.. yeah.

Other participants indicated that they collaborated with other teachers from their school to ‘make sure that everybody was aware of the changes,’ ‘try to figure out what it was they were supposed to do’ and to ‘share ideas.’ Therefore, it appeared from the participants that experienced PE

teachers can facilitate the adaptation process to curriculum change by collaborating with teachers amongst their school.

Participants in the current study also reported that they collaborated with teachers from different schools. Though not all participants indicated this, most specified that they had frequent meetings with seven or eight teachers across different schools to discuss, and work on the changes. What is interesting is that it appears as though the researcher interviewed all members of this group of 'seven or eight,' as almost all of the participants described these meetings. All of these participants described that these meetings facilitated them to implement and adapt to the curriculum because it allowed them to 'share ideas,' 'create resources,' 'run workshops for other teachers,' and 'plan for the changes.' Teacher F's answer to the general question from the interview illustrates these notions:

So, what happened was a group of us, probably seven or eight got together and they [the school board] gave us release time from the board, and we literally went out and we brought all of our information that we had for health and the activity sections and then put it all together. So, everybody was on the same page.

When asked by the researcher if this collaborative work facilitated her adapting to the curriculum, she responded: 'Yeah, that helped.' Therefore, from the perceptions of the participants, it appears as though experienced PE teachers can facilitate the adaptation process to curriculum change by collaborating with teachers from different schools as well as their own schools.

The previous quotation indicated that the school board district allowed this collaboration to occur. The participant indicated that the district allotted this group of teachers time and a place to meet and to collaborate. The level of support from a school board district and its affect on the

collaboration of teachers has been examined in many studies (Cothran, 2001; Dwyer et al., 2003; Fullen & Stiegelbauer, 1991; Johns, 2003), as well as Fullen et al.'s (1990) conceptual framework. Fullen et al. indicated that the way in which joint efforts, assistance and sharing is valued in a school can contribute to the school change process. Furthermore, teachers should be provided time and resources for "joint planning" (Fullen et al., p. 15) to facilitate this change. Though district support and its affect of the adaptation process was investigated in this study, and will be discussed in the upcoming 'school board level', it appears that a school board district supporting collaborative work amongst teachers at the school level can facilitate the adaptation process for experienced PE teachers.

The importance of planning for an upcoming change in curriculum, and its ability to facilitate the adaptation process for experienced PE teachers was discussed in an earlier section, at the personal level. Often times however, the participants in the current study collaborated with one-another *to* plan for the upcoming change in curriculum. In response to the general question from the interview, Teacher I indicated:

There was a group of us and then we were able to, with the support of curriculum services (at the time) at the board... and we provided these resources to each school. Then, we had training, like [another teacher] and I had training. And we would run workshops. We would run workshops and go in with the draft document and with some exemplars. I remember we did workshops to show teachers the new exemplars from the ministry. And, that helped mesh the change from the old curriculum to the new curriculum.

This teacher, as well as the other teachers who met in that group, collaborated with each other to plan for the upcoming changes. When asked if this collaborative planning was effective in

facilitating her adaptation process, she responded: ‘I think so... I think it made for a much smoother transition.’ This confirms the findings of Briscoe and Peters (1998), who indicated that the collaboration amongst teachers is effective because it gives them the opportunity to plan. Additionally, this example further stresses the importance of a school board district on facilitating the adaptation process by allowing collaborative work amongst teachers to occur; as the teacher indicated that ‘with the support of curriculum services (at the time) at the board,’ teachers were able to collaborate (Cothran, 2001; Fullen & Stiegelbauer, 1991; Johns, 2003).

These findings further confirm the importance of the Teacher as Learner cog as depicted in Fullen et al.’s (1990) conceptual framework. Within the Teacher as Learner cog, Fullen et al. illustrated the involvement of collaboration as a component to achieve change in schools. The framework specifies that “collaboration enables one to receive and give ideas and assistance” (p. 15). The results of the current study fit into Fullen et al.’s framework as participants perceived that collaborating with other teachers facilitated their adaptation process. Furthermore, the perceived importance of collaboration on the adaptation process from the participants in the current study confirm the results of many previous studies (Armour & Yelling, 2004; Armour & Yelling, 2007; Butler, 2005; Fullen et al., 1990; Fullen 1993, 2003; Johns, 2003; Johns et al, 2001; Kirk & Macdonald, 2001, WestEd, 2002; Wirszyla, 2002). Though these studies researched PE teachers or teachers in general, the current study confirms their relatedness to experienced PE teachers. All of these studies suggest that collaborative efforts amongst teachers would facilitate the adaptation process to a curriculum change, but not all schools and school board districts allow the time and resources for collaboration (Fullen, 2003). Though the teachers in the current study reported that they were provided with opportunities to collaborate with other

teachers during curriculum change, participants in other studies did not. A participant in Johns et al.'s (2001) study indicated:

I think it would help if we can have one or two more meetings so that we can share our experiences and learn how the research in other schools is going. We could talk about the problems that we face on school and think of some solutions to solve them. (p. 208)

This particular teacher believed that a lack of collaboration inhibited his or her adaptation process to change; whereas the participants in the current study, who had the opportunity to collaborate, described this as a facilitator to change. A participant in a study conducted by Armour and Yelling (2007) shared this idea, as he or she described that “in an ideal world obviously it would be great to meet up with other PE teachers” (p. 189). Furthermore, Wirszyła's results indicated that a hindrance to the change process was “teachers not collaborating” (p. 11). The results of the current study, as well as with information from previous research, suggest that school boards should provide teachers of all experience with the opportunity to collaborate (Armour & Yelling, 2004; Fullen, 2003; Johns; Johns et al.). This collaboration amongst teachers will allow teachers to share experiences and ideas, learn new things, talk about problems, and possibly facilitate a teacher's adaptation to a change in curriculum.

Colleague Support

Support in the current study was defined as a teacher receiving some form of aid or guidance from an individual, body or organization to help that teacher through the change. Teachers reported that they received support from a variety of individuals, organizations and bodies. One specific factor that was perceived to have influenced the adaptation process for the teachers in the current study was the support they received from their colleagues. Few teachers

indicated that the support they received affected their adaptation process when asked the general question from the interview. However, after being probed by the researcher, all teachers mentioned receiving or giving some form of support to their colleagues.

It is difficult to fully grasp the effect of support on facilitating or inhibiting the adaptation process for the participants in the current study. All teachers that reported receiving support from their colleagues during the curriculum change indicated that this facilitated their adaptation process. However, though all participants realized the importance of support when adapting to a new curriculum, some indicated that they did not need, and thus, did not receive support from their colleagues. Rather, these participants indicated that they were the individuals *providing* the support to other teachers during this time. This might be explained by the selection criteria of the current study, in that all participants interviewed were experienced PE teachers. As such, the need for colleague support may be less necessary compared to a beginning teacher. The responsibility to seek support as a beginning teacher may shift slightly towards providing support when a teacher becomes experienced. Nevertheless, it was the perceptions of the teachers in the current study that this support was made available to all teachers. As Teacher B indicated:

I remember that there was help was there for everybody, new or old, and everybody could get the support from people in their department if they needed it.

The participants who *provided* support in the current study were often the PE department head for their particular school during the curriculum change. These participants indicated that they supported their colleagues in order to ‘ensure they understood the expectations,’ ‘aid in assessing and evaluating students,’ ‘providing examples of teaching’ and ‘allowing leave time from teaching to attend workshops.’ This confirms the importance of department heads during a change, as was discussed in Butler’s (2005) research. Butler indicated that “when head

teachers/administrators support young teachers who want to implement curricular change, they best do so by helping them to “overcome the weight of responsibility experienced by beginning teachers when combined with resistance to change” (p. 226). Butler stated that this support can come in the form of providing “mentoring, in-service training and financial support to attend workshops and conferences” (p. 226). Though there is a plethora of literature on the effect of being supported by colleagues during a time of curriculum change, few studies have examined the specific effect of PE department heads on *providing* support to their colleagues.

On the other side of the spectrum, the teachers that *received* support from their colleagues often obtained it from their PE department head. These participants confirmed the findings of other studies that state the importance of a supportive department head (Butler, 2005). Teacher E perceived that her department head offered support by providing her with time to attend teacher workshops and meetings:

I often went to the subject council meetings, because my department head let me go, I had the chance to talk to teachers from other schools all the time. And so that was, I thought, that was helpful too... just to hear. And it was people I respected.

PE department heads were also perceived to have facilitated the adaptation process by providing support in the way of resources. As Teacher D indicated:

One of the things that helped me adapt to the new curriculum was that I had a great department head who brought things in for the department. And if we didn't have something and if I looked at something and thought I could have needed it, then we bought it that year.

