2014

Links Among Distributed Leadership in IBMYP Schools, Program Coordinators' Role Clarity, and Professional Self-Efficacy

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Links Among Distributed Leadership in IBMYP Schools, Program Coordinators' Role Clarity, and Professional Self-Efficacy

by

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Presented to the Graduate and Research Committee

of Lehigh University

in Candidacy for the Degree of

Doctor of Education

in

Educational Leadership

Lehigh University

January 2014

January 2014

DOCTOR OF EDUCATION PROGRAM OF STUDY

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Residency	Summer Sessions 2006, 2007, and 2008
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Language Requirement	Not Applicable
General Exam	Sit-down comprehensive exam: Fall 2008 Take-home comprehensive exam: Spring 2009
Previous Degrees	B.A. Hons; John Moores University, UK 1987 P.G.C.E; Liverpool University, UK, 1988 M.A; Oxford Brookes University, UK, 1999
Candidacy Approved	

ACKNOWLEDGEMENTS

I owe so much to my husband, Mike and our two boys, Patrick and George, who have supported me on this seven-year journey. They kept me going when I felt like giving up. Thank you to my 'three men' for your understanding, encouragement, and for always being there.

Many people helped along the way and I have mentioned some of them in the manuscript. Fellow students and professors from Lehigh were always on hand to share experiences and help in any way they could. Their professionalism and collegiality never ceased to amaze me. I also owe many thanks to the MYP coordinators around the globe who participated directly in this study.

A special thank you to three colleagues whom without their help, I simply would not have made it through: Dr. Laura Roberts for her statistical expertise—we are now lifelong friends; Dr. John Kurtenbach who could obtain any article in a matter of seconds, or so it seemed; and James Pilton (soon to be Dr.) who gave me feedback and insightful comments on numerous occasions. I owe all of you a deep expression of my gratitude.

Moreover, to Dr. Jill Sperandio, my advisor and fellow Brit, who guided me through and never gave up on me when I am sure there are times she may have wanted to.

I dedicate this manuscript to my mum and dad, James and Mary Tooher. This achievement has made them so very proud and their joy gives me so much joy and sense of accomplishment too. They are the best parents ever!

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ABSTRACT

The increasing complexity of tasks confronting formal instructional leaders (FILs) in K-12 schools has led to a growing need for the distribution of leadership. This paper investigated the International Baccalaureate Middle Years Programme Coordinators' (IBMYPCs') perceptions of their (a) FILs' commitment to distributed leadership (DL), (b) the extent to which coordinators felt supported by their instructional leaders, and (c) how those variables correlated with coordinators' role clarity and professional self-efficacy. I applied a mixed methods design by collecting quantitative and qualitative data. The research instrument was the distributed leadership correlates inventory (DLCI). The sampling method was stratified systematic random sampling. Demographic and school structural variables became part of the analysis to test whether these variables could explain the correlations uncovered by the tests of the research hypotheses.

Results supported the theory that FILs' commitment to DL and support for the Middle Years Program Coordinator (MYPC) would bring about greater role clarity and improved feelings of professional self-efficacy for the MYPC. The study's key findings reinforced the necessity for FILs to have a detailed and comprehensive understanding of DL, which could be obtained through professional development and networking. The study also reinforced the idea that FILs must demonstrate support of MYPCs. Suggestions made for future practices by schools included educating the community on DL at the IB authorization stage, with suitable follow-up by the IB to ensure it is occurring in schools.

Future researchers who continue this line of inquiry could look at possible correlations between middle-level leaders' professional self-efficacy and the effect on

student learning and achievement. Further research is needed to explore the reasons why FILs seem to support MYPCs more in the area of teaming and less in the area of job tasks. Finally, this study could be replicated with other groups of coordinators in the IB programs and other instructional programs that mandate similar roles.

CHAPTER 1

Introduction

Background

The increasing complexity of tasks confronting FILs in K-12 schools has led to a growing need for the distribution of leadership (Elmore, 2000; Lambert, 2003; Spillane, Halverson, & Diamond, 2001). In a DL model, leadership is flattened from a traditional hierarchical model to a situation where a group of individuals interact with other group members and pool their expertise (Heck & Hallinger, 2009; Muijs and Harris, 2007; Spillane, Halverson, & Diamond, 2004). Simply, DL is the sharing of leadership between two or more individuals and the building of leadership capacity within a network of individuals that includes top-level administrators, middle-level administrators, and others (Gronn, 2002; Harris, 2003; Leithwood & Jantzi, 2005).

DL has become attractive to school organizations because it reflects progressive changes in leadership practices and actions (Harris, 2006; Harris & Spillane, 2008). Schools actively practicing DL are characterized by the interaction of multiple leaders rather than direction by single leaders in formal positions of authority. Such interaction is perceived as allowing individuals to develop leadership and expertise in specific areas of school operations, enhancing the likelihood of positive change and improved student learning and achievement within the school (Spillane et al., 2004).

In order for DL to bring about improved student learning and achievement, leadership must be distributed in a specific way (Harris, 2011; Day et al., 2009). DL needs to be purposefully planned if it is to have a positive impact on school improvement where FILs empower people at middle-level leadership positions, by providing them with

decision-making authority and control over resources (Leithwood, Mascall, & Strauss 2009). Ultimately, for DL to flourish in schools, FILs must be committed to the distribution of leadership (Harris, 2011; Murphy, Smylie, Mayrowetz, & Louis, 2009).

A key aspect of FILs' commitment to distributing leadership is the degree to which they assign control of the curriculum to middle-level leaders such as program coordinators. Program coordinators are invested with leadership responsibilities in a DL model. More specifically, program coordinators play an important role, as they are responsible for teacher delivery of the chosen curriculum and instruction of the school, including teacher unit and lesson planning, assessment practices, professional development, and best practice to improve student learning and achievement.

Research suggests that student learning and achievement improves when the school implements shared forms of leadership (Robinson, Lloyd, & Rowe, 2008**;** Waters, Marzano, & McNulty, 2003). FILs must relinquish some authority and power by repositioning their role "from exclusive leadership to a form of leadership that is more concerned with brokering, facilitating and supporting others in leading innovation and change" (Harris, 2011, p. 8). I hypothesized that distributing the leadership in schools, which requires support from FILs to middle-level leaders, would have a positive effect on student learning and achievement because DL requires program coordinators who have the expertise to be responsible and accountable for the development of curriculum and instruction. Program coordinators need to be clear about the leadership aspect of their role, which in turn will empower them to carry out the responsibilities assigned to their role with confidence**.**

Tubre and Collins (2000) posited, “In today’s complex work environments, boundaries between occupations, departments, and organizations are often unidentifiable, and blurred roles are especially likely to occur in jobs where the responsibility and performance of job tasks is distributed among teams and team members” (p. 157). Perception of role clarity in any organizational context and notably in a DL model is, therefore, key to organizational success (House & Rizzo, 1972). Role clarity, which includes the presence of clear leadership structures, influences the effectiveness of leadership teams (Conley, Fauske, & Pounder, 2004; Hulpia, Devos, & van Keer, 2011; Senior & Swailes, 2007). Role clarity is the degree to which required information is provided about how a person (and in the present study, program coordinator) is expected to perform their role (Chipunza & Samuel, 2012; Ilgen & Hollenbeck, 1991; Teas, Wacker, & Hughes, 1979; Ryan, 2012; Shoemaker, 1999).

A program coordinator’s role is clear when the responsibilities attached to that role are defined in a consistent way. With regard to role definition in a DL model, a program coordinator adheres to two sources of authority: (a) an explicit written description of the job responsibilities and (b) the implicit messages from the FIL who may or may not empower the program coordinator to perform the leadership aspects of the job. A program coordinator’s role is clear when he or she receives a consistent message regarding that role in the form of both explicit communication (written description) and implicit communication (FIL purposely sharing leadership). The FIL must possess the leadership skill of sharing responsibilities with others. A program coordinator’s role is unclear when the explicit and implicit messages are inconsistent. For example, this can happen if the program coordinator is unempowered by the FIL with

decision-making authority, despite having this power outlined in a job description. When these two sources of authority are in conflict, program coordinators experience role ambiguity and they will remain unclear about the expectations of their position. In the context of this study, the implicit component is determined by the degree to which FILs provide program coordinators the requisite authority to carry out their leadership responsibilities at the school. As the explicit components are a standardized job description with no variation, I focused only on the implicit component of role clarity in this study.

Professional self-efficacy is a judgment of one's perceived belief in the capability to organize and perform a specific task successfully. The stronger the self-efficacy beliefs, the greater the challenge individuals are willing to undertake (Pajares & Schunk, 2001). Professional self-efficacy is important because it may influence the amount of time and commitment a middle-level leader will spend on a task. In the daily routines of schools, this could be a crucial ingredient for improving the organization. A self-efficacious middle-level leader whose beliefs are grounded in success will put the extra time and effort into a particular task to help move the organization forward (Schunk & Pajares, 2001).

Professional self-efficacy is a dynamic construct that can change and evolve depending on context and situation (Bandura, 1986; Gist & Mitchell, 1992; Hoy & Miskel, 2008; Pajares, 1996; Schunk, 1996). Those taking on leadership and decision-making roles, therefore, must have a strong belief in their own leadership and decision-making capacity in order to bring about a desired goal (Bandura, 1977). There has been research conducted on teachers' sense of self-efficacy and how this relates positively to

student outcomes such as higher student achievement (Goddard, Hoy, & Woolfolk Hoy, 2004). Higher teacher self-efficacy brings about better student achievement because self-efficacious teachers are more likely to spend extra time with students and encourage them to work harder (Gibson & Dembo, 1984). However, to date there is no research on the degree to which professional self-efficacy makes better middle-level leaders. I hypothesized that professional self-efficacy would work the same way with middle-level leaders as it does with teachers. In other words, a middle-level leader who had a high degree of professional self-efficacy would likely spend more time with teachers and encourage them to work harder, to ultimately improve student learning and achievement.

While a number of studies have examined models of DL, few have explored program coordinators' perceptions of their role clarity or focused on their professional self-efficacy in a DL context. The program coordinators' perspectives are important because they are the people assigned to the role of curriculum leadership in schools. For DL to be successful, program coordinators must possess a strong sense of role clarity and a high level of professional self-efficacy. When these elements are present, theorists claim improved teacher practice in instruction, and improved student learning and achievement will occur (Day, Hopkins, Harris, & Ahtaridou, 2009; Harris, 2004, 2008). This line of thought led to a casual model that guided my research. The causal model for this study is presented in Figure 1, as follows:

1. As FILs become more committed to distributing leadership in their schools, they provide greater support for program coordinators to take leadership of program delivery.

2. When program coordinators perceive greater support from their FILs, they begin to have a clearer understanding of their role.
3. As program coordinators gain a clearer understanding of their roles, they become more empowered, which manifests as an experience of greater professional self-efficacy.
4. As program coordinators become more self-efficacious, this leads to more effective program delivery because the coordinators are more inclined to spend time and effort on the finer details to ensure successful program delivery.
5. As program delivery improves, student learning and achievement improve.

I conducted an empirical examination of the first three postulates. The fourth and fifth postulates were implicit in my model, but were not examined explicitly in the current study. My study focused on the perspectives of program coordinators.