Therefore, receiving support from fellow PE colleagues (including department heads) appears to facilitate the adaptation process to new curricula for experienced PE teachers

These findings confirm the results of many studies who stress the importance of a supportive network of colleagues when attempting to adapt to a change (Bechtel & O'Sullivan, 2007; Fullen 2003; Johns, 2003; Johns et al, 2001; Wirszyla, 2002). Specifically, Bechtel and O'Sullivan's investigation of PE teachers revealed that the support teachers received was a major factor in affecting adaptation to change. Their participants reported that "collegial support... provid[ed] encouragement and ideas in their efforts to improve" (p. 228). One of their participants, however denied the importance of collegial support; it was indicated that this teacher often "used the Internet instead" (p. 229). The importance of researching topics to facilitate the adaptation process was discussed earlier in the current study, and may have acted as a substitute for support for this particular participant in Bechtel and O'Sullivan's study. Though the incidence of a discriminate case, Bechtel and O'Sullivan clearly state that "when physical education departments are not united in the change effort, the possibilities for change are reduced" (p. 230). Furthermore, the experienced PE teachers in Wirszyla's study described the support they received from colleagues during a time of change as a "tremendous help."

Principal Support

Principal support was defined in the current study as receiving some form of aid or guidance from the school principal to help a teacher through the change. All ten participants indicated that they believed that their principal was supportive during the time of change. The type of support however, was perceived to differ compared to other individuals or bodies within or outside of the school.

All of the participants in the current study perceived that their principals supported them by facilitating aspects that needed to be done to adapt to the curriculum change. Though the

teachers indicated that their principals facilitated their adaptation process, the perception was that their principals were not ‘actively’ supportive. This perception of ‘inactive’ support was described by Teacher E:

I found that they were very supportive. They never stopped you from going, and they were pleased that you went, but they didn’t actively say “okay, I want five people going to this workshop kind of thing...”

More responses will be provided simply to attempt to illustrate the homogeneity of the participants’ perceptions. In response to how his principal may have facilitated or inhibited his adaptation process, Teacher B stated:

The principals themselves when it came to the content matter, they really weren’t involved much other than, if, leave time was needed to be able to go to these things, they found time for us that way, or they supported us that way... And, I found all my principals to be very supportive of what we were doing.

Furthermore, Teacher H’s responded:

Yeah, yeah, they’re always just supportive. You know, they might not always know all the areas, they expect you as the department head to know, and you can tell them what is going on, but they don’t necessarily know all the changes that are taking place [in every subject], but they are always supportive. Like if you’re saying “this curriculum change is happening”, they’re like “what do you need, what do you have to do,” those kinds of things... But, in general, very supportive.

The EIC (2000) indicated that principals play an integral role in the curriculum change process. The efforts of a principal when attempting to implement a change in curriculum were further outlined in the OCT’s (2006) Professional Learning Framework. The OCT specified that

principals should be included in the curriculum change process to provide professional growth for teachers. The effects of the principal during the curriculum change outlined in the current study confirm the findings of research conducted in this area (Bechtel & O'Sullivan, 2007; Fullen & Stiegelbauer, 1991; Wirszyła, 2002). Bechtel and O'Sullivan indicated that "the involvement of the principal in a physical education innovation has not always been a necessary component for change to occur" (p. 229). However, as the researchers indicated, when principals were "involved in an innovation, they provided a positive impact, whereas a lack of principals' support tended to result in a negative impact on the change process" (p. 229). One participant in Bechtel and O'Sullivan's study indicated that when she asked for equipment funding from her principal and did not receive it, this acted as an inhibitor to the change process. Conversely, when the principal of the participants in Wirszyła's study were accommodating to the needs of the teachers, this facilitated the change effort.

School Board Level

Factors initiated at the school board level were found to affect the adaptability of teachers during the curriculum change. The school board district can affect the adaptation process of their teachers by providing them with various resources and workshops, as well as providing them with professional development programs to facilitate adaptation.

District Support

District support was defined in the current study as participants receiving aid or guidance from the school board to help a teacher through the change. Examples of how a district can offer support are by providing teachers with conferences, workshops, or in-servicing which they may

attend. Most of the teachers discussed the factor of a supportive district when asked the general question from the interview. Few teachers had to be probed to discuss the effect of a supportive district on facilitating their adaptation process. Though all participants reported that they were supported in some way by their district, there were two different perceptions regarding the amount of support in which the teachers received. Some teachers perceived that the level of district support was adequate, there were those who felt that it was inadequate.

Those teachers who specified that they received adequate support from their district all reported that this facilitated them to adapt to the curriculum change. This support was often seen as the district providing resources to their teachers to effectively implement the changes. As Teacher A iterated:

You know what... for the most part... depending on what was needed to be taught... our board... has always been more than generous in providing the resources we need to implement any of the programs, and that goes right up until today... I can't say enough about how well the people at the board level take care of the teachers that are in the field, and making sure they have the proper resources to implement the sports programs or the different programs that we have.

When asked by the researcher if he felt as though this district support facilitated or inhibited him to adapt to the curriculum change, he replied:

Well it definitely would have helped you adapt to the changes because you were offered the support at the board level to do that, so you're going to adapt fairly easily. (Teacher A)

The participants in the study indicated that the effective support that they received from their district did not differ based on the experience of the teacher. As Teacher D indicated:

No, I think they just wanted to help everybody. It didn't matter, you're level of experience. I think that's changed now, though. Because now they have different programs in place, like they have NTIP programs... and that didn't exist back then.

Some teachers indicated that people at the board level provided them with workshops or in-servicing days to aid them through the curriculum change, and this acted as a facilitator to adapt to the change. When asked the general question by the researcher, Teacher H indicated:

I think this is critical, is that our school board has a coordinator at the board for each subject area. So we have a PE coordinator, and our PE coordinator is a strong strong leader in the sense that, when those initiatives, or when the new curriculum came out, she had in-services, she provided with all kinds of support. And she went over the stuff with us, she broke down the stuff with us. She explained the stuff to us – she brought people *in* to explain the stuff to us.

Some teachers in the current study however, reported that even though their school board did provide support, it was inadequate to meet their needs of adapting to the change. As Teacher E described:

So what would have helped, would have had to been to actually set aside days to really, more days than they did to work on this, but they didn't do that. Although, our board did have the odd training day for each grade level, so, there would be a grade 9 training day and you'd go for the day and talk about the curriculum and then there is grade 10 day, grade 11. But, it was really a drop in the bucket compared to what needed to be done.

The teachers that reported inadequate support specified that the little support they did receive acted as a facilitator to the adaptation process. Conversely, because these teachers were not provided with adequate support, this acted as an inhibitor. It appears from the participants'

perceptions that school board districts should provide experienced PE teachers with adequate support during a time of curriculum change in order to facilitate the adaptation process to a new curriculum.

These results confirm the findings of other studies regarding the importance of a supportive district during a time of curriculum change (Bechtel & O'Sullivan, 2007; Cothran, 2001; Dwyer et al., 2003; Fullen & Stiegelbauer, 1991; Johns, 2003). Bechtel and O'Sullivan indicated that an unsupportive district that provided "no workshops related to issues of concern for physical educators" inhibited the change process for these PE teachers (p. 230). The researchers in that study identified that the reason for this lack of support for PE teachers is "marginalized status of physical education" in schools (p. 232).

Professional Development. A specific form of support that the school board district can offer to teachers is professional development programs. In the current study, this was defined as a teacher being provided time or days for professional development in order to collaborate, discuss, share, or learn about any aspect of the change. This definition was created based on the meaning of professional development from the OCT as well as previous studies (Armour & Yelling, 2007; Fullen, 2003; Knight, 2002; OCT 2006). These studies indicate that professional learning and development should always be a collaborative effort between many stakeholders in the change (Armour & Yelling, 2004; OCT). Therefore, though collaboration was already discussed, the specific effect of collaborating with other teachers during professional development will be discussed in this section.

All but one teacher reported that they received some form of professional development time during the period of the curriculum change. It was difficult to grasp the effect of professional development programs on the discrepancy case because that particular teacher was

involved in the creation and presentation of these programs, and thus did not *receive* any professional development. All but one of the remaining nine participants reported that these professional development programs facilitated the adaptation process to the new curriculum. Provided is an example of Teacher D indicating the effectiveness of the professional development programs:

Number one, it gave me a contact at the school board to, she was great, she showed us what the new curriculum was, she explained the changes, she explained how to do the assessment for it, and then gave us training for CPR, because we had to then suddenly teach CPR which was never something that we had to do before... And it gave me a contact if I needed her, she was going to come into our school and work with you one-on-one if you wanted to, so it gave me that direct resource to go over some more things if you needed to for the curriculum.

The perceptions of this teacher, as well as most of the other participants in the current study, demonstrate the importance of professional development programs in facilitating the adaptation process for experienced PE teachers.

Teacher E, however, perceived that the professional development provided was inadequate and insufficient to meet her needs during the change. Provided is this participant's perceptions of the lack of professional development during this time:

Here were these really great ideas coming out, and at the very same time, they cut back the number of PD days. Then, they increase the load of department heads, who are supposed to be the curriculum experts. So there was no PD time in order to implement the changes. So it was a really bad combination... those changes.

When asked by the researcher how this affected her adapting to the curriculum change, this participant indicated 'It made it slower.' Therefore, it appears as though when adequate professional development programs are provided to experienced PE teachers, these programs can facilitate the adaptation process to a new curriculum. Conversely, when these programs are insufficient to meet the needs of experienced PE teachers, the lack of professional development can inhibit the adaptation process.

Armour and Yelling (2007) defined professional development as all forms of professional learning done by teachers beyond their initial training. Furthermore, guidelines set by the OCT (2006) indicated that it is the duty of all teachers in Ontario to engage in this professional learning throughout their careers. The results of the current study confirm the positive effect of effective professional development programs during a time of curriculum adaptation for PE teachers (Armour & Yelling, 2007; Bechtel & O'Sullivan, 2007; Borko, 2004; Conkle, 1997; Knight, 2002; Faucette et al., 2002; Fullen, 2003). PE teachers in Bechtel and O'Sullivan's study felt that their district was providing them with insufficient professional development, and that the lack of such programs inhibited their adaptation process. All four teachers in their study "felt that the district had not met their professional development needs" (p. 230), and that this was "an inhibitor for all four teachers" (p. 231). Participants in other studies have also reported the inadequacy of professional development on PE teachers (Armour & Yelling, 2004, 2007; Borko; Conkle; Fishman et al., 2003). These reports differ from the findings of the current study, where most PE teachers stated that professional development programs they were provided with were effective in facilitating the adaptation process. However, all previous research, in coupling with the findings from the current research, submit to the conclusion that effective professional development programs are an integral part of the adaptation process for experienced PE teachers.

Studies have indicated that an important aspect of professional development programs is to provide PE teachers with the opportunity collaborate with other members of their profession. Armour and Yelling (2004) indicated that professional development “allows teachers ways to talk with each other about their classrooms” (p. 108). Furthermore, Faucette et al.’s (2002) participants indicated that an effective aspect of professional development programs were that they allowed for dialogue and collaboration with colleagues. Participants in the current study indicated that this dialogue was an indispensable aspect of professional development programs. Teacher B commented on the facilitative effect of adequate professional development programs:

It was good in that, we could talk to other teachers from other schools and you could find out how they were dealing with the situation as much as, you know, the student populations are different in all schools, and this was definitely a different school, its always neat to hear how another teacher presents something, or teaches and even just to discuss about different types of evaluation or even just to see the kinds of tests that the other teachers offer and things like that.

It appears then, that effective professional development programs can facilitate the adaptation process for experienced PE teachers. Furthermore, a cause for these professional development programs to facilitate the adaptation process for experienced PE teachers may be largely due to the collaborative nature of the programs offered.

Upper Level

The Ministry of Education in Ontario issues the curriculum for the entire province as well as provides funding to the school board districts for resources (Ministry of Education, 2008). The Upper Level in the current study consists of factors that were reported by teachers to affect the

adaptation process at the ministry level. This factor is higher in the educational system than the school and the school board district and, as such, was strategically placed at the top of the pyramid, seen in Figure 1.

The bottom-up approach of planning, as discussed earlier, considers the input and contribution of practicing teachers into the planning and implementing phases of a new curriculum (Kirk & Macdonald, 2001). The opposite of this is the top-down approach, whereby the ministry creates a new curriculum with no attempt to consider the dynamics of the practicing teachers (Butler, 2005; Fullen & Stiegelbauer, 1991; Guskey, 2002; Ha et al., 2004). Participants' perceptions of the influence of interactions with the overarching ministry are provided in the following section.

Problems with the Ministry

Problems with the ministry in the current study were defined as general disagreements with the procedures, policies, and facets of the overarching ministry. Perceived problems identified by the participants in the current study were: a lack of resources, a lack of direction, and a general disagreement with the procedures during the change. No teachers perceived that the ministry acted as a facilitator to the adaptation process. Similar to other factors that emerged from the perceptions of the participants in the current study, there were no questions in the interview guide that attempted to stimulate discussion on the ministry. Therefore, all issues with the ministry were discussed without the participant being provoked by the researcher. All but one teacher perceived that there were problems with the ministry and that this affected their adaptation process to the new curriculum. The nine participants that indicated their problems with the ministry perceived that these issues acted as inhibitors to the adaptation process to the

new curriculum. Furthermore, these teachers indicated that this absence of an effective ministry would be perceived the same across all PE teachers:

I don't think anybody, experienced or not, got a whole lot of support originally.

Curriculum documents came out, and they [the ministry] said "we want you to do this, do that, do this, but in terms of how to do it, I don't think there was a lot of support that way.

(Teacher C)

One issue with the ministry that was discussed by the participants was the lack of resources provided. Most teachers indicated that they felt somewhat 'short-changed' during the implementation of the new curriculum. Many of the teachers described that PE was never given a textbook to draw on for their classes, whereas other subjects were provided with a textbook. As Teacher D indicated:

Our problem in PE is that we didn't have a text anyway. So, when the new curriculum came out, yeah there were new textbooks for math and science that were created, so, maybe when the publishers "hey, come up with something new that would help us..." that was never created, that was never given to us. At all.

Furthermore, when Teacher G was asked if any other organizations supported, or did not support him during the curriculum change, he responded:

The ministry didn't provide any funding for any text-books or resources. So, that's a bit of a hindrance, but that's the ministry's decision.

Many of the teachers that discussed the issue of lacking resources, or specifically the lack of a textbook, mentioned that 'important subjects such as math and science' were provided with these resources. This supports Bechtel and O'Sullivan's results that the perceived marginalization of PE can inhibit the adaptation process for PE teachers. Bechtel and O'Sullivan's participants

indicated that they felt as though PE was at the “bottom of the barrel” (p. 231), and that this inhibited them to adapt to changes. This marginalization of PE was also seen as an inhibitor to adapting to change in Dwyer et al.’s (2003) study. One participant in their study described a strikingly similar situation to the participants in the current study. In an excerpt, a participant in their study indicated that “when there’s no set program, it tends to be just put on the back burner. You have your program for your math, language, and social studies. You get textbooks. But for physical education, there’s nothing, there’s just your curriculum” (p. 450). The results of the current study indicate that not providing resources to experienced PE teachers, which may be the result of an increase in the marginalization of PE, can inhibit their adaptation process to a new curriculum.

Another problem perceived by the participants in the current study was that the ministry did not provide them with enough direction to make the changes in the curriculum. The participants who described this problem perceived that the new curriculum was given to them without any guidance as to what they were supposed to be doing. As Teacher E indicated:

It was too much and it was kind of, because we didn’t really have time to digest it, it was kind of a big stressor and it was frustrating, and I didn’t feel like it had been explained enough, especially at the beginning.

Furthermore, Teacher C described:

I don’t think anybody got a whole lot of support, originally. Curriculum documents came out, and they said “we want you to do this, do that, do this, but in terms of how to do it, I don’t think there was a lot of support that way.

This finding further confirms Dwyer et al.’s (2003) study on the inhibitors to positive PE teacher change. Dwyer et al. indicated that “teachers had problems implementing the required program

because the [Ontario] provincial curriculum document is unclear about expectations for physical activity” (p. 450).

Finally, many of the teachers expressed a broad distaste towards the overarching ministry, and were grouped in a section termed ‘disagreement with procedures.’ Due to the ambiguity of the descriptions, this factor was defined in the current study as a teacher’s perception that the course of action and procedures that the ministry took during the curriculum change period were not correct. These disagreements varied from a perceived lack of planning, the change being done from a top-down approach, the change being unnecessary, and a variety of other factors. Teacher J indicated a lack of planning from on the part of the ministry during the curriculum change:

So it was a lack of planning on the ministries part. Why? Example being, when they rushed the 12 year education program. Why not implement it year by year, over a span of X number of years “boom, here it is.” So now you have everybody from grade 1 – 12 up in arms. Why didn’t they say “Okay, lets focus on K-4”, and then when your done, lets do “5-8”... Because then there would be a domino, or a ripple affect off of proper change. And as a result, over the years, different curriculums have had to re-vamp their stuff because there has been duplications at different grade levels.

Furthermore, Teacher B described his feeling towards top-down approaches to curriculum:

I think that it is done, is that the teachers themselves have to be involved in the planning phase. One of the concerns I have, too often is that this is done by people who are too far removed from the actual classroom... they’ve got to incorporate people who are actively involved and are practicing it into the process.

Finally, Teacher I described her general distaste for the ministry:

At the time, I thought that there could have been more from the ministry. You just sort of feel like you get sent this stuff from the ministry. And you also get the picture that everything happens in Toronto. Like, to a certain extent – the group that got together in Toronto – sometimes we would say “jeeese, they must have gotten together and said “okay, as a PE group, how can we shoot ourselves in the feet.”

All of these problems with the ministry were perceived to have inhibited the adaptation process for the experienced PE teachers in the current study. This finding confirms the results of many studies which indicated a need for ministerial empowerment and consideration when attempting to change a curriculum (Faucette et al., 2002; Fullen & Stiegelbauer, 1991; Johns, 2003). Fullen and Stiegelbauer indicated that ministries attempting to implement a change without considering the teachers who will be adopting it will inhibit the adaptation process. Johns indicated that change does not always occur because curriculum planners and policy makers are using the top-down approach, and no consideration is given to the teachers at the school level. This further emphasizes the need for a bottom-up approach to curriculum planning, as discussed earlier in these results, as well as by other researchers (Johns; Kirk & Macdonald, 2001). Johns further discussed the “power relations between planners and practitioners” that can act as an inhibitor to change as well (p. 346). The findings of the current study further confirm Dwyer et al.’s (2003) results, where it was indicated that there was insufficient guidance, direction and assistance from the individuals in charge of implementing curriculum during changes; and that these insufficiencies inhibited the adaptation process for PE teachers. It appears then, that a ministry that not only provides curriculum, but supports it with guidance, resources, assistance, and consideration to the adopting teachers can facilitate the adaptation process for experienced PE teachers.