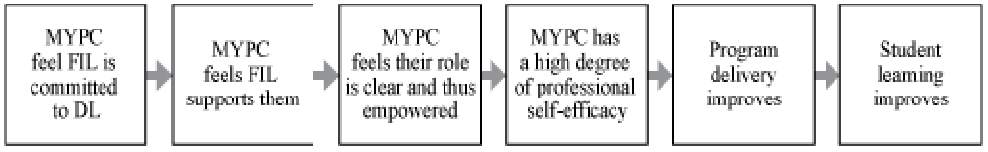


Figure 1: Causal model of the study.

Research Proposal

I examined these overarching questions in the context of the Middle Years Program (MYP) of the International Baccalaureate (IB). The IB has a three-program continuum of education for student from ages 3–19 years. The MYP is a five-year program for students aged 11–16 years. For many schools, the adoption of the MYP is appealing because it is a philosophy of education, rather than a set curriculum. The MYP

is a non-prescriptive framework for teaching and learning, and according to experts in the field, allows for best pedagogical approaches (Tolan, 2001; Sperandio, 2010).

The MYP implements the best pedagogy in some ways: (a) by developing skills through a concept-based curriculum, (b) by applying interdisciplinary synergy, and (c) by presenting content that is integrated, collaborative, current, and relevant. All of these methods empower students beyond traditional systems of education. One reason these methods empower students is that they have a voice in their own learning; they take ownership and assert their own ideas about the best ways to improve their learning and achievement.

A successful MYP program must include a framework for distributing leadership in a school (International Baccalaureate Organization, 2008b). Additionally, for schools to be authorized by the IB to offer the MYP to their students, they are required to put in place an organizational structure that establishes a pedagogical leadership team. A key person on the pedagogical leadership team is the Middle Years Program Coordinator (MYPC). One aspect of the role of the MYPC entails administrative responsibilities, such as disseminating information, overseeing implementation of the program, and providing students, teachers, and parents with up-to-date information. In addition, the role of the MYPC includes that of a pedagogical leader and thus entails responsibilities linked to curriculum delivery.

These responsibilities include (a) directing subject area leaders, (b) providing guidance and support to teachers for best pedagogical practice through informal and/or formal observations of teachers, and (c) providing teachers with guidelines and information pertaining to developing both disciplinary and interdisciplinary units.

The MYPC must be empowered to execute the responsibilities linked to both the administrative role and the pedagogical leadership role of the position. This will only occur if the FIL chooses to relinquish some responsibilities as instructional leader to entrust, to actively support, and to empower the MYPC with authority and leadership, thus establishing greater role clarity. According to my theory, greater role clarity, in turn, will bring about an increased sense of professional self-efficacy for the MYPC. Conversely, if the FIL communicates a confusing message to the MYPC about their position of leadership in the school, this will decrease role clarity in the mind of the MYPC. A low level of role clarity, in turn, will erode the sense of professional self-efficacy of the MYPC. Thus, role clarity is an important construct to include in the causal model linking FIL support and MYPC professional self-efficacy.

Research Questions

I asked the following research questions (RQ) to schools offering the MYP:

RQ1: Is there a relationship between Middle Years Program Coordinators' perceptions of the formal instructional leaders' commitment to distributed leadership and Middle Years Program Coordinators' perception of support from their formal instructional leaders?

RQ2: Is there a relationship between the Middle Years Program Coordinators' perceptions of the formal instructional leaders' support of them and the perceived clarity of their role?

RQ3A: Is there a relationship between Middle Years Program Coordinators' perception of the clarity of their role and their sense of their own professional self-efficacy?

RQ3B: If there is a relationship as stated in 3A, does role clarity mediate the impact of perceived formal instructional leaders' support on professional self-efficacy?

Research Design

The design for this research consisted of a non-experimental correlational study with controls for third variable effects. I employed an online survey in which a questionnaire I created provided both quantitative and qualitative data to answer the research questions. Using quantitative and qualitative data allowed for triangulation (Jick, 1979; Maxwell, 2012; Trochim & Donnelly, 2008). The method of triangulation using different sources of information (i.e., this case, the quantitative data from the Likert-type items and the qualitative data from the open-ended question) allowed for cross verification in order to increase the validity and credibility of the data.

The research instrument was the DLCI, developed following the distributed leadership inventory (DLI) example of Hulpia, Devos, and Rosseel (2009). The sampling method was a stratified systematic random sampling method that consisted of contacting every third name on the list of people in the role of MYPC on the IB website (www.ibo.org). Because the sampling frame consisted of 1,013 MYPCs worldwide, I surveyed every third person on the list, giving a sample number of approximately 337 people. I estimated a response rate of about 37%. Thus, this method would likely return a sample of about 124 people, which is the criterion for a power level of .8, a critical effect size of .25, and an alpha level of .05. With a stratified systematic random sampling methodology, everyone in the accessible population had an equal chance of being selected into the study sample (Glass & Hopkins, 1970).

The survey examined the perceptions of MYPCs on (a) the FILs' commitment to formal distribution of leadership, (b) support from the FILs to the MYPCs, (c) the MYPCs' role clarity, and (d) the MYPCs' professional self-efficacy. Table 1 shows a summary of the research design. In addition, I tested whether the links among the variables in the model persisted even after the effects of the demographic variables and structural school variables had been controlled. I included demographic and school structural variables (e.g., school size) in my analysis to see if the model held among different demographic groups and in different school structural contexts. In addition, I wanted to determine whether the hypothesized correlations would persist even after a set of possible third variable explanations was included in the model. The internal validity of the study (i.e., support for the causal model) is strengthened every time a third variable explanation for the hypothesized relationships is tested and eliminated. The research design, methodology, and analysis are elaborated in Chapter 3.

Audience, Significance, and Purpose

The main purpose of this study was to investigate MYPCs' perceptions of FILs' commitment to distributed leadership functions and its correlates. More specifically, the investigation set out to determine if this perception had a relationship with MYPCs' perceptions of the support they received from their FIL, MYPCs' self-evaluation of their role clarity and MYPCs' sense of their own professional self-efficacy. It is expected that this work will contribute to the greater understanding of DL. Specifically, the study contributes to the understanding of the relationship between program coordinators and FILs with regard to instructional leadership in the context of MYPCs' role clarity and professional self-efficacy.

Table 1

Research Questions, Question Predictor, Outcome, Data Source, and Type of Analysis

Research Questions	Question Predictor	Outcome	Data Source	Analysis
1. Within schools offering the MYP, is there a relationship between MYPCs perceptions of the FIL's commitment to DL and their perception of support from their FIL.	MYPCs perceptions of the FIL's commitment to DL	MYPC's perception of support from their FIL	Revised distributed leadership inventory	Simple regression
2. Is there a relationship between the MYPC's perceptions of the FIL's support of them and the perceived clarity of their role?	MYPC's perceptions of the FIL's support	MYPC's perceived clarity of role	Revised distributed leadership inventory	Simple regression
3A. Is there a relationship between MYPC's perception of the clarity of their role and their sense of their own professional self-efficacy?	MYPC's perception of the clarity of their role	MYPC's sense of their own professional self-efficacy	Revised distributed leadership inventory	Simple regression
3B. If there is a relationship as stated in 3A, is it also true that role clarity is the link that meditates the impact of perceived FIL support on professional self-efficacy?	1. MYPC's perception of the clarity of their role 2. Perceived support from the FIL	professional self-efficacy	Revised distributed leadership inventory	Analysis of covariance (ANCOVA)

The study built on recent works on the MYP and DL, notably those of Bolivar (2010); Hulpia and Devos, (2009); Hulpia et al. (2009); Lee, Hallinger, and Walker (2012); and Robertson (2011a). The audience for the findings is FILs, any schools considering adopting a DL model, the IB, and potential IB schools. These stakeholders will be able to use the findings to fine-tune the distribution of leadership in their schools and based on the proposed theory, this will ultimately lead to improved student learning and achievement.

Definition of Terms

The following definitions clarify the terminology used for this study:

Delphi method is a qualitative research method utilizing an interactive panel of experts in the field to review the instrument, to comment on content validity, and to provide suggestions for improving content validity (Hsu & Sandford, 2007; Pandza, 2008). The purpose of the Delphi method is to reach a consensus. All participants review each other's revisions and ultimately agree on the final version. The researcher sends out the questionnaire to the experts, solicits feedback, summarizes the responses, and then sends them back for further input, until a consensus is reached. Once a consensus is reached regarding the specific ways to revise the instrument to improve content validity, the suggested revisions are then made and a pilot study of the questionnaire follows.

Formal instructional leader, for the purpose of this research paper, is the person who directly supervises the MYPC (e.g., principal, section head, divisional principal, school head, etc.). In this paper, a formal instructional leader will be referred to as the FIL.

International Baccalaureate (IB) program, founded in 1968, currently works with 3,105 schools in 140 countries offering programs to over 889,000 students (www.ibo.org): the Primary Years Program (PYP) for students aged 3–11, the Middle Years Program (MYP) for students aged 11–16, and the Diploma Program (DP) for students aged 16–19. Each program has its unique approach to learning, with emphasis on international mindedness through intercultural awareness and respect, holistic learning, communication, and life-long learning. The programs promote "a pedagogy of inter-active class discussion and critical thinking skills, which would recognize a range of perspectives on any issue, particularly global issues" (Hill, 2006, p. 100). The focus for this research is the MYP of the IB.

Middle-level leaders in schools are those responsible for a wide range of administrative duties, critical to the effective operation of schools and central to the improvement of educational standards. In the present study, program coordinators are middle-level leaders.

MYP framework presents eight major subject areas all of equal standing (a first language, a second language, design, humanities, physical education, mathematics, sciences, and the arts) which integrate within the context of five areas of interaction (approaches to learning, community and service, environment, health as well as social and human ingenuity). Through these contexts, students become aware of the connection between subjects of real-world issues and see the relationships among knowledge, concepts, skills, and attitudes (International Baccalaureate Organization, 2008a).

Middle Years Program (MYP), developed in 1994, is a curriculum framework designed for students aged 11 to 16. Students are encouraged to be critical and reflective

thinkers and are challenged in the classroom. The curriculum should be current and relevant, should possess interdisciplinary synergy, and should develop in students the skills for communication, intercultural understanding, and awareness with the aim to prepare students to be 21st century learners in a global society.

Pedagogical leader refers to someone who recognizes and practices effective management of resources (e.g., people, money, and time) in a school to ensure teaching and learning is enhanced. A pedagogical leader, therefore, builds capacity by actively supporting and developing teachers intellectually and professionally so they, in turn, can develop students socially and academically (Sergiovanni, 1998). A pedagogical leader re-cultures the school towards improvement (MacNeill, Cavanagh, & Silcox, 2003). In sum, a pedagogical leader provides direction and guidance, models best practice, and develops and builds human capital.

Professional self-efficacy, as social cognitive and social learning theorists have defined, is a perception by an individual of how confident and capable they are in their ability to perform a given task (Bandura, 1986). Researchers have used a variety of terms regarding efficacy, such as self-efficacy and sense of efficacy (Woolfolk Hoy, 2004). I chose to use the term professional self-efficacy as it relates to the context of the study.