Outside Support

Outside support was defined in the current study as teachers receiving support from organizations other than the school board district, and the Ministry of Education. Almost every teacher in the current study also mentioned that outside organizations aided in their adaptation process to the new curriculum.

OPHEA and other Organizations

One of the organizations identified as having an influence the participants' adaptation process was the Ontario Physical Health and Education Association (OPHEA). OPHEA is a non-profit organization that supports the development of lifelong learning in physical activity (OPHEA, 2009). As such, an integral aspect of the organization's undertaking is the collaborative effort with schools to provide effective PE. The participants perceived that the support they received from OPHEA facilitated their adaptation process to the new curriculum. Support from OPHEA primarily came in the form of providing supplemental materials and documents that teachers could use as a resource when implementing the new curriculum. Provided are the responses of multiple participants to show the homogeneity in the perceptions:

OPHEA was amazing. That really stood out. I mean, I didn't even really hear of them until the curriculum changes came in. And then all of a sudden they started producing all sorts of great stuff. (Teacher E)

OPHEA, yeah. They would have different curriculum booklets, and so on that you could purchase from OPHEA. There was one, a curriculum booklet that was sponsored by OPHEA and they had charts that you could use. So I would experiment with those charts with my class to see how it worked, and then, just sort of a 1 page assessment that you could

put in the different activities that you were teaching. And that was about – the second year.

And then, again, that just furthered your understanding of what the expectations were.

(Teacher F)

OPHEA, is, ugh, I mean, they were so supportive. It was *amazing*, that that organization

took the time and the energy and all the stuff they did to put that together. Um, yeah,

absolutely. OPHEA is a god-send in implementing the curriculum. (Teacher H)

It appears from the participants in the current study that OPHEA facilitated experienced PE teachers to adaptation to the new curriculum. Though the organization's support only traverses the province of Ontario in Canada, other provinces have similar organizations that offer this support and could facilitate the adaptation process in the same effect as OPHEA.

Teacher E also mentioned multiple other organizations that facilitated her to adapt to the curriculum change:

For sure, it made it seem more possible. Especially with some of the things that we had never taught before. To me, for example, the mental health unit in grade 11, well, we had never taught that before. Then, we start getting e-mails from the Canadian Mental Health Association saying “we have these programs, we just want you to know that we know it's in there now and, we can have speakers come in.” And even Ottawa U, we started hearing from the medical students about sex-ed workshops that they would offer and, so that was definitely a plus. Because before the changes, though I mean, we used to have Planned Parenthood in, Alcohol's Anonymous and, you know, we had, we were linked up with community organizations. But I think the difference was that some of these groups started producing a supporting curriculum document, you know, activities to do... which I had never seen before.

Though not discussed by all participants, the fact that this particular teacher mentioned other organizations, coupled with the elaborate praise for OPHEA, confirm the results of previous studies (Faucette et al., 2002, Ha et al., 2004; Wirszyła, 2002). These studies indicated that teachers should collaborate with and seek the support of organizations outside the school realm.

CHAPTER VI

CONCLUSION

The purpose of the current study was to investigate experienced PE teachers during a period of curriculum change and what was perceived to facilitate or inhibit this adaptation process. Literature was presented identifying the complexities of educational change, and in particular, curriculum change (Fullen 1993, 2003; Fullen & Stiegelbauer, 1991; Johns, 2003; Wirszyla, 2002). A study by Bechtel and O'Sullivan (2007) as well as a conceptual framework by Fullen et al. (1990) identified processes involved in the teacher change process. Additional literature further emphasized the importance of these processes (Armour & Yelling, 2004; Armour & Yelling, 2007; Butler, 2005; Cothran, 2001; Dwyer et al., 2003; Fullen, 2003; Fullen & Stiegelbauer; Ha et al., 2004; Johns et al., 2001; Kirk & Macdonald, 2001; McKernan, 1996; Veenman, 1984; Wirszyla), thus justifying their investigation in the current research. It was proposed by the current researcher that investigating the processes involved in Bechtel and O'Sullivan's study and Fullen et al.'s conceptual framework would help in the understanding of the adaptation process of experienced PE teachers to a new curriculum.

A variety of themes emerged as facilitators or inhibitors to the adaptation process for the experienced PE teachers in the current study. Conversely, certain factors which were suggested by previous studies to influence the teacher change process did not emerge as prominent factors in affecting the experienced PE teachers in the current study. The emerged themes were organized by the current researcher into four levels: the Personal Level, School Level, School Board Level, and the Upper Level. It is important to note that these factors were not *separated* into different groups, but rather carefully organized to assist interpretation during the analysis and presentation of results. Separating them, rather, would imply that these factors are

disconnected from each other during the process of curriculum change. By illustrating the model as pieces of a puzzle, as seen in the Pyramid Model, the current researcher attempted to demonstrate the interconnectedness of these factors.

Results from the current study suggest that the specific effect of experience on the adaptation process for PE teachers during a curriculum change may be minimal. After interviewing ten PE teachers that were considered experienced when adapting to a curriculum change, it appears as though their relative experience mainly affected their level of confidence in effectively teaching PE. This increase in confidence however, *did* appear to have a facilitative effect on the adaptation process for the participants. However, participants also perceived that beginning teachers adapt just as effectively, or ineffectively, to curriculum changes as their experienced counterparts. Therefore, though experience did not appear to affect the adaptation process for PE teachers directly, it can alter the way in which experienced PE teachers are facilitated or inhibited to adapt to change. The effect of experience on the confidence level of PE teachers, and their effect on the process of adapting to a new curriculum, is an area to be addressed by future research.

An important factor when adapting to curriculum change, appears to be the personality of the teacher experiencing the change. The participants in the current study perceived that the personality of a teacher does not relate to the level of experience in teaching PE. As the participants indicated, being experienced does not pre-dispose a PE teacher to being an adaptive or un-adaptive person. Personality traits of teachers acting as a facilitator or inhibitor to the adaptation process were not something that was expected by the current researcher to emerge as an important factor; yet there appeared to be a tremendous link between these factors. Furthermore, this is an area that has hardly ever been addressed by previous research (Curtis and

Cheng, 2001). Personality and its effect on the adaptation process for teachers of all experience is an area that should be addressed by future research.

The effect of beliefs, collaboration, support, and other factors investigated on the adaptation process of PE teachers has been extensively researched (Armour & Yelling, 2004; Bechtel & O'Sullivan, 2007; Butler, 2005; Johns, 2003; Dwyer et al., 2003). Specifically, Bechtel and O'Sullivan specified that the beliefs of a PE teacher, the collaboration and support that they received were factors that could facilitate or inhibit the change process for PE teachers. Data from the current research was able to confirm the results of these studies by investigating their influence on the adaptation process to a curriculum change in Ontario. In addition to corroborating the importance of these factors, the current study further demonstrated that these factors can also influence the adaptation process for *experienced* PE teachers. It is important to note, however, that any factor discussed (or any multiple of factors) may have both a facilitative and inhibitive effect on the adaptation process. For example, receiving support from the school board district was found in the current study, as well as many other studies (Cothran, 2001; Dwyer et al., 2003; Fullen & Stiegelbauer, 1991; Johns, 2003), to facilitate the change process; but receiving inadequate support from school board district can inhibit the adaptation process for PE teachers (Bechtel & O'Sullivan, 2007).

The one factor that was found in the current study to specifically inhibit the adaptation process were the teachers' perceived problems with the ministry. The two main problems expressed were teachers not being provided sufficient resources and direction during the change. Though these teachers perceived an inhibitive effect, the results of other studies (Faucette et al., 2002; Fullen & Stiegelbauer, 1991; Johns, 2003) suggest that sufficient ministerial support is an important factor that can facilitate the adaptation process.

The perceptions of the participants in the current study exposed the facilitators and inhibitors of experienced PE teachers adapting to a curriculum change. Taking these factors into consideration when implementing a change in curriculum could potentially increase the fidelity of a curriculum being proposed. By taking into consideration the facilitators and inhibitors to the adaptation process for PE teachers, individuals in charge of curriculum change (organizers, principals, and school board personnel) could potentially aid teachers adapting to the change. Furthermore, curriculum planners and policy makers should not just consider these factors, but also consider the input and collaboration of the practicing PE teacher when creating a curriculum. This bottom up approach to curriculum design could positively enhance the change process for the adapting teachers, as has been shown in other studies (Johns, 2003; Kirk & Macdonald, 2001).

Participants in the current study perceived that, due to experience, they may exhibit a higher level of confidence compared to a teacher of less experience. Aside from this increase in confidence, the participants perceived that they are affected by similar facilitators and inhibitors as PE teachers of an unidentified experience, as seen in other studies (Bechtel & O'Sullivan, 2007; Butler, 2005; Dwyer et al., 2003; Johns, 2003). Though the current study identified processes involved in the adaptation process for experienced PE teachers, there is still much to be investigated on this topic. There is a need for more research on the confidence level of experienced PE teachers and the affect on the adaptation process. Future studies could possibly investigate a correlation between the experience of a teacher, with their individual level of confidence. Furthermore, because this research only investigated experienced PE teachers, it might be viable to conduct a study where teachers from both ends of the experience spectrum are compared. This type of study could then compare the perceived facilitators and inhibitors to the

adaptation process from the perspective of both spectra, possibly exposing an evolution of factors.

Personal Reflections

This study has come a long way since I first talked to my supervisor, Dr. Charlotte Beaudoin, more than two years ago. At that time, I was an undergraduate student in Human Kinetics at the University of Ottawa, looking forward to my future career as a PE teacher. The opportunity to conduct a Master's study arose, and I felt that learning more about my future career could only be beneficial. I was not certain about a research topic, but I knew I wanted to dip into the realm of my passion in PE. Being in the first round of high school students who experienced the Ontario curriculum change in 1999, I had a predisposed interest for this specific change. After reading countless journals and books on the curriculum change process, I knew that I wanted to research the curriculum change that I experienced first-hand as a student. I then came across a few studies that pointed towards a lack of research on experienced PE teachers and their ability to adapt, and the current study was born.

Admittedly, the results of this study were surprising to me. Because of discussions I had with many people in my life, I had the belief that experienced PE teachers would adapt less effectively to curriculum change. Though these thoughts were simply based on personal perceptions and discussions with friends, it appeared as though academic research would validate these thoughts (Hargreaves, 2005; Howey and Corrigan, 1980). Results of the current study, however, propose that experienced PE teachers may adapt just as effectively or ineffectively as beginning teachers; but the processes that affect this adaptation, may be different. A study to compare these processes, I believe, may shed light on greater differences in the adaptation

process. Though there are still many areas that need investigating to fully grasp the perceptions of experienced PE teachers, I strongly believe this study effectively generated the perceptions of how experienced PE teachers adapt to curriculum change. These results have not only increased my knowledge about PE teachers, but have altered my perceptions towards experienced PE teachers. With the knowledge that I have gained, I feel that I will have more respect for experienced PE teachers in my future career.

REFERENCES

- Armour, K. (2006). Physical education teachers as career-long learners: A compelling research agenda. *Physical Education and Sport Pedagogy*, 11(3), 203-207.
- Armour, K. M., & Yelling, M. R. (2004). Continuing professional development for experienced physical education teachers: Towards effective provision. *Sport, Education and Society*, 9(1), 95-114.
- Armour, K. M., & Yelling, M. (2007). Effective professional development for physical education teachers: The role of informal, collaborative learning. *Journal of Teaching in Physical Education*, 26(2), 177-200.
- Bassey, M. (1995). *Creating education through research: A global perspective of educational research for the 21st century*. Kirklington: Moor Press.
- Bechtel, P. A., & O'Sullivan, M. (2007). Enhancers and inhibitors of teacher change among secondary physical educators. *Journal of Teaching in Physical Education*, 26(3), 221-235.
- Bengoechea, E. G., & Strean, W. B. (2007). On the interpersonal context of adolescents' sport motivation. *Psychology of Sport and Exercise*, 8(2), 195-217.
- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 3-15.
- Briscoe, C., & Peters, J. (1998). Teacher collaboration across and within schools: Supporting individual change in elementary science teaching. *Science Education*, 81(1), 51-65.
- Butler, J. I. (2005). TGfU pet-agogy: Old dogs, new tricks and puppy school. *Physical Education and Sport Pedagogy*, 10(3), 225-240.

- Cherryholmes, C. H. (1988). *Power and criticism: Poststructural investigations in education*. New York: Teachers College Press.
- Conkle, M. T. (1997). Inservice programs: What do physical educators want? *Journal of Physical Education, Recreation & Dance*, 68(8), 50-55.
- Côté, J., Salmela, J., Trudel, P., Baria, A., & Russell, S. (1995) The coaching model: A grounded assessment of expert gymnastic coach's knowledge. *Journal of Sport and Exercise Psychology*, 17(1), 1-17.
- Cothran, D. J. (2001). Curricular change in physical education: Success stories from the front line. *Sport, Education, and Society*, 6(1), 67-79.
- Crookes, G. (1993). Action research for second language teachers: Going beyond teacher research. *Applied Linguistics*, 14(2), 130-144.
- Crotty, M. (2003). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks: SAGE.
- Curtis, A., & Cheng, L. (2001). Teachers' self-evaluation of knowledge, skills and personality characteristics needed to manage change. *Asia-Pacific Journal of Teacher Education*, 29(2), 139-152.
- Dwyer, J. J., Allison, K. R., Barrera, M., Hansen, B., Goldenberg, E., & Boutilier, M. A. (2003). Teachers' perspective on barriers to implementing physical activity curriculum guidelines for schoolchildren in Toronto. *Canadian Journal of Public Health*, 94(6), 448-452.
- Earnest, J. (2004). Leadership, school effectiveness and staff professional development: The case study of a school in Uganda. Paper presented at Annual Conference for the Australian Association for Research in Education: Melbourne.

- Education Improvement Commission. (2000). *School Improvement Planning: A handbook for principals, teachers, and school councils*. Toronto
- Eisner, E. W. (1991) *The enlightened eye*. New York: MacMillan Publishing.
- Faucette, N., Nugent, P., Sallis, J. F., & McKenzie, T. L. (2002). "I'd rather chew on aluminum foil": Overcoming classroom teachers' resistance to teaching physical education. *Journal of Teaching in Physical Education*, 21(3), 287-308.
- Fink, D., & Stoll, L. (1998). Educational change: Easier said than done. In A. Hargreaves, A. Lieberman, M. Fullen, & D. Hopkins (Eds.), *International Handbook of Educational Change*. (pp. 297-321). Boston: Kluwer Academic Publishers.
- Fishman, B. J., Marx, R. W., Best, S., & Tal, R. T. (2003). Linking teacher and student learning to improve professional development in systematic reform. *Teaching and Teacher Education*, 19(6), 643-658.
- Fontana, A., & Frey, J. H. (2005). The interview: From neutral stance to political involvement. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The sage handbook of qualitative research* (pp. 695-727). Thousand Oaks: SAGE Publications.
- Fullen, M. (1993). *Change forces: Probing the depths of educational reform*. Bristol: The Falmer Press.
- Fullen, M. (2003). *Change forces: With a vengeance*. New York: Routledge Falmer Press.
- Fullen, M. G., & Stiegelbauer, S. (1991). *The new meaning of educational change: Second edition*. New York: Teachers College Press.
- Fullen, M. G., & Bennett, B., & Rolheiser-Bennett, C. (1990). Linking classroom and school improvement. *Educational Leadership*, 47(8), 13-19.

- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks: Sage.
- Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 8(3/4), 381-391.
- Ha, A. S., Lee, J. C., Chan, D. W., & Sum, R. K. (2004). Teachers' perceptions of in-service teacher training to support curriculum change in physical education: The Hong Kong experience. *Sport, Education and Society*, 9(3), 421-438.
- Hall, G. E., & Hord, S. M. (1987). *Change in schools: Facilitating the process*. Albany: New York Press.
- Hammond, M., Howarth, J., & Keat, R. (1991). *Understanding phenomenology*. Oxford: Basil Blackwell Ltd.
- Hargreaves, A. (2005). Educational change takes ages: Life, career and generational factors in teachers' emotional responses to educational change. *Teacher and Teaching Education*, 21(8), 967-983.
- Howey, K. R., & Corrigan, D. C. (1980). The school based teacher educator: Developing a conceptual framework. In D. C. Corrigan, & K. Howey (Eds.), *Special education in transition: Concepts to guide the education of experienced teachers*. (pp. 15-32). Reston: Council for Exceptional Children.
- Jewett, A. B., Bain, L. L., & Ennis, C. D. (1995). *The curriculum process in physical education*. Dubuque: Wm. C. Brown Communication, Inc.
- Johns, D. P. (2003). Changing the Hong Kong physical education curriculum: A post-structural case study. *Journal of Educational Change*, 4(4), 345-368.

- Johns, P. D., Ha, A. S., & Macfarlane, D. J. David. (2001). Raising activity levels: A multidimensional analysis of curriculum change. *Sport, Education and Society*, 6(2), 199.
- Kamberelis, G., & Dimitriadis, G. (2005). Focus groups: Strategic articulations of pedagogy, politics, and inquiry. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The sage handbook of qualitative research* (pp. 887-907). Thousand Oaks: SAGE Publications.
- Kirk, D., & Macdonald, D. (2001). Teacher voice and ownership of curriculum change. *Journal of Curriculum Studies*, 33(5), 551-567.
- Knight, P. (2002). A systematic approach to professional development: Learning as practice. *Teaching and Teacher Education*, 18(1), 229-241.
- Macdonald, D., Kirk, D., Metzler, M., Nilges, L. M., Schempp, P., & Wright, J. (2002). It's all very well in theory: Theoretical perspectives and their applications in contemporary pedagogical research. *Quest*, 54(2), 133-156.
- Marris, P. (1975). *Loss and change*. New York: Anchor Press/Doubleday.
- Maxwell, J. A. (2005). *Qualitative research design: An interpretive approach: Second Edition*. Thousand Oaks: SAGE Publications.
- McKernan, J. (1996). *Curriculum action research: A handbook of methods and resources for the reflective practitioner*. London: Routledge
- Ministry of Education. (1996). *Curriculum for Ontario secondary schools: Ministry of education and training*. Retrieved July 25, 2008, <http://www.edu.gov.on.ca/eng/document/discussi/curricul.pdf>
- Ministry of Education. (1999). *The Ontario curriculum grades 9 and 10: Health and physical Education*. Retrieved November 8, 2008, <http://www.edu.gov.on.ca/eng/document/discussi/curricul.pdf>

Ministry of Education. (2007). *Performance appraisal of experienced teachers: Technical requirements manual*. Queens Printer for Ontario. Retrieved November 15, 2007, <http://www.edu.gov.on.ca/eng/teacher/technicalRequirementsManual.pdf>

Ministry of Education. (2008) Ministry of Education. About the Ministry. Retrieved February 7, 2009, <http://www.edu.gov.on.ca/eng/about/>

Mumtaz, S. (2000), Factors affecting teachers' use of information and communications technology: A review of literature. *Journal of Information Technology for Teacher Education*, 9(3), 319-342.