Role clarity, for the purposes of this study, has an explicit component and an implicit component. The explicit component is the written job description that appears in the MYP Handbook. The implicit component pertains to the degree of decision-making power granted by the FIL to the MYPC. Although instructional leadership is considered part of the MYPC role according to the MYP Handbook, the FIL does not grant the MYPC the required authority to fulfill this part of their job description in some schools.

When this happens, the MYPC experiences decreased role clarity and increased role ambiguity.

CHAPTER 2

Review of Literature

Introduction

With this study, I was seeking to determine whether the support from FILs impacted the IBMYPCs' role clarity and professional self-efficacy. More specifically, I intended to study the relations among three theoretical constructs (DL, role clarity, and professional self-efficacy), as viewed by the MYPCs. This chapter begins with an overview of the changing nature of school leadership and the emergence of the construct of DL. The chapter then provides a review of the relevant literature associated with the study's three constructs and their correlations to each other. Finally, I will discuss the three constructs in relation to the IB's MYP as a 21st century curriculum framework, including the role of the MYPC, whose perceptions were the focus of this study.

The Changing Role of Leadership

The greater complexity of tasks facing FILs in recent years has led researchers to question if a single person could take on all the main leadership roles at a school. This new outlook has led to the demise of the individual or *hero leader* who transforms schools (Goleman, Boyatzis, & McKee, 2002; Harris, 2004, 2011; Hartley, 2007; Heller & Firestone, 1995; Leithwood & Riehl, 2003; Smylie & Denny, 1990). Additionally, recent policy shifts in the public sector such as *No Child Left Behind* in the US and *Every Child Matters* in the UK have called for more accountability and increased pressures on FILs to enhance student learning and achievement. FILs must understand the challenges facing schools and be able to reconceptualize leadership away from a single-leader style to the distribution of leadership roles beyond their formal leadership posts (Harris, 2011).

The study of the role of school leadership in transforming schools owes much to the work of Kenneth Leithwood (Leithwood & Jantzi, 2006). He spent over 30 years analyzing the nuances of the changing role of the school leader. He progressed from looking at planned educational change and program improvement to the need for school restructuring and the manner this creates new expectations for those in leadership positions. The new expectation was for FILs to ensure that instruction and student learning were their primary tasks. As an instructional leader, the FIL is both a learner and leader who strives for excellence by setting goals, providing resources, and creating new teaching and learning opportunities through professional development and collaboration. Leithwood along with Hallinger (2003; 2007) advocated the concept of transformational leadership beyond instructional leadership to improve student learning (Leithwood & Poplin, 1992). He posited, "School leaders can further enhance teacher's development when they give them (teachers) a role in solving non-routine problems of school improvement within a school culture that values continuous professional growth" (Leithwood & Poplin, 1992, p. 10). According to Pawar and Eastman (1997), transformational leadership has an advantage over instructional leadership in its ability to overcome organizational inertia and create change.

Leithwood and Jantzi (2005, 2006) suggested that the transformational leader encourages all team members to put forth extra effort by facilitating collaboration, building capacity, and promoting a shared vision. Effective transformational leadership takes place through a DL model (Foster & St. Hilaire, 2004). Thus, leadership has evolved to a team level construct where the goal is to create a network of leadership teams with multiple leaders taking on leadership practices, rather than a single FIL (Bush

& Glover, 2003; Mehra, Smith, Dixon, & Robertson, 2006; Spillane et al., 2004). Simply put, DL offers the opportunity to look at leadership through a different lens where the interaction of followers and leaders—rather than the action of the leader—frames a new leadership definition (Harris & Spillane, 2008). In a DL model, we can find open leadership with varieties of expertise distributed among the many. Leadership becomes an emergent property of a network of individuals.

Distributed Leadership Theory

The concept of DL is not new. We can trace back the origins of DL at least 50 years to the field of organizational theory. Gibb (1954) made the distinction between focused leadership, with one central leader in the group and distributed leadership where—owing to the fluidity of members—leadership patterns fluctuated depending on the situation. Therefore, the members of the group were likely to distribute or share leadership. Different leaders would emerge depending on the task and the areas of expertise of the group members (Gronn, 2006). Gibb did not elaborate further on these two aspects of leadership and thus the concept of DL lay dormant in the ensuing three decades. During this time, the general concept of leadership roles and performance evolved.

Although DL has coined a synonym for a *bossless team* (Barry, 1991) or that everyone leads (Bennett, Wise, Woods, & Harvey, 2003), most recent conceptualizations of DL do *not* suggest that formal leadership structures are taken away or are obsolete (Harris, 2011). Instead, DL scholars have described leadership as a phenomenon stretched across behaviors, responsibilities, and communications within a network of individuals (Heller & Firestone, 1995; Spillane et al., 2004), and the definition of

leadership is expanded (Elmore, 2000; Harris, 2008). Leadership teams are envisioned as having a fluid membership, which changes according to the task with different leaders responsible for different leadership functions. DL is fundamentally about rethinking organizational redesign to generate the building of greater leadership capacity at the middle level (Bennett et al., 2003; Gronn, 2002; Harris, 2003, 2006; Leithwood, Day, Sammons, Harris & Hopkins, 2006; Spillane & Sherer, 2004). These studies examined how redesigning the organization by implementing DL may improve schools, but they did not look specifically at how DL at the middle level could help improve student learning and achievement.

Studies on the Benefits and Barriers of DL

Studies on DL have examined both the benefits and barriers of implementing a DL model in schools. Spillane et al. (2001, 2004) conducted a four-year longitudinal and qualitative study designed to analyze leadership practice in 13 elementary schools in Chicago, Illinois. The study concluded that the engagement of multiple leaders in a DL model, rather than one individual leader, was the best use of resources in efforts to improve student learning and achievement. This early study gave some insight into the value and benefit of DL but did not discuss the role of middle-level leaders specifically or the analysis of tasks or situations in relation to FIL support.

In order for middle-level leaders, who are responsible for a wide range of administrative duties to perform their role clearly, they must perceive they have supervisory authority and support from their FIL. Hulpia et al. (2009) explored the perceptions of DL and leadership teams in 46 secondary schools in Flanders, Belgium. They created a DLI sample based on three core leadership functions: (a) setting a vision,

(b) developing people, and (c) teacher supervision. The DLI was sent out to 47 principals, 85 assistant principals, 248 teacher leaders, and 1,522 additional teachers to determine the perceived performance levels of the core leadership functions by leaders in the schools. The results of the questionnaire showed that supportive leadership functions were seen as the role of leaders at all levels. However, supervisory roles were perceived to be solely the function of principals and assistant principals. This view was confirmed in a follow-up study (Hulpia et al., 2009) where teachers indicated they preferred to be supervised by individuals at the highest levels of leadership within the school. The results of the first study concurred with other studies that suggested teachers desired to be involved in professional dialogue with middle-level leaders but not to be supervised by them. Thus, middle-level leaders may encounter challenges to their authority from teachers. In such cases, middle-level leaders must receive supervisory support from their FIL who explains their role clearly to the faculty so that they can perform their leadership role.

Other researchers have demonstrated the benefits and barriers of a DL model. A recent analytic autoethnographic qualitative study examined the development of a DL model in a private school in Mexico (Singh, 2012). The study took place over a three-year period with a group of middle-level leaders. Singh revealed the development of a DL model caused positive benefits in terms of (a) modeling collaboration, support, shared vision, and trust as well as (b) allowing for different perspectives and leaders to emerge dependant upon the situation. However, a barrier to DL that surfaced was the amount of time and commitment it took working as a team. Further, leadership did not come naturally to some of the team members and on occasion, members were territorial and did

not maintain the required confidentiality. The study highlighted the overall success of a DL model by citing improvement in standardized tests and nationwide exams. Finally, the study concluded that a DL model was unlikely to be successful without careful thought and planning as to how DL works.

How DL Works

Lee et al. (2012) conducted a study on a distributed perspective on instructional leadership. They showed how DL works in the international school arena. In their qualitative study of five international IB schools located in Thailand, Vietnam, Hong Kong, and China, Lee and his colleagues interviewed 68 teachers and 25 students. They set out to provide a better understanding of and demonstrate the need for what they termed *distributed instructional leadership*, questioning whether instructional leadership needed to be distributed widely throughout an IB school.

The study's five schools offered all three programs of the IB: PYP for students aged 3–11, the MYP for students aged 11–16, and the DP for students aged 16–19. Schools that follow all three programs of the IB are known as IB continuum schools. Even though continuum schools follow all three IB programs with common origin and philosophy, the programs themselves have distinct curricular and pedagogical differences. Structurally, schools tend to be organized into discrete sections: primary, middle, and high school. Thus, there is a need for distribution of instructional leadership to occur in an IB continuum school in order to coordinate the work of the three sections. Their study concluded that given the differing nature of the three IB programs, there was a need to intentionally distribute responsibilities for instructional leadership throughout the school. The study findings resonated with previous research suggesting that the

particular way DL is organized impacted organizational outcomes (Singh, 2012). DL must be organized so that the most effective people are in place and DL is planned and coordinated (Leithwood et al., 2007).

As noted from previous studies on DL, leadership is evolving in schools to a DL model, and this has implications for the role of the FIL (Harris, 2011). Harris examined the available empirical evidence about DL and organizational outcomes. She concluded that the concept of leadership is evolving from an attribute of an individual and becoming a characteristic of the interactions among several individuals. In order to accommodate this change, principals need to relinquish power and authority and build a high degree of trust and professionalism with those in formal and informal leadership positions. This remains one of the biggest barriers to DL in that FILs and individuals in organizations need the strength and capacity to let go of their perceived understanding of one person (e.g., the FIL) leading the organization.

Limitations of DL. As a conceptually immature, evolving construct in education, DL is not without scholarly critique or controversy (Fitzgerald & Gunter, 2006; Hargreaves & Fink, 2009). There remains some confusion around the definition of the concept. DL is often used interchangeably with shared (Pearce & Conger, 2003), collaborative (Wallace, 2003), collective (Leithwood & Mascall, 2008), devolved (Bennett et al., 2003), emergent (Harris, 2011), participative (Vroom & Jago, 1995), democratic (Bolden, 2011) and co-leadership (Spillane, 2006), suggesting that DL is simply a new term for an established leadership style. However, according to Harris and Spillane (2008), where DL differs from the above constructs, DL purposefully and deliberately sets out to deal with increased pressures and demands on schools by

requiring a more responsive approach of leaders and their followers. Pressures and demands on 21st century schools include mandates from governments: *No Child Left Behind* in public/state schools, parental and student engagement and voice, increased competition for university places, and the need to alter teaching methodology through technology for a changing and increasingly competitive job market. DL in schools "suggests that 'followers' may actually be a key element in defining leadership through their interactions with leaders" (Harris & Spillane, 2008, p. 33), which will purposefully help with the increased complexity of schools.

However, some writers have questioned the leadership motivation behind a DL model. Commentators ask if DL is simply a way to get middle-level leaders and teachers to do more work (Hargreaves & Fink, 2009). Is it not better to have fewer leaders rather than more? The perception of too many *chiefs* can lead to lack of clarity and inefficiency in a team, thus negatively effecting outcomes (Harris, Leithwood, Day, Sammons, & Hopkins, 2007). Practically, DL can be difficult in terms of conflicts and competing leadership styles. Schools tend to have an established hierarchy that looks to the FIL as having the formal power and authority.