Murray, M., J. (2003). *A cybernetic view of teacher learning*. Unpublished doctoral thesis. University of Wollongong, New South Wales.

Neshila, S. (2004). *Action research on an organization development intervention in a secondary school in the Erongo education region of Namibia*. Unpublished master's thesis. Rhodes University, Grahamstown.

Ontario College of Teachers. (2006). Foundations of professional practice. Toronto. Retrieved November 15, 2007, http://www.oct.ca/publications/PDF/foundation_e.pdf

Ontario College of Teachers. (2007). About the college. Retrieved November 20, 2007. <http://www.oct.ca/about/?lang=en-CA>

Ontario Physical Education and Health Association. (2009). About OPHEA. Overview. Retrieved February 8, 2009, <http://www.ophea.net/aboutophea.cfm>

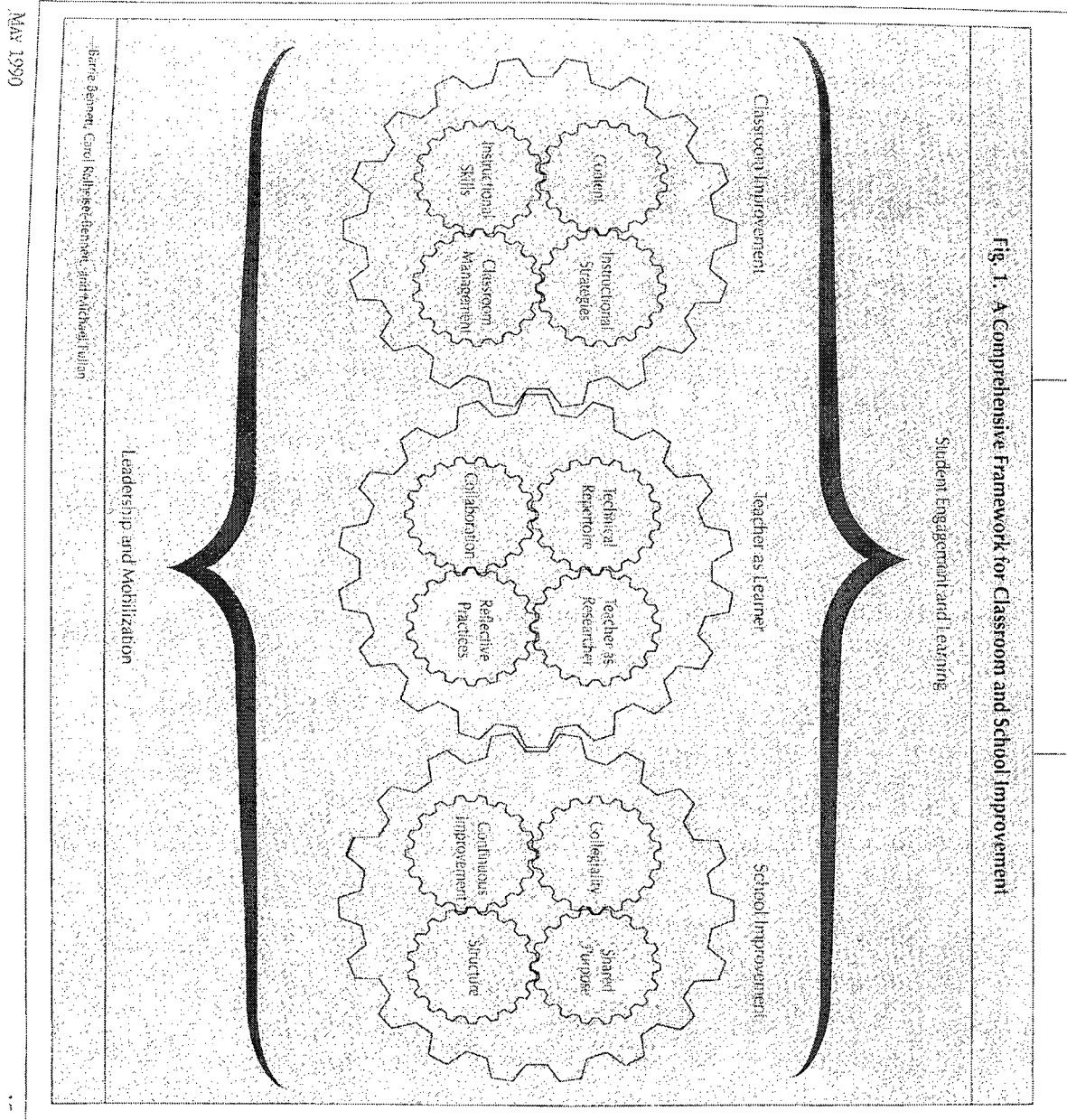
Oslin, J., Collier, C., & Mitchell, S. (2001). Living the curriculum. *Journal of Physical Education, Recreation & Dance*, 72(5), 47-51.

Patton, Q. P. (2002). *Qualitative research & evaluation methods: Third edition*. Thousand Oaks: SAGE Publications.

- Richardson, V. (1990). Significant and worthwhile change in teaching practice. *American Educational Research Association*, 19(7), 10-18.
- Rubin, J. R., & Rubin, I. S. (2005). *Qualitative interviewing: The art of hearing data: Second edition*. SAGE: Thousand Oaks.
- Smith, D. W. (2005). Consciousness with Reflexive Content. In D. W. Smith, & A. L. Thomasson (Eds.). *Phenomenology and philosophy of mind* (pp. 93-114). New York: Oxford.
- Thomasson, A. L. (2005). First-Person Knowledge in Phenomenology. In D. W. Smith, & A. L. Thomasson (Eds.). *Phenomenology and philosophy of mind* (pp. 115-139). New York: Oxford.
- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54(2), 143-178.
- WestEd (2000). *Teachers who learn, kids who achieve: A look at schools who model professional development*. San Francisco: WestEd.
- Wilson, S. M., & Berne, J. (1999). Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary professional development. *Review of Research in Education*, 24(1), 173-209.
- Winter, E. C., & McEachern, W. R. (2001). Dealing with educational change: The Ontario experience. *Education*, 121(4), 682-688.
- Wirszyla, C. (2002). State-mandated curriculum change in three high school physical education programs. *Journal of Teaching in Physical Education*, 22(1), 4-19.

Appendix A

Fullen, Bennett, and Rolheiser-Bennett (1990)'s Conceptual Framework



Note: From "Linking classroom and school improvement," by M. G. Fullen, B. Bennett, and C.

Rolheiser-Bennett, 1990, Educational Leadership, 47(8), p. 15. Copyright 2002 by

EBSCO Publishing.

Appendix B



Ottawa-Carleton Research Advisory Committee

March 11, 2009

Mr. Will Bowins
13 Westfield Cres.
Nepean, ON K2G 0T6

Re: Adaptability of Experienced Physical Education Teachers to New Curricula: An Interpretive Understanding of Facilitators and Inhibitors

Dear Mr. Bowins,

On behalf of the Ottawa-Carleton Research Advisory Committee, I am pleased to inform you that your research proposal, "*Adaptability of Experienced Physical Education Teachers to New Curricula: An Interpretive Understanding of Facilitators and Inhibitors*" was approved for implementation in the Ottawa-Carleton District School Board and the Ottawa Catholic School Board.

Before you proceed with any aspect of this study you must contact Yasmin Sankar Khan at the Ottawa-Carleton District School Board (613-596-8211 ext. 8667) and myself at the Ottawa Catholic School Board (613-224-4455 ext. 2341).

On behalf of the Ottawa-Carleton Research Advisory Committee we wish you success with your research and look forward to receiving the results of your work.