Cultural, micropolitical, and structural barriers may mean DL is difficult to either implement or accept (Singh, 2012). Harris (2004) and Goldstein (2004) both noted that when not executed properly, DL could be viewed as misguided delegation or as Timperley (2005) posited, the distribution of incompetence. Moreover, leadership needs to be distributed to those who have the expertise and required skills to carry out a given task and understand what is expected of them. FILs need to understand the nature and purpose of DL and the manner to implement it by design rather than default (Day et al.,

2009). FILs "play a key role in leadership distribution and are a critical component in building leadership capacity throughout the school" (Harris, 2011, p. 8). Evidence shows that without the support of FILs, successful implementation of DL is unlikely (Harris, 2011; Murphy et al., 2009). DL requires FILs to support and facilitate others in leading, which is at the heart of this study.

Summary of DL. In sum, given the complexity of schools in the 21st century, DL is a construct that has the potential to have greater influence on organizational redesign by intentionally and actively distributing leadership tasks to a number of individuals within the school context. The purpose of redesigning a school is to improve student learning and achievement. The literature suggests "that school redesign is unlikely unless patterns of leadership practice are dramatically altered and flattened" (Harris & Spillane, 2008, p. 32). DL highlights the necessity of changing leadership practice rather than leadership roles. This is not a straightforward task and is in part dependent on the FIL to promote "others to be leaders in their own right" (Sergiovanni, 1991, p. 35). These individuals must understand what leadership is and act accordingly. Although DL does not mean there is no longer a need for FILs, a DL approach is a change from a top-down model. In a DL context, FILs must establish role clarity for the middle-level leaders and the teachers as well as for themselves.

Role Clarity

Role clarity and its converse, role ambiguity, have been the focus of substantial research and warrant attention in this study because of the implications regarding DL, particularly in the context of middle-level leaders and how clarity of role affects their performance (Lieberman, 2004; Rizzo, House, & Lirtzman, 1970; Tubre & Collins,

2000). A role refers to a set of responsibilities that an individual is expected to perform within a group (Beauchamp, Bray, Eys, & Carron, 2002; Sherif & Sherif, 1953). Role clarity occurs when there is clear information provided about the role. In contrast, role ambiguity occurs when a person in a particular position lacks adequate and consistent role-relevant information (Rogers & Molnar, 1976). Organizational theorists have argued that role clarity is needed among team members in the workplace (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Sarnoff & Katz, 1954; Maslow, 1943). Moreover, a major characteristic of an effective team is that FILs and all the members perceive that roles are clear. This is achieved through clear communication regarding the distribution of tasks.

When FILs facilitate defining clarity of roles, this will help middle-level leaders execute their roles more effectively. Several studies on DL have focused on the importance of role clarity. For example, Scribner, Sawyer, Watson, and Myers (2007) conducted a qualitative case study that explored DL, as it related to two teacher teams in a public secondary school in the US. One key finding from the study was the need for FILs to become more aware of their role in helping to establish clarity of purpose and appropriate levels of autonomy so teams may engage in work that is effective and innovative.

Mayers and Zepeda's (2002) study pertained to role clarity of high school department chairs as middle-level leaders. The researchers examined the challenges chairs faced in their dual roles as administrators and instructional leaders. The researchers employed a case study method, which examined the perspectives of five department chairs. Data were collected through semistructured interviews and each department chair was interviewed five times over the period of one year. The main

finding from the study was that chairs experienced role ambiguity due to the tension between their roles as administrators and as instructional leaders. Two other interconnected findings emerged from the data: (a) it was challenging for chairs to manage the multiple learning curves of the people who answered to them, and (b) chairs felt they did not have enough time to perform each of their roles successfully and this effected their professional self-efficacy (Mayers & Zepeda, 2002).

In their conclusions, Mayers and Zepeda (2002) presented several recommendations to help FILs reduce the tension experienced by chairs to increase their role clarity and thus, theoretically, to increase their productivity. Recommendations included (a) providing professional development to help chairs in their leadership capacity, (b) making sure they understand their role and have a clearer understanding of it, and (c) revising schedules so they have more time to perform their roles. It was hypothesized that once these recommendations are implemented, chairs would be empowered to become leaders of their departments and not only managers.

Beauchamp et al. (2002) research focused on a context different from that of the current study, but I include it here because the findings shed light on the hypothesis under investigation. Their study on role ambiguity and role conflict within elite level interdependent sport teams surveyed via questionnaires 261 university athletes at the University of Birmingham in the United Kingdom. One aspect of their work investigated the relationship between role ambiguity, role conflict, and role-related efficacy. They defined role-related efficacy as "a team member's confidence in his or her ability to carry out interdependent role functions" (Beauchamp et al., 2002, p. 143). They concluded that role ambiguity was negatively associated with role-related efficacy. That is, when people

felt unclear about their role, they had less confidence in their ability to carry out that role. Further, guided by Bandura's (1997) self-efficacy theory, they hypothesized this would lead to lower performance.

Professional Self-Efficacy

Questions of professional self-efficacy within a DL environment remain largely unanswered. To date, most research related to professional self-efficacy in the academic arena has been on student self-efficacy (Jinks & Morgan, 1997; Schunk, 1985, 1991, 1996), individual teacher self-efficacy (Gibson & Dembo, 1984; Ross & Bruce, 2007; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998), collective teacher self-efficacy (Goddard et al., 2004; Hoy & Miskel, 2008; Ware & Kitsantas, 2007), and most recently, the emerging construct of principal self-efficacy (Tschannen-Moran & Gareis, 2004, 2005). The current study is the first to delve into the construct of self-efficacy among middle-level leaders.

Professional self-efficacy is a construct grounded in Bandura's (1986) social cognitive theory. The construct of professional self-efficacy is helpful when applied to schools. Professional self-efficacy occurs when a person expects to succeed at a task or obtain a valued outcome through personal effort and strong self-belief (Lee, Dedrick, & Smiths, 1991). Strong self-belief can influence how a person thinks and feels about a given situation and has an impact on motivation and actions and thus, the likelihood to succeed (Bandura, 1995). Wood and Bandura (1989) noted that in order to succeed, people must have a "robust sense of personal efficacy to sustain the productive attentional focus and perseverance of effort" (p. 413).

Relations Between Role Clarity and Professional Self-Efficacy

Research on teacher self-efficacy has shown that teachers who have higher self-efficacy tend to spend more time preparing lessons and helping students outside of class time. These self-efficacious teachers are also inclined to praise students and build confidence in them (Gibson & Dembo, 1984). In contrast, when teachers have low self-efficacy, they are disengaged and are more likely to act negatively towards students by criticizing them and giving them punitive sanctions (Dimmock & Hattie, 1996; Woolfolk & Hoy, 1990). Teachers' efficacy is related to their school organization in that teachers are more efficacious when they have more control and can assert leadership with regard to their classroom practices (Hallinger & Heck, 1999; Lee et al., 1991).

Further, teachers' sense of self-efficacy beliefs has been associated with improved student learning and achievement (Ashton & Web, 1986; Midgley, Feldlaufer, & Eccles, 1989; Ross, 1992; Tschannen-Moran et al., 1998). Teachers with high self-efficacy beliefs generate higher levels of student learning and achievement (Tschannen-Moran et al., 1998). Some researchers have studied collective teacher efficacy (Goddard et al., 2004; Hoy & Miskel, 2008) where teachers believe the shared capabilities and collective efforts can have an impact on student achievement by promoting a culture in a school that works persistently to improve. A study by Ware and Kitsantas (2007) on teacher and collective efficacy beliefs as predictors of professional commitment noted the importance of administrative (FIL) support that teachers were able to obtain through their collective efforts and thus the importance of such efforts.

Research linking role clarity and professional self-efficacy suggests that when roles are not clear, individuals in the organization do not perform as well and are less

committed. Further, individuals do not believe in their ability to carry out their duty well and the organization is less effective in general (Fisher & Gitelson, 1983; Jackson & Schuler, 1985; Tubre & Collins, 2000; van Sell, Brief, & Schuler, 1981). Research by Katz and Kahn (1978) suggested that lack of role clarity relates negatively to a school leader's professional self-efficacy.

Principal (FIL) professional self-efficacy is an emerging construct. Research by Rossow (1990) posited that if the principal (FIL) does not have high levels of professional self-efficacy, the effect on both students and teachers can be dramatic. Work by Tschannen-Moran and Gareis (2004, 2005) reported on three studies that were conducted in the search to reliably and validly measure principals' sense of efficacy. The findings of the study concluded that given the increasingly high-stakes role of the principal, even the most capable principals must have strong beliefs in their own ability to meet the expectations and demands of the position. Tschannen-Moran and Gareis (2004, 2005) suggested the instrument needed further testing, using factor analysis to determine transferability to other populations.

The studies by Tschannen-Moran and Gareis (2004, 2005) captured the relationship between efficacy and attitudes towards distributed leadership of principals. To date, however, there has been little research examining the link between middle-level leaders' (e.g., MYPCs') professional self-efficacy and the commitment of the principal or other FILs to integrated DL. Professional self-efficacy has an impact on the choices middle leaders make and the amount of effort, quality, and persistence they put forth.

Summary of the Three Constructs

This literature review pertaining to the three constructs in the study has revealed the following:

1. Given the complexity of leadership in schools today, DL can influence school redesign by actively and intentionally distributing leadership tasks to a number of individuals to improve the learning and achievement of students.
2. DL in practice requires that people, especially those in middle-level leadership positions, have clarity of their role.
3. Role clarity literature suggests that without clarity of role—and notably in a DL model where roles are fluid and interchangeable—individuals are unable to perform at the level required.
4. Crucially, a lack of role clarity may lead to lower professional self-efficacy.
5. Research suggests that role clarity and high levels of professional self-efficacy have a positive impact on school culture and school effectiveness.

The remainder of the literature review will address the three constructs in the context of the MYP.

The International Baccalaureate Middle Years Programme (IBMYP)

The context for this study revolves around schools worldwide, offering the IBMYP. This curriculum program requires the creation of middle-level leadership in the form of MYPCs. As of May 2013, there were 1,013 schools in the IB regions of the world offering the MYP: 163 in Africa, Europe, and Middle East region of the IB; 140 in the Asia Pacific; and 710 in the Americas. The IB requires school leaders to appoint a coordinator before the school is authorized to offer the program. In doing so, the school

is expected to adopt a DL framework that empowers program coordinators to lead, which will help with the delivery of the curriculum and the improvement of student learning and achievement. The IB describes the role of these coordinators as members of "the pedagogical leadership team [which takes on] . . . leadership role(s) in advising and working with teachers on the development of the curriculum" and thus, these individuals play a key role in the development, delivery, and leadership of the program (International Baccalaureate Organization, 2008b, p. 23).

Role of the MYPC. In addition to working with the pedagogical leadership team, the MYPC has responsibilities towards other stakeholders: school area leaders, teachers in subject departments, students, and parents. The MYPC must ensure systems are set up for communication, understanding, and cooperation. The MYPC is the school liaison for communication with the IB regional office on all issues related to the program. The MYPC is also responsible for circulating information from the IB to appropriate individuals.

Robertson's (2011a) empirical research on the role of the MYPC involved two stages. The first stage comprised of interviewing eight experienced MYPCs. The second stage of the research was a case study of three schools in the US and Canada. The schools in the study consisted of an international private school, a national private school, and a national public school. One of the study's conclusions was that the schools' pre-existing organizational resources and structures (e.g., schedule, cultural barriers) prevented collaborative and interdisciplinary planning and thus interfered with MYPCs' ability to perform their roles in a leadership capacity.

In the schools Robertson studied, MYPCs overcame their lack of formal authority

through key functions to become the guide alongside the facilitator and professional developer (Robertson, 2011a, 2011b). He concluded that for continued program development to happen, greater attention must be paid to what he termed the *creative professionalism* of the coordinator's role. Creative professionalism (Hargreaves, 1998) in this context is where MYPCs need support from their FIL to allow them to lead others in conducting experimentation regarding their teaching methodology (e.g., by developing innovative, interdisciplinary units). Robertson's further conclusion that coordinators typically had a lot of responsibility but little formal authority inferred the absence of a DL model in the schools and thus, an impetus for this research.

DL and the MYP. The MYP model is one DL whereby *deeper and wider pools of leadership abilities are developed within the school* (Hargreaves & Fink, 2006*)*. Meaningful interdisciplinary teaching and learning is the cornerstone of the MYP and is predicated on deep disciplinary learning. As the MYP has a fluid, project-based, and interdisciplinary curriculum framework, different leaders naturally emerge during new units and ideas of learning. Thus, there is a match between the MYP context and the DL leadership framework to generate greater leadership capacity. Moreover, DL in practice calls for a flatter, lateral design along with formal leadership processes to aid the decision-making process and generate organizational change and development (Hargreaves, 2007; Leithwood & Jantzi, 2005; Mitchell & Sackney, 2011; Silins, Mulford, & Zarins, 2002; Walters, 2007).

An example where formal leadership processes can work within a flatter, lateral design to distribute leadership in the MYP is the appointment of areas of interaction leaders. The areas of interaction (AoI) are the core of the MYP model as they transcend

the boundaries of traditional subjects and are common to all disciplines and thus, provide the contexts for learning (International Baccalaureate Organization, 2008a). The AoI include (a) approaches to learning, (b) community and service, (c) human ingenuity, (d) environments, and (e) health and social education. Using the AoI as a lens, learning is explored through real world issues and this gives the MYP "its unique core of skills, values and attitudes" (International Baccalaureate Organization, 2008a, p. 8). The practice of teachers leading the AoI effectively distributes leadership away from not only the FIL, but the MYPC also. This is one example pointing to the need for change when adopting the MYP model. The MYP curriculum framework thus contrasts with a traditional model where subjects are taught independently of one another and no explicit connections are made between subject areas. Figure 2 shows the MYP as a distributed model.

Challenges to the implementation of DL in the MYP. For schools opting to adopt the MYP, the organization will require profound change (Senge, 2000) and stakeholders may need to alter their values and teaching methodology in order to deliver the program, such that student learning and achievement will improve. However, when adopting and adapting to change in a school, not all school administrators may realize the complexity of the change process to a DL model, and the result of this can lead to ill-conceived perceptions about the lack of organizational commitment to the change (Ohlhausen, Meyerson, & Sexton, 1992). When schools attempt to implement the MYP and fail to adopt an effective DL model recommended by the IB, and the FIL remains the sole instructional decision maker, MYPCs have little leadership capacity to develop the program effectively. Further, it is essential to have FIL buy into DL in order to bring

about optimal effectiveness of the MYPC and of the school in general, to bring about greater student learning and achievement**.**

Figure 2. Example of the MYP as a DL model.

Role clarity issues in the early years of the MYP. As a nascent program, the MYP has not been without critique and scrutiny. The origins of the MYP began in the 1980s with an initiative from the International Schools Association (ISA). The IB took over the framework from the ISA in 1994 and developed it into the MYP. During these first years, the program lacked definition and had limited leadership and direction (International Baccalaureate Organization, 2010). Coordinators struggled with the nature of their role, as clear professional description was lacking. The lack of a clear role made it difficult for MYPCs to be self-efficacious, which was detrimental to the program development and thus the improvement of student learning and achievement. In an attempt to remedy the situation as the MYP developed, IB curriculum headquarters in

Cardiff, Wales produced subject guides in the late 1990s and developed moderation of student assessment, but there was still much to be done. MYP coordinators felt there was insufficient support for both them and the program they were responsible for. They wanted more guidelines and prescriptions to clarify their role (M. Nicolson, personal communication, April 2010).

MYP change initiatives to deal with role clarity. In 2006, major change initiatives to the MYP began to merge existing guides: *Implementation and Development of the Program* (2000) and *Areas of Interaction* (2002) into a single, more coherent document. This led to the development of a new guide called *Middle Years Programme: From principles into practice* (International Baccalaureate Organization, 2008a). This publication is an in-depth essential resource and guide to MYP curriculum, assessment, and teaching requirements designed to bring about improved student learning. The IBO requires all teachers to have access to the guide and to be familiar with it. The guide contains a clear outline for the professional description of coordinators, which provided the much-needed clarification of the coordinator's role. For the first time, the role of the MYPC was defined as a *leadership position* (International Baccalaureate Organization, 2008a, p. 81). In the annual C*oordinator Guide* (2010), specifically for MYPCs, the IB suggests that the MYPC role is as a pedagogical leader who has a "central function in the organization of the program" (International Baccalaureate Organization, 2010, p. 6).

DL and professional self-efficacy in the MYP. Bolivar (2010) conducted an exploratory case study on DL and social networks in MYP schools in an IB school in Venezuela. Using the integration of two theoretical frameworks (DL and social networks), Bolivar set out to describe and understand leadership in action during a time

of redesigning the organization by implementing the MYP. The study used a mixed method approach. The researcher sent a survey out to teachers to obtain data on the information flow during the time of change, curriculum collaboration, and pedagogical support. Twenty-two administrators, coordinators, and teachers were interviewed and observed at planning meetings. His study, in line with Robertson's (2011a, 2011b) conclusions, revealed that administrative support for teachers practically, pedagogically, and emotionally led to greater confidence and professional self-efficacy of teachers. Their efforts were recognized and there was obvious concern for their well-being. This, in turn, helped teachers to work collaboratively and move away from traditional teaching practices to a more interdisciplinary approach through teaming and shared leadership. In the current study, the focus was to test whether MYPCs, similar to teachers in Bolivar's study, perceived that commitment to DL and support from their FIL would provide them greater role clarity.

Conclusion

This chapter has provided a relevant literature review of the study's three theoretical constructs: DL, role clarity, and professional self-efficacy in the context of MYPCs as middle-level leaders. The literature supported the need for distributed leadership to deal with the complexity of 21st century schools. In addition, I have presented literature supporting the theory that greater role clarity and FILs' support of middle-level leaders lead to greater professional self-efficacy. The authors cited throughout this chapter from the three constructs drew valuable conclusions that provide the foundation and justification for a quantitative study on DL, role clarity, and

professional self-efficacy, with a focus on the perceptions of MYPCs on FILs' commitments to DL.

CHAPTER 3

Methodology

Purpose

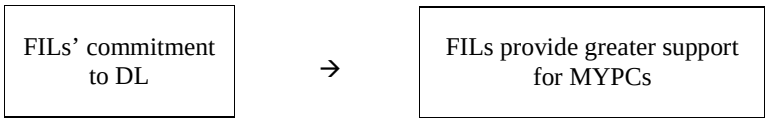
The purpose of this study was to investigate MYPCs' perceptions of their FILs' commitment to DL, the extent to which they felt supported by the FIL and how that impacted their role clarity and professional self-efficacy. The study examined DL functions and DL correlates from the MYPCs' point of view.

Study Questions, Models, and Hypotheses

A causal model that posited the following sequence of action guided the study: Greater FIL commitment to the DL model will lead to greater support from the FIL to the MYPC. This, in turn, will lead to the MYPC's (a) greater role clarity and (b) greater professional self-efficacy as well as improved organizational effectiveness, increasing the likelihood for improved student learning and achievement. Using this causal model, the following questions and hypotheses were developed:

Research Question 1. Within schools offering the MYP, is there a relationship between MYPCs' perceptions of the FILs' commitment to DL and MYPCs' perception of support from their FILs?

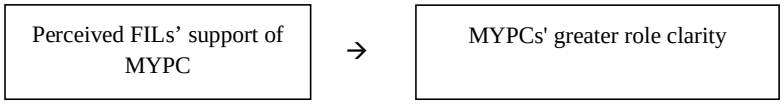
Model 1



Hypothesis 1. When the MYPCs perceive FILs have greater commitment to DL, this is linked to the MYPC perceiving a greater level of support from the FIL.

Research Question 2. Is there a relationship between MYPCs' perceptions of the FILs' support of them and the perceived clarity of their role?

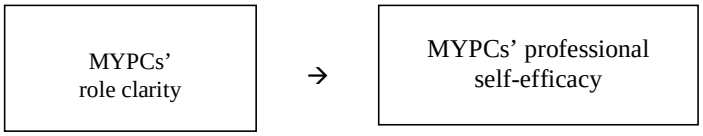
Model 2



Hypothesis 2. When MYPCs perceive greater support from FILs, MYPCs will have greater role clarity.

Research Question 3A. Is there a relationship between MYPCs' perceptions of the clarity of their role and their sense of their own professional self-efficacy?

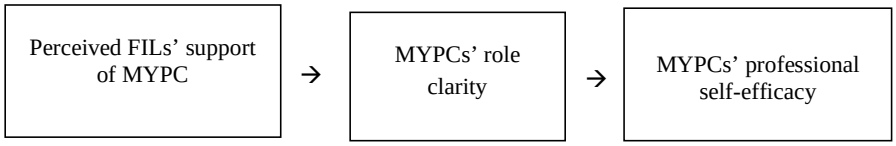
Model 3A



Hypothesis 3A. When MYPC have higher levels of role clarity this is linked to higher levels of MYPCs' professional self-efficacy.

Research Question 3B. If there is a relationship as stated in 3A, does role clarity mediate the link between perceived FILs' support on professional self-efficacy?

Model 3B



Hypothesis 3B. I hypothesized that role clarity would mediate the link between perceived FILs' support and MYPCs' professional self-efficacy.

Study Design

Researchers can increase the robustness of the conclusions drawn about a process or phenomenon by examining it from multiple perspectives (Creswell, 2003; Jick, 1979). In order to provide multiple perspectives and permit triangulation of the data, I collected both qualitative and quantitative data using survey techniques. I created a data collection instrument and sent it to a random sample of MYPCs using an online data collection service called SurveyMonkey.

Data Collection Instrument and Methods to Establish Construct Validity

Overview. In order to address the research questions posed above, I needed to create a questionnaire to measure all of the constructs described in the questions. I generated 36 questions based on concepts that appeared in the distributed leadership inventory created by Hulpia et al. (2009). The questionnaire is entitled The DLCI (Appendix A). The question responses used a six-point Likert scale with the following qualitative anchors: 1 = Strongly agree, 2 = Agree, 3 = Slightly agree, 4 = Slightly disagree, 5 = Disagree, and 6 = Strongly disagree.