Sincerely,

Lauren Figueredo, Ph.D.
Research Officer
Ottawa Catholic School Board

On behalf of the Ottawa-Carleton Research Advisory Committee

RECRUITMENT TEXT FOR PRINCIPALS

Adaptability of Experienced Physical Education Teachers to New Curricula: An Interpretive Understanding of Facilitators and Inhibitors



uOttawa

Université d'Ottawa
Faculté des sciences
de la santé
École des sciences de
l'activité physique

University of Ottawa
Faculty of Health
Sciences
School of Human
Kinetics

Researcher: Will Bowins
Institution: University of Ottawa
Faculty of Health Sciences
School of Human Kinetics.
Rm. 428, 125 University St.
Ottawa, ON, K1N 6N5
Telephone: 613-799-9213
Email: wbowi055@uottawa.ca

Supervisor: Dr. Charlotte Beaudoin
University of Ottawa
Faculty of Health Sciences
School of Human Kinetics
Rm. 340, 125 University St.
Ottawa, ON, K1N 6N5
613-562-5800 (ext. 4259)
cbeaudoi@uottawa.ca

Dear Principal,

I will be conducting a study at the University of Ottawa, the purpose of which is to explore how experienced physical education (PE) teachers perceive the adaptation process to curriculum change. For this study, I am looking for teachers that had a minimum of five years of teaching in PE at the time of the Ontario high school curriculum change in 1999.

In an effort to generate the perspectives of PE teachers, qualitative interviews will be performed on ten teachers in this field. Previous research on this topic is minimal to non-existent; to date, there have been no studies that have explored how experienced physical education teachers perceive this process of adaptation. The only research that has been conducted in this area has been on teachers in general or on beginning teachers. In hopes to further the knowledge on experienced physical education teachers, this study will seek to identify the factors that facilitate or inhibit the change process for these teachers during of a time of curriculum change. With the results of this study, it is hoped that more attention will be given to aiding experienced PE teachers when adapting to curriculum change. Furthermore, this research will contribute to understanding the benefits of professional development programs to enhance continuous learning for PE teachers.

Participation in this study is voluntary. Teachers who wish to participate will engage in one individual semi-structured interview. All interviews will be conducted in English and will last approximately 45-minutes. The interview will be scheduled at a time and place that is convenient for the teacher and will be audio recorded and transcribed verbatim. The interview will consist of open-ended questions about the experience with curriculum change and how these processes were perceived by each teacher. Teachers will be offered the opportunity to participate in the analysis process by reviewing their interview transcript for authentication purposes. This will allow for additions, omissions, and/or modifications of any information that they do not feel accurately reflects their experiences they addressed. Should teachers regret disclosing something, the

☎ 613 562-5852
☎ 613 562-5149

125 Université / University
Ottawa ON K1N 6N5 Canada

www.uOttawa.ca

information shared will be excluded from the database and they will be informed that the information will not be reported in any form of communication.

There are numerous benefits to conducting research on experienced physical education teachers. A teacher's participation in this study will allow them to share their experiences of adapting to curriculum change. This sharing process will help them gain a better understanding of curriculum change, by discussing rich and detailed information with the researcher. In addition, this study will provide research to an area that has hardly ever been explored; as no research has been conducted on how experienced PE teachers perceive the adaptation processes to new curricula. The study will fill the gap in the current body of research, by identifying the factors that facilitate and inhibit the adaptation process for experienced PE teachers. Furthermore, upon completing of the study, the teachers will be offered a copy of the final thesis project. The information in the thesis will allow them to view the research on curriculum change to date, as well as reveal the perceptions of many experienced PE teachers like themselves. Finally the researcher is willing to offer a presentation of the final thesis and its results to the school community during a professional development (PD) day, or at any other time of convenience, to any schools that participate in this study.

As a principal, the extent of your participation would be to provide the researcher with written permission to allow this study to be conducted, as well as forward consent forms via e-mail to PE teachers in your school. You are under no obligation to participate in this study. If you choose to participate, you are free to withdraw from the study at any time. The teachers in your school are also under no obligation to participate in this study.

Anonymity will be assured by assigning a pseudonym to your file and your teachers' file so that no actual names will appear on or identify anyone in any transcript or research documents. Furthermore, neither your school name nor school board name will be mentioned to prevent linking you to the data. This is an independent study, and therefore data will not be shared with the Ottawa Carleton District School Board, or the Ottawa Catholic School Board.

Any information that you or the teachers share will be kept strictly confidential, as only the researcher and the research supervisor will have access to all forms of raw data. The list identifying you, and other participants in this study, will be kept in a separate location, in a locked filing cabinet so that no association between your pseudonym and your true identity will be possible. The audiotapes, transcripts of the interviews, and data will be stored in my research supervisor's office. Only my supervisor, Dr. Charlotte Beaudoin and myself, Will Bowins, will have access to these materials. Transcripts and audiotapes of teachers' interviews will be destroyed after 5 years (in accordance with the University of Ottawa Research Ethics Board). You and your teachers will be offered a summary of the research findings in Spring 2009. You can receive the research findings either by an electronic mail address or home address.

The potential risks involved in this study are minimal. The teachers may be uncomfortable by remembering a negative event or experience from the past. To prevent this from occurring, teachers are under no obligation to answer questions if they find them uncomfortable in any way.

If you are interested, and feel that experienced physical education teachers in your school would also be interested, could you please sign and date the 'Permission from Principals' document and send it to the researcher by mail using the enclosed pre-addressed and posted envelope. If you choose to allow this study to be conducted in your school, an e-mail will be sent to you with an attached consent form for any PE teachers who fit criterion for this study. It is asked that you forward this document to these teachers, upon which they can decide if they wish to participate by responding to the contact information in the document. The researcher and supervisor can be contacted at the information at the beginning of this document.

Best regards,

Will Bowins



PERMISSION FORM FOR PRINCIPALS

Adaptability of Experienced Physical Education Teachers to New Curricula: An Interpretive Understanding of Facilitators and Inhibitors

Researcher: Will Bowins
Institution: University of Ottawa
Faculty of Health Sciences
School of Human Kinetics.
Rm. 428, 125 University St.
Ottawa, ON, K1N 6N5
Telephone: 613-799-9213
Email: wbowi055@uottawa.ca

Supervisor: Dr. Charlotte Beaudoin
University of Ottawa
Faculty of Health Sciences
School of Human Kinetics
Rm. 340, 125 University St.
Ottawa, ON, K1N 6N5
613-562-5800 (ext. 4259)
cbeaudoi@uottawa.ca

Université d'Ottawa
Faculté des sciences
de la santé
École des sciences de
l'activité physique

University of Ottawa
Faculty of Health
Sciences
School of Human
Kinetics

I, _____ permit Will Bowins and Dr. Charlotte Beaudoin to recruit physical education teachers in my school for the study entitled 'Adaptability of Experienced Physical Education Teachers to New Curricula: An Interpretive Understanding of Facilitators and Inhibitors.'

If you allow this study to be conducted in your school, please send this letter to the researcher using the enclosed pre-addressed and posted envelope. Upon delivery, an e-mail will be sent to you asking for your help in forwarding consent forms to teachers in your school.

I permit this study to be conducted in my school. Yes _____ No _____

Date: _____

School: _____

E-mail: _____

Signature: _____



CONSENT FORM FOR TEACHERS

Adaptability of Experienced Physical Education Teachers to New Curricula: An Interpretive Understanding of Facilitators and Inhibitors

Researcher: Will Bowins
Institution: University of Ottawa
Faculty of Health Sciences
School of Human Kinetics.
Rm. 428, 125 University St.
Ottawa, ON, K1N 6N5

Telephone: 613-799-9213
Email: wbowi055@uottawa.ca

Supervisor: Dr. Charlotte Beaudoin
University of Ottawa
Faculty of Health Sciences
School of Human Kinetics
Rm.340, 125 University St.
Ottawa, ON, K1N 6N5
613-562-5800 (ext. 4259)
cbeaudoi@uottawa.ca

Université d'Ottawa
Faculté des sciences
de la santé
École des sciences de
l'activité physique

University of Ottawa
Faculty of Health
Sciences
School of Human
Kinetics

I, _____, have been invited to participate in the Master's research project conducted by Will Bowins under the supervision of Dr. Charlotte Beaudoin, from the School of Human Kinetics of the Faculty of Health Sciences at the University of Ottawa. If you wish to participate, please contact the researcher, Will Bowins or the supervisor, Charlotte Beaudoin through the contact information above, to indicate your interest in participating.

The purpose of the research is to explore how experienced physical education (PE) teachers perceive the adaptation process to new curricula. For this study, the researcher is looking for teachers that had a minimum of five years of teaching in PE at the time of the Ontario high school curriculum change in 1999. This research will seek to understand the perceptions of experienced PE teachers in an effort to understand the facilitators and inhibitors involved in the adaptation process to new curricula. Previous research on this topic is minimal to non-existent; to date, there have been no studies that have explored how experienced PE teachers perceive this process.

Your participation in this study will be voluntary and will consist of one individual semi-structured interview, conducted in English. The interview will last approximately 45-minutes in length. It will be located in a place that will allow for confidential interview, but also be at a time and place that is convenient for you (during or after school). The interview will be audio recorded and transcribed verbatim. The interview will consist of open-ended questions regarding your experiences with curriculum change in PE. If interested, you will be given the opportunity to participate in the analysis process of this study by reviewing the transcript of the interview. This will allow for additions, omissions, and/or modifications of any information that you do not feel accurately reflects your experiences to be addressed. Should you regret disclosing any information, the information you shared will be excluded from the database and you will be informed that the information will not be reported in any form of communication. You will also be offered the opportunity to view, and make comments on what the

☎ 613 562 5852
☎ 613 562-5149

125 Université / University
Ottawa ON K1N 6N5 Canada

www.UOttawa.ca

researcher has identified as key facilitators and inhibitors involved in the experienced teacher change process.