The survey included one open-ended question: What additional support, and from whom, would improve your ability to carry out your role as an MYPC? It was expected that the individual responses from the MYPCs to this question would give a deeper understanding of the pattern of responses resulting from the analysis of the forced choice questions on the survey (Maxwell, 2012).

Validation steps. I conducted a pilot study described below. I sent the draft of the questionnaire to a small pilot sample of coordinators. Then, I revised the instrument based on their feedback. I sent the new instrument to the full sample for the study. Then, I tested several psychometric properties of the instrument based on the full sample for the current study. I will describe the population and sampling methodology for the full study. Finally, I will describe the steps I took to establish psychometric validity of the instrument once the data for the full study were returned. It seemed logical to organize the steps in this order because it was necessary to describe the sampling methodology and characteristics of the full sample before explaining how the psychometric testing was conducted on the data for the sample at large.

Pilot study. The idea of the DLCI came from Hulpia et al.'s (2009) distributed leadership inventory (DLI). I used this as a springboard to formulate my questionnaire, which I initially conceptualized as a revised version of the DLI, but as the items on the DLI inventory would not have answered my research questions, I developed my own instrument. I applied the Delphi method to establish content validity and conducted a pilot study to test for reliability and validity of the instrument.

First, I created a draft of the instrument. Secondly, I asked three experts in the field to review the instrument and comment on content validity. For example, did it measure all the important topics covered by the variables? Was the length appropriate? Were the questions clear? Were there any revisions they would recommend? Once I received their feedback, I made revisions that I deemed appropriate and sent it out a second time for their input. I used a modified *Delphi* technique to develop the instrument (Hsu & Sandford, 2007) and the purpose was to reach a consensus so that all participants

reviewed one another's revisions and ultimately agreed on the final version. Expert review is the essence of the Delphi technique. My three chosen experts were Dr. Barry Drake, Consultant for Search Associates; Dr. Mary Hayden, Professor at Bath University in the UK; and Dr. Merris Page-Smith, Curriculum Coordinator and Integrationist at the American International School of Johannesburg. All of these experts are known for their scholarly contributions to international education and notably the IB. Each expert gave feedback independently to ensure unbiased evaluation.

Once I adjusted the instrument by incorporating the useful feedback from the experts, I requested approval from the Institutional Review Board (IRB) at Lehigh University to conduct a pilot study with 30 people. Once approved, I conducted a small pilot study (Oppenheim, 2000) by sending it out to 30 people who hold the position of PYP or DP coordinators. I selected these individuals for the pilot study because their professional status is similar to the MYPCs. Thus, their input was relevant to the study and I did not risk losing potential respondents (MYPCs) for the main study. (People who were included in the pilot sample were not included in the main study.) I conducted the pilot study using an online data collection service called SurveyMonkey.

When I received the data from this pilot group, I downloaded the data and computed Cronbach alpha coefficients (CACs) as the reliability coefficients for each of the four hypothesized scales: (a) MYPCs' beliefs about FILs' commitment to DL, (b) degree to which MYPCs' feel supported by FILs, (c) level of MYPCs' role clarity, and (d) level of MYPCs' professional self-efficacy. Reliability in this context pertains to inter-item consistency within the scales. In other words, reliability refers to the extent to which the items within a particular scale are correlated with each other. The criterion for

an acceptable coefficient is one greater than or equal to .70 (Cohen, 1988; Norušis, 1999). All the CACs reached or exceeded the value of .70 (see Table 2). And so, I deemed them to be reliable.

Table 2

Cronbach Alpha Coefficients From the Pilot Study for the Distributed Leadership Correlates Inventory (DLCI)

Scales/Indicators	Cronbach Alpha (CAC)
FIL commitment to DL	.90
FIL support for MYPC	.91
Role clarity	.91
Professional self-efficacy	.75

The Population and Sampling Methodology

The theoretical population for this study was all the current MYPCs worldwide in IB programs and MYPCs who will hold these positions for the next several years and into the future. The accessible population consisted of the 1,013 MYPCs listed on the IB website (www.ibo.org) at the time the sampling occurred in May 2013. The sampling method was a stratified, systematic, random sampling method (Babbie, 2012; Wallen & Fraenkel, 2001) that consisted of contacting every third name of the listed MYPCs. The IB operates in three official languages (English, French, and Spanish) and in three regions of the world: the IB Americas (IBA), the IB Asia Pacific (IBAP), and the IB Africa, Europe, and the Middle East (IBAEM). The survey was therefore translated into all three languages and distributed to the appropriate language groups. The table below gives the number of MYP schools in each region and the number of schools for each language.

Table 3

Count of MYP Schools for Each Region by Language

Region	Language			
	English	French	Spanish	Total
IBAEM	151	6	6	163
IBAP	140	0	0	140
IBA	558	99	53	710

As there are environmental factors that differ from one region and from one culture to the next, I decided to take a representative sample from each geographic regional subgroup of the population. I combined the three lists of names for the three regions into a single list and then contacted every third MYPC on the large list. Thus, the survey was sent to 1,013/3 = 337 MYPCs. With a stratified, systematic, random sampling methodology, everyone in the accessible population had an equal chance of being selected into the study sample (Wallen & Fraenkel, 2001). This was a probability sample and produced a representative sample of the accessible population. The accessible population of MYPCs (one per MYP school) was stratified as follows: 70% were in the IBA region, 16% were in the IBAEM region, and 14% were in the IBAP region. When I conducted the stratified, systematic, random sampling, I found the percentage of MYPCs in the sample mirrored the percentage of MYPCs in the population with regard to region. Thus, in the sample, 234 (70%) of MYPCs (schools) were from the IBA region, 55 (16%) were from the IBAEM region, and 47 (14%) were from the IBAP region. Therefore, the proportions in the sample matched the population. The actual number of respondents is outlined in Table 4.

Table 4

IB Regional Representative Response Rate

IB Region	*n*	Sample (%)	Population (%)
IBAEM	55	16	16
IBA	234	70	70
IBAP	47	14	14
Total	336	100	100

Data Collection Method

I used SurveyMonkey, an electronic data collection service to collect the data. SurveyMonkey allowed responses to be downloaded directly to the statistical package for the social sciences (SPSS, version 21.0: Norušis, 1999). The letters inviting MYPCs to participate in the survey appear in Appendix B (English), Appendix C (Spanish), and Appendix D (French). The letters stated that protecting the identity of the MYPC was guaranteed. This was essential because comments about their FILs were sensitive.

I anticipated a response rate in the range of 30% (Nulty, 2008) to 37% (Sheehan, 2001) based on prior research utilizing online survey methods. A relatively high response rate in the range of 37% can be achieved by sending repeated reminder e-mails according to Nulty (2008). I attempted to contact MYPCs through the IB website. This method limited me to three attempts. After three contacts, the website put a block on further correspondence, and I had to return to the site later, it would have been excessively time-consuming to send out 337 e-mail reminders. When I was unable to contact MYPCs through the IB website, I went onto the individual school websites and contacted from there the coordinators directly by name.

Responses were steady during the first week following the delivery of the MYPC to selected participants. To further booster the return rate, I used my connection to the Academy of International School Heads (AISH) to e-mail the chief administrator of MYPC schools in AISH and obtain e-mail addresses so I could deliver the invitation directly to the MYPC in each school. This produced an additional 20 responses. I hypothesized a response rate of 37%, which would result in a sample of 337 x .37 = 124. By the end of the second week, I had received 135 responses. Moreover, the percentages in each regional group in the sample mirrored the percentages in each regional group in the population. I calculated the response rate as the percent of the people sampled who actually returned a questionnaire. The overall response rate was 40.5%. After accounting for the missing data, I found that 111 subjects had complete data for the full model. This number corresponds to a response rate of 33%. Thus, according to Kraemer and Thiemann (1987), with a critical effect size of approximately .27 and a critical alpha of .05, this provided a power level of .80. In other words, assuming there are significant correlations in the data as hypothesized, I have an 80% chance of capturing them with a sample of $n = 111$.

Additional Construct Validation of DLCI

The survey instrument is the DLCI, designed to address the specific research questions pertinent to this study. Moreover, the instrument was inspired by the DLI designed by Hulpia et al. (2009). The instrument appears in Appendix E (English), Appendix F (Spanish), and Appendix G (French). The psychometric validity of the instrument is demonstrated in the following paragraphs.

I sent the questionnaire to all MYPCs in the sample, as identified by the systematic sampling method described above. When the data collection was complete, I checked for correlations among items within each scale by computing CACs. In addition, I conducted both qualitative and quantitative analyses to identify the items that belonged to each scale. The quantitative analysis consisted of an exploratory factor analysis to test whether the scales were as I had hypothesized them. The items did not "load" on the specific factors as I had conceptualized them. Therefore, I revised the hypotheses about the item loadings and renamed some of the factors. Once the data were analyzed, the strengths and limitations of this instrument as a valid way to measure the constructs of interest were assessed.

First, I examined the reliability of each scale with the full data set. The results of that reliability analysis are as follows: The Kaiser-Meyer-Olkin (KMO) statistics from the factor analysis and the CACs for each scale of the DLCI are presented in Table 6. Cohen (1988) and Norušis (1999) recommend that CAC scores greater than .70 are considered reliable for most purposes in social science research. The KMO measure of sampling adequacy has a minimum acceptable level of .60 (Norušis, 1999).

I analyzed the items contained in each scale by recomputing the CAC with each item deleted one by one. My purpose for doing this was to determine whether the CAC improved when an item was taken out. If the CAC improved, I reconsidered the item to see if it belonged better in a different scale or if the item measured something unique and if it should be considered as a single item indicator. I used an iterative process, moving back and forth between the quantitative and qualitative information to create a set of valid scales pertaining to the constructs of my study.

Scale 1: FIL commitment to DL. As shown in Table 6, the first scale, FIL commitment to DL, had a KMO of .86 and CAC of .91. When I deleted Item 17 (I am given autonomy with regard to the organization of the time allotted to my role), the CAC increased to .92. This increase in CAC is an indicator that Item 17 may not fit on Scale 1. Therefore, I reconsidered the item qualitatively and I hypothesized it would fit better in Scale 2, the FIL support for the MYPC. I will describe the statistics to support this decision in the next section. Regarding Item 13 (leadership is distributed in my school for activities critical for student learning), I saw a similar pattern emerge. When the item was removed from the scale, the CAC improved to .94. Ordinarily, this would suggest the item was problematic in that particular scale. However, my qualitative analysis of the item revealed it a defining item for Scale 1 and it was more logical to keep it in that scale and thus have a CAC of .92.

Table 5

Kaiser-Meyer-Olkin (KMO) and Cronbach Alpha Coefficients (CAC) for the Distributed Leadership Correlates Inventory (DLCI)

Scales/Indicators	KMO	CAC
FIL Commitment to DL (Item 17 included)	.86	.91
13. Leadership is distributed in my school for activities critical for student learning.		
17. I am given autonomy with regard to the organization of the time allotted to my role.		
21. I feel my FIL understands the concepts of distributed leadership.		
26. My FIL is committed to the distribution of leadership at our school.		
30. I feel my FIL and I work well together in a leadership capacity.		
FIL Commitment to DL (Item 17 removed)[a]	**.83**	**.92**
13. Leadership is distributed in my school for activities critical for student learning.		
21. I feel my FIL understands the concepts of distributed leadership.		
26. My FIL is committed to the distribution of leadership at our school.		
30. I feel my FIL and I work well together in a leadership capacity.		
FIL Support for MYPC	.81	.84
14. My FIL encourages me to try new practices consistent with the MYP framework.		
17. I am given autonomy with regard to the organization of the time allotted to my role (moved from Scale 1).		
18. My FIL encourages me to help teachers in the development of their units of work.		
22. My FIL encourages me to look out for the personal welfare of teachers.		

Scales/Indicators	KMO	CAC
25. My FIL encourages me to participate in formative evaluations of teachers.		
28. I have an appropriate level of autonomy in decision making.		
31. My FIL supports my efforts to develop professional learning communities for teachers.		
36. My FIL encourages me to participate in summative evaluations of teachers.		
FIL Support for MYPC in General	**.86**	**.88**
14. My FIL encourages me to try new practices consistent with the MYP framework.		
17. I am given autonomy with regard to the organization of the time allotted to my role (moved from Scale 1).		
18. My FIL encourages me to help teachers in the development of their units of work.		
22. My FIL encourages me to look out for the personal welfare of teachers.		
28. I have an appropriate level of autonomy in decision making.		
31. My FIL supports my efforts to develop professional learning communities for teachers.		
FIL Support for MYPC Regarding Teacher Evaluation	**.50**	**.87**
25. My FIL encourages me to participate in formative evaluations of teachers.		
36. My FIL encourages me to participate in summative evaluations of teachers.		
Role Clarity Regarding Goals (Item 15)	**n/a[b]**	**n/a**
15. I have clear job-related goals.		
Role Clarity Regarding Tasks and Duties (Item 20)	**n/a**	**n/a**
20. I have a clear idea of the duties and tasks that are required to achieve my goals.		

Scales/Indicators	KMO	CAC
Role Clarity and Leadership Teaming	**.84**	**.92**
24. Leadership roles are clear in our school.		
29. The leadership team communicates clearly about distribution of leadership.		
33. The leadership team has a clear process for distributing leadership functions.		
35. People on the leadership team respect each other's areas of expertise.		
Professional Self-Efficacy	**.77**	**.78**
16. I am a pedagogical leader in my school.		
19. I am a change agent in my school.		
23. I raise student achievement through implementing the best practice in assessment procedures.		
27. I ensure that concepts of international awareness and international mindedness permeate all subjects.		
32. I facilitate student learning in my school.		

[a]The bolded scales are the ones I determined to have the best psychometric properties based on my quantitative and qualitative analyses and thus were selected for inclusion in the remaining analyses. [b]KMO and CAC coefficients are not applicable (n/a) for single item indicators.

Scale 2: FIL support of the MYPC. The KMO and the CAC were at acceptable levels. However, I analyzed the statistics that resulted when I imposed a one-factor solution constraint. The Eigenvalues, which indicate the indices of the variance amount explained by a given factor, suggested that two factors should be extracted. The total amount of variance available is equal to the number of items analyzed. For example, if there are 14 items analyzed, there are 14 "parts" of variance available. If a particular factor has an Eigenvalue of 7, that factor explains half of the variance available. The problematic items were 25 (My FIL encourages me to participate in formative observations of teachers) and 36 (My FIL encourages me to participate in summative evaluations of teachers) and they both pertained to MYPC involvement in teacher evaluation.

When I deleted Item 36, there was a slight increase in the CAC, so I replicated the factor analysis of Scale 2, excluding Item 36. The new KMO was .86 from the original .81. The CAC changed nominally. When I deleted Item 25, there was a substantial increase in CAC from .84 to .88 indicating that the item did not belong in the scale. Therefore, both items were removed from the scale. I hypothesized that these two items taken together constituted a second subscale related to FIL support, more specifically an MYPC who had a high score on these two items felt the FIL support in the evaluation of teachers. An MYPC with a low score on these two items did not feel the FIL support in evaluating teachers. Although the KMO was low (.50), this is expected when there are only two items on a scale. The CAC was at an acceptable level .87.

Scale 3: MYPC perceived role clarity. The MYPC perceived role clarity scale proved to be the most problematic of the four scales. Initially, with all of the

hypothesized items included (15, 20, 24, 29, 33, and 35), the CAC was .89. However, the item analysis revealed that when Item 20 (I have a clear idea of the duties and tasks that are required to achieve my goals) was removed, the CAC jumped to .92, indicating that Item 20 did not belong in the scale. However, a qualitative analysis of Item 20 revealed this item appears to be the signature item for the scale and it is the best item to measure MYPC role clarity. Therefore, I did not want to lose the information contained in that item and I decided it would stand alone as a single item indicator of MYPC role clarity, as it pertained to tasks and duties. The next step for Scale 3 was to investigate whether Item 15 (I have clear job-related goals) and 20 could go together as a subscale. However, the KMO was low and CAC was also low (.53). So, I discarded the idea of putting them together as a subscale and instead decided to consider each one as a stand-alone, single item indicator.

The remaining items of Scale 3 (Item 24, Leadership roles are clear in our school; Item 29, The leadership team communicates clearly about distribution of leadership; Item 33, The leadership team has a clear process for distributing leadership functions**;** and Item 35, People on the leadership team respect each other's areas of expertise) all pertained to leadership roles within the leadership team. When these four items are taken together, the KMO was .84 and CAC was .92. So I deemed these numbers to be an indication that these items belonged together in a subscale, which I labeled role clarity with regard to leadership teaming.

Scale 4: Professional self-efficacy. The scale of professional self-efficacy (PSE) appeared to be a univariate construct. The KMO was .77 and the CAC was .78. It was the least problematic of the four scales as evidenced by the fact that when items were

removed from the scale one by one, the CAC dropped to a lower reliability in every case. Ideally, I aimed to create scales with maximum reliability. Therefore, in this case, reliability was at a maximum with all the originally hypothesized items included.

Control variables. I hypothesized that FIL commitment to DL would have a positive impact on FIL support of MYPC. Thus, I expected there would be a positive correlation between these two variables. However, it is possible that FIL commitment to DL and FIL support of MYPC could be influenced by demographic and structural control variables. To provide the opportunity to rule out a third variable explanation of the hypothesized correlations between FIL commitment to DL and FIL support of MYPC, I included control variables for the following reason: If one finds a correlation between FIL_DL and FIL Support for MYPC, as hypothesized, it is possible that the relationship is spurious. That is, the two variables appear to be correlated, but in fact, both are impacted by MYPCs' years of experience. (For example, it is possible that as MYPCs become more experienced this causes FIL to become more committed to DL and also causes FIL to become more supportive of the MYPC.) If one enters MYPCs' years of experience as a control variable and the correlation between FIL_DL and FIL support for MYPC persists, I can conclude that the relationship is not a spurious one that can be explained by the MYPCs' years of experience.

Demographic control predictors. The demographic control predictors chosen for inclusion in the study were (a) length of time with current FIL as an MYPC, (b) length of time the respondent has held the position of MYPC at current school, and (c) length of time the respondent has held the position of MYPC (total years). Each of the control predictors was added one by one to the causal model to test whether the control

predictor was a viable third variable explanation of the hypothesized correlations in the causal model.

School structural control predictors. The school structural control predictors included

1. size of school (defined by the following categories: up to 250 students, 251–450 students, 451–700 students, 701–1200 students, more than 1201 students),
2. number of members in the leadership team,
3. type of school (private international, private national, public/state),
4. school's profit status (for-profit, not-for-profit), and
5. the IB region where the MYPC was situated: Africa, Europe, and the Middle East; Asia Pacific or the Americas.

The IB places schools into three categories: private international, private national, and public state. *Private international schools* are viewed as multicultural organizations with student bodies that are often children of service employees from multinational companies and embassies. *Private national schools* are those in which the majority of students come from the country where the school is located. Both types of schools require tuition fees. *Public state schools* are part of a government education system and are funded by the government. The majority of students come from the country where the school is located. Teachers are civil servants and there are no tuition fees. I also identified schools by their profit status. The IB identifies two types of schools: for profit and not for profit. All types of schools were used in this study.

I compared the types of schools represented in my sample to the types of schools in the population at large with regard to the categories: private international/private

national versus public state. These comparisons are presented on Table 4. With regard to external validity, the data shows a discrepancy regarding the percentage of respondents from the different types of schools for the sample compared to the population. More specifically, the private international and private national schools are overrepresented in the sample. Whereas 56% of the sample fell into this combined category, only 38% of the population fell into this combined category. In addition, private state schools were underrepresented in the sample. Only 44% of the sample and 62% of the population fell into this category. The IB does not keep track of the percentage of for-profit or not-for-profit schools, so I was unable to make a comparison between the sample and the population for these categories (J. Sanders, personal communication, 3 July 2013). The proportion of respondents in each category is given in Table 6.

Table 6

Frequency and Percentage of Respondents From Each School Type

Type of School	*f*	Sample (%)	Population (%)
Private International	55	47	not reported
Private National	11	9	not reported
Private International/ National Combined	66	56	38
Public State	51	44	62
Total	116	100	100
Profit	11	10	
Not-for-Profit	103	90	
Total	114	100	

MYPCs responded to the online survey. Of the 135 respondents, 111 people answered every item. Eighty-four people responded to the qualitative question. The overall response rate was 40.5%.

Analysis Methods and Conclusion Validity

Quantitative analysis. In this section, I describe the analysis methods and discuss the strengths and limitations of the methods as valid ways to capture the correlations among the variables of interest. This section pertains to conclusion validity. Conclusion validity is the strength of the conclusions one can draw pertaining to the correlations found in the quantitative analysis of the data. Conclusion validity is impacted by sample size, alpha level, critical effect size, and one's selection of the appropriate statistical tools. First, I produced descriptive statistics. For the categorical variables, the descriptive statistics consisted of frequencies and percentages. The descriptive statistics for the continuous variables consisted of means and standard deviations (SD). See Tables 7, 8, and 9.

Analysis methods for Research Question 1. Within schools offering the MYP, is there a relationship between MYPCs' perceptions of the FILs' commitment to DL and MYPCs' perception of support from their FILs? To examine this question, I regressed MYPCs' perceptions of support from their FIL (the outcome variable) on MYPCs' perceptions of the FILs' commitment to DL (the question predictor). I used simple linear regression to explore the relationship.

Analysis methods for Research Question 2. Is there a relationship between MYPCs' perceptions of the FILs' support of them and the perceived clarity of their role? Simple regression was used for the statistical analysis of data collected to answer the question. More specifically, perceived clarity of MYPCs' role was regressed on MYPCs' perceptions of FILs' support.

Analysis methods for Research Question 3A*:* Is there a relationship between MYPCs' perceptions of the clarity of their role and their sense of their own professional self-efficacy?

I regressed MYPCs' sense of their own professional self-efficacy (the outcome variable) on MYPCs' perceptions of the clarity of their role (the question predictor). Simple regression was used for the statistical analysis of the data.