Though you will not be compensated, there are numerous benefits to your participation in this research. Your participation in this study will allow you to share your experiences of adapting to curriculum change. This sharing process will help you gain a better understanding of curriculum change, by discussing rich and detailed information with the researcher. In addition, this study will provide research to an area that has hardly ever been explored; as no research has been conducted on how experienced PE teachers perceive the adaptation processes to new curricula. The study will fill the gap in the current body of research, by identifying the factors that facilitate and inhibit the adaptation process for experienced PE teachers. Furthermore, upon completion of the study, you will be offered a copy of the final thesis project. The information in the thesis will allow you to view the research on curriculum change to date, as well as reveal the perceptions of many experienced PE teachers like yourself. Finally the researcher is willing to offer a presentation of the final thesis and its results to the school community during a professional development (PD) day, or at any other time of convenience, to any schools that participate in this study.

You understand that this research deals with personal information about your teaching experiences and that the risks involved of sharing personal information are minimal, and include no form of physical distress, legal or social repercussions, or economic inconveniences. The only form of risk the researcher foresees is if you are asked to discuss an event that will evoke a negative experience. To prevent this from occurring, you are under no obligation to answer questions if you find them uncomfortable in any way.

Confidentiality will be assured and respected as only the researcher and his supervisor will have access to all forms of raw data. The transcript of your interview will be identified by a pseudonym. All audio tapes, interview transcripts, and data will be stored in the research supervisor's office to which only the supervisor and researcher have access. The data from this study will be conserved for a period of 5 years, after which time, all audio tapes will be cut up and written transcripts and data will be destroyed by shredding. Your confidentiality will continue to be respected if the results of this study are presented in physical education pedagogy journals and conferences.

Your anonymity will be assured by having a pseudonym assigned to you that will identify you on transcripts and research documents. This ensures that your name will not appear on any documents or publications. Additionally, neither your school name nor school board name will be mentioned to prevent linking you to the data. This is an independent study, and therefore data will not be shared with your principal, the Ottawa Carleton District School Board, or the Ottawa Catholic School Board. Furthermore, information you disclose to the researcher will in no way impact your work, employment or relationships with your superiors.

You are under no obligation to participate in this study. If you choose to participate, you are aware that you are free to withdraw from the project at any time, before or during an interview, and refuse to answer questions without prejudice. If you choose to withdraw, all data gathered until the time of withdrawal will be cut up (audio tapes) and shredded (transcripts).

If you have any questions about the conduct of the research project, you may contact the researcher or supervisor.

Any information requests about your rights as a research participant may be addressed to the Protocol Officer for Ethics in Research, 550 Cumberland Street, Room 159, University of Ottawa, Ottawa, Ontario, Canada, K1N 6N5, 613-562-5841 or ethics@uottawa.ca.

Please print two copies of this consent form if interested in participating. You will be asked to return one copy to the researcher prior to the interview, and the other copy you may keep.

I agree to participate in this study. Yes _____ No _____

I consent to being audio-taped during the interview
Yes _____ No _____

I want to review the transcript of my interview. Yes _____ No _____

I want to review the organization of common themes presented by the researcher.
Yes _____ No _____

I wish to receive a copy of the final project, which will be available in Spring 2009.
Yes _____ No _____

Please mail a copy of the final project to:

Or e-mail to:

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

Appendix C

Procedure Outline

Phase 1: Recruitment Phase

Letters of information for purposes of recruitment were addressed to principals of schools in the City of Ottawa. Each letter included a description of study, type of participants needed. It will also include a permission form, and a pre-addressed, pre-posted envelope to be returned to the researcher.

Receive letters from principals indicating their permission to recruit PE teachers from their respective schools.

E-mails containing letter of information for purposes of recruitment were sent to principals in schools in which the researcher was permitted to recruit. The principals were asked to forward the letter to PE teachers in their school who met the previously described criteria. Teachers were asked to contact the researcher to indicate their acceptance to participate in the study.

Receive e-mails from experienced PE teachers volunteering to participate in the current study.

Phase 2: Data Collection Phase

E-mail teachers that have volunteered to participate in order to explain confidentiality and anonymity procedures (Bechtel & O'Sullivan, 2007). Agree upon a 45-minute to one-hour time to perform interview.

On the date of the interview, PE teachers provided written consent, as well as perform semi-structured interview with the researcher on pre-agreed upon date. Each interview was audio recorded.

Transcribe interview just recently performed – as soon as possible after the completion of the interview.

Member check with recent PE teacher by giving (via e-mail) them a transcription of the interview (Bechtel & O'Sullivan, 2007) (using track changes function on Microsoft Word).

Receive e-mail from recent PE teacher regarding their thoughts on the interview transcription provided.

Phase 3: Analysis Phase

Analyze data from all transcribed interviews. Determine, indicate and analyze emerged themes from interviews using NVivo software.

Common emerged themes from interview transcriptions were organized in attempt to understand the experiences of curriculum change for the PE teachers. Other individual knowledgeable in the field will also performed analysis to attempt to achieve inter-analysis reliability.

Second member checking round. Common themes from analysis organization presented back to each PE teacher (via e-mail). Purpose was to further gain acceptance of what was initially indicated by them during the interview.

Write results and discussion based on data found

Appendix D

Semi-Structured Interview Guide

Introductory questions

How are you? How are you doing today?

Where did you get your teaching and/or physical education degree?

Demographic question:

How long have you been teaching for?

How long have you been teaching PE for?

Primary Questions:

Localizing the teacher and general questions:

What does curriculum change mean to you?

How many times have you been asked to bring about curriculum change in PE?

How long were you teaching PE when you experienced this curriculum change?

Would you have considered yourself an experienced teacher at this time?

Can you tell me how you adapted to this curriculum change?

(The following are probes for the previous question)

(What do you think your level of experience in teaching had to do with)
you adapting to the curriculum?)

(How did the curriculum change affect you?)

(Did it force you to adapt in any way?)

(What facilitated you to adapt to the curriculum?)

(What inhibited you to adapt to the curriculum?)

Secondary Questions: (Probe if not talked about in Primary Questions)

Questions relating to beliefs/value towards the curriculum:

What were your beliefs towards the new curriculum that you were asked to accommodate?

What affect do you think this had to you adapting to the curriculum?

How did this have an effect?

What affect do you think your level of experience had on this adaptation?

Questions relating to support from principals, students, district and other members of the school:

Did the principals of your school affect your experience of adapting to the curriculum?

If "yes" – How did they affect your experience?

If "no" – Wait until end of interview (***)

Did the students of your school affect your experience of adapting to the curriculum?

If "yes" – How did they affect your experience?

If "no" – Wait until end of interview (***)

Did the district of your school affect your experience of adapting to the curriculum?

If "yes" – How did they affect your experience?

If "no" – Wait until end of interview (***)

Were there any other individuals/organizations that had an influence on your experience to adapting to the new curriculum?

Did any body not support you that you feel should have supported you?

What affect do you think your level of experience had on how you received/handled the support?

Do you think your need for support depended on your level of experience at this time?

Questions pertaining to district policies:

Did your school district have policies that affected your adaptation process?

What were they?

How did they influence your adaptation process?

What affect do you think your level of experience had on this adaptation?

Questions regarding experience and professional development:

At the time of the curriculum being implemented, how effective were the professional development programs in extending your knowledge of delivering effective PE?

What aspects of the professional development programs affected your adapting to the new curriculum?

How did this have an affect?

As an experienced teacher, did you find it more, or less difficult to adapt to new curricula?

Why would you say this?

How is it different?

Questions regarding Fullen et al. 's framework

Technical Repertoire: How confident were you in teaching the lessons of the new curriculum?

What effect did your confidence have on how you adapted to the new curriculum?

How did this have an effect?

What do you think your level of experience had had on this adaptation?

Teacher as Researcher: Did the new curriculum encourage you to go out and perform research to effectively adapt to the new curriculum?

If yes – What affect did this research have on how you adapted to the new curriculum?

How did this have an affect?

What do you think your level of experience had had on this adaptation?

Reflective Practices: Did you ever have to reflect on why you became a teacher during this curriculum change?

If yes – What affect did this reflection have on how you adapted to the new curriculum?

How did this have an affect?

What do you think your level of experience had had on this adaptation?

Is there anything else you want to say about your experiences with adapting to curriculum change?

If “no” – What could your principal have done in order to affect your experience of adapting to the new curriculum?

If “no” – What could your students have done in order to affect your experience of adapting to the new curriculum?

If “no” – What could your district have done in order to affect your experience of adapting to the new curriculum?

Appendix E

Table 2

Number of Coding Instances for Coded Themes

Coded Theme	Number of Coding Instances
Beliefs	
Positive	17
Negative	5
Changing what they had been doing for years	3
Collaboration	22
Confidence	17
Ministry Problems	
Change for change sake	2
Disagreement with Procedures	12
Lack of Direction	7
Lack of Resources	12
Personality	30
Planning	11
Professional Development	14
Research	18
Reflection	3
Support	
Colleagues	19
District	31
Principal	13

OPHEA	10
Students	2
Other	3
Lack of Time	4