Analysis method for Research Question 3B. If there is a relationship as stated in 3A, does role clarity mediate the link between perceived FILs' support and professional self-efficacy? First, I regressed MYPCs' professional self-efficacy on perceived FIL support of the MYPC. I predicted the correlation would be significant and positive. Next, I added MYPCs' role clarity to the predictor side of the model. I predicted the correlation between MYPCs' role clarity and MYPCs' perceived FIL support would be significant but that the regression coefficient between the MYPCs' professional self-efficacy and perceived FIL support of MYPCs would no longer be significant. The reason I hypothesized that the link between MYPCs professional self-efficacy and perceived FIL support of MYPCs would no longer be significant is that I believe all of the shared variance between those two variables would be explained by the hypothesized mediating variable, MYPCs' role clarity. The steps above describe an example of a statistical method called *path analysis*, which is an application of regression using analysis of covariance (ANCOVA). I applied this method to test the mediation model. As noted by Pedhazur (1982), ". . . path analysis reduces to the solution of one or more . . . linear regression analyses" (p. 582).

Analysis method for all research questions taken together. After analyzing each research question separately, I conducted another mega-analysis that considered all the questions taken together. In this step, I applied a structural equation-modeling program called *analysis of moment structures* (AMOS). The logic of this analysis is to consider all the research hypotheses at once and to test whether the data are consistent with the theory that FILs' commitment to DL impacts FILs' support for the MYPC, which in turn, impacts MYPC role clarity and MYPC feelings of professional self-efficacy. The fit indices analysis provides an index of the level of consistency between the data and the theoretical beliefs about the causal links among the variables. I will conclude whether the data provide an adequate or inadequate fit to the theory.

Internal validity of the design. An analysis of how well I can make causal inferences based on a particular design is called *an assessment of the internal validity of the design*. Internal validity of the current study design was improved by testing Hypothesis 3B, which added a third variable to the model, known as a covariate and used path analysis. Path analysis allows one to parse the direct and indirect relationships among the variables in the model. In this study, if the data show high levels of MYPCs' professional self-efficacy correlated positively to greater perceived FIL support of MYPCs, this could be attributed to a direct causal impact of perceived FIL support on MYPCs professional self-efficacy. On the other hand**,** if after entering MYPCs' role clarity into the model, the correlation between these two variables disappeared, it would be logical to discard the hypothesis of a direct impact of FIL support on MYPCs' professional self-efficacy in favor of a competing model. This competing model would be that the link between FIL support and MYPCs' professional self-efficacy is an indirect

effect mediated by MYPCs' role clarity. Internal validity of the design was also greatly improved by the application of AMOS to test the fit between the data and the theory that drove the research. Finally, the internal validity was strengthened by examining the impact of a control variables set (i.e., demographic and structural variables). Based on the criteria espoused by Roberts and Mancuso (2013), the internal validity of the current study is between moderate and strong.

Qualitative analysis. The analysis of the responses to the open-ended survey question (What additional support and from whom would improve your ability to carry out your role as an MYPC?) was undertaken using the qualitative research methodology of content analysis. I applied conventional content analysis (CCA) and summative content analysis (SCA). CCA is the process of reading through all qualitative responses for a *sense of whole* to look for the big picture ideas and the gist of the comments. I then read the responses a second time to identify and note the main themes. Through careful identification of the data into themes, the results of qualitative content analysis can support and validate the information that emerges from the quantitative data (Zhang & Wildemuth, 2009). SCA is the process of reading through the comments a third time and keeping a tally of how many people mentioned each theme. Finally, the percentage of people who mentioned each theme is computed (Trochim & Donnelly, 2008).

For the pilot study, I conducted the CCA and SCA of the data from question 37. I copied and pasted all the comments onto a Word document and read through them once for a sense of whole. Next, I read through and began identifying the emerging themes. I looked for similar words or groups of words that could be identified as one category. For the theme (e.g., time), I put a 'T' next to the comment. Once I had identified the themes,

I copied and pasted the relevant comments under the themes. Six main themes emerged from the responses that I then identified as six criteria categories or themes (Schamber, 2000). To check for credibility and validity of my themes, I asked another person to identify the themes and categories independently of me. The second investigator also conducted a CCA and SCA of the data from question 37. The second coder and I then computed the interrater reliability. We had 100% agreement on the *type* of themes that emerged.

I computed interrater reliability a second time based on the number of responses each of us placed into each theme. I computed the *percent agreement* for each theme. Then I took the sum of the percent agreement for each theme and divided by six (the number of themes) to result in an average percent agreement of 88%. As this was a pilot study, I did no further investigation of the data. For the full study, I present in Chapter 4 the discussion that took place between the second coder and myself and explain how we made revisions until we achieved an average percent agreement above 90%. It was very encouraging to note that some of the themes from my causal model emerged in the open-ended responses of program coordinators (e.g., administrative support, role clarity, and student progress).

CHAPTER 4

Findings

Descriptive Findings From Online Survey

In this chapter, I will present the results of the findings from the online survey. Table 7 presents the means and standard deviations of all the variables. Raw scores on the 1–6 Likert scale ranged from 1 "strongly agree" to 6 "strongly disagree." Thus, the mean score for Scale 1 (FIL commitment to DL) was 2.23, which is between 2 "agree" and 3 "slightly agree," but closer to "agree." The mean score for Scale 2.1 (FIL support for MYPC general) was 2.12, which was very close to "agree." For Scale 2.2 (FIL support for MYPC regarding teacher evaluations), the mean score was mid-way between 3 and 4 but rounded up resulting in a qualitative value of "slightly disagree." Scale 3.1 (role clarity regarding leader teaming) resulted in the mean score of 2.64, which is closest to "slightly agree." Scale 3.2 item 15, the first subscale of role clarity (I have clear job-related goals) produced a score of 2.46, which is closest to "agree." The mean score for the second role clarity subscale S3.3 item 20 (I have a clear idea of the duties and tasks required to achieve my goals) was the lowest mean of 1.72, but still closest to "agree." Finally, Scale 4 (MYPC professional efficacy) produced a mean of 1.94, which was also close to "agree."

Table 7

Descriptive Statistics for Continuous Variables

Scales/Indicators	*N*	*Mean*	*SD*	Interpretation[a]
S1 FIL Commitment to DL	112	2.23	1.18	agree
S2.1 FIL Support for MYPC general	111	2.12	.93	agree
S2.2 FIL Support for MYPC regarding teacher evaluations	111	3.46	1.69	slightly agree/slightly disagree
S3.1 Role Clarity regarding leader teaming	111	2.64	1.15	agree/slightly agree
S3.2 Q15: I have clear job-related goals.	112	2.46	1.31	agree/slightly agree
S3.3 Q20: I have a clear idea of the duties and tasks required to achieve my goals	113	1.72	.83	agree
S4 MYPC professional self-efficacy	111	1.94	.62	agree
Valid N (list wise)	111			

[a]The Interpretation column provides the closest qualitative anchor for the mean score on each scale. In some cases, the mean score is between two anchors, so both anchors are given. For example, a mean of 3.46 for Scale S2.2 is between anchors of slightly agree and slightly disagree.

Research Question 1: MYPCs Perceptions of FILs' Commitment and Support

Tables 8 and 9 provide the data to answer Research Question 1: Is there a relationship between MYPCs' perceptions of the FILs' commitment to DL and MYPCs' perception of support from their FILs? For this item, support was divided into two subscales: (a) support in general and (b) support regarding teacher evaluations.

Table 8

Coefficients for FIL Support (General) Regressed on Control Predictors and FIL Commitment to Distributed Leadership

Predictor	Unstandardized *B*	Standardized *B*
School size	-.06	-.07
Number of people on leadership team	.02	.02
School type	.01	.07
Profit vs. nonprofit	.11	.03
IBAEM vs. IBA vs. AP	-.00	-.02
FIL Commitment to DL	.69***	.88***

***$p < .0005$

The interpretation of the unstandardized *B* coefficient is as follows: as the FIL commitment to DL as perceived by the MYPC rises one point, the support of the MYPC in general increases by .69 points. This is a strong relationship. The standardized *B* coefficient of .88 is squared to reveal that 77% of the variance in FIL support (general) can be explained by variation in FIL commitment to DL. This effect is significant at $p < .0005$. When FILs are perceived as being committed to DL, the MYPC perceives them to be more supportive in general. None of the control predicators were significant predicators of FIL support in general. This is interpreted as indicating that the link between FIL commitment to DL and FIL support of the coordinator cannot be explained by any of the third variable possibilities (school size, number of people on the leadership team, school type, profit versus not-for-profit, and IB region).

The statistical analysis showed a significant difference between the private international and public state schools on the variable: FIL support regarding teacher evaluations. The mean score in private international schools on FIL support of MYPC in

the area of teaching evaluations was 2.80 (SD = 1.59) corresponding to a score of slightly agree. The mean score for public state school was 4.14 (SD = 1.5). This score corresponds to a score of slightly disagree. These two mean scores were significantly different from each other. The mean score for private national schools was 3.45 (SD = 1.82). This score corresponds to a qualitative interpretation of neutral, which is not statistically significantly different from either of the other two school types.

Table 9

Coefficients for FIL Support (Teacher Evaluations) Regressed on Control Predictors and FIL Commitment to Distributed Leadership

Predictor	Unstandardized *B*	Standardized *B*
School size	.04	.03
Number of people on leadership team	-.09	-.05
School type	.12**	.35**
Profit vs. nonprofit	.18	.03
IBAEM vs. IBA vs. AP	-.03	-.08
FIL Commitment to DL	.55***	.38***

** $p < .0001$. *** $p < .0005$.

The unstandardized *B* coefficient showed that as the FIL commitment to DL increases by one point, FIL support regarding teacher evaluations increases by .55 points. The standardized *B* coefficient is .38. When converted to a percentage, this becomes 14%. The interpretation is that 14% of the variability in FIL support regarding teacher evaluation can be explained by FIL commitment to DL. In other words, as FILs become more committed to DL, MYPCs feel a higher level of support regarding their involvement in teacher evaluations. In fact, the predictor variable explains 14% of this increase. This effect is significant ($p < .005$). However, there is still a large amount of

the variation in FIL support regarding teacher evaluation (86%) that is not explained by the model. One control variable (school type) was also significantly linked to FIL support regarding teacher evaluation. However, school type does not explain the relationship between FIL commitment to DL and FIL support of program coordinators in the area of teacher evaluations.

Research Question 2: FILs' Support and Role Clarity

Tables 10 and 11 provide the data which were used to answer Research Question 2: Is there a relationship between the MYPCs' perceptions of the FILs' support of them and the perceived clarity of their role. For the purposes of this analysis, role clarity was divided into three categories: (a) leader teaming, (b) job goals, and (c) job tasks. The regression coefficients are provided in Tables 10, 11, and 12.

The interpretation of the unstandardized coefficient is as follows: as the FIL support of MYPC in general rises one point, the MYPC role clarity regarding leader teaming goes up almost a full point (.99 points). With regard to FIL support of MYPC regarding teacher evaluations, when this coefficient rises by one point, the MYPC role clarity regarding leader teaming also goes up .09 points.

The standardized regression coefficient for FIL support of MYPC in general is .80. When that number is squared, it becomes .64 and converts to 64%. The interpretation is that 64% of the variability in MYPC role clarity regarding teaming can be explained by FIL support of MYPC in general. This effect is significant ($p < .0005$). The standardized score for FIL support of MYPC regarding teacher evaluations is .14. When converted to a percentage, this becomes 2%. The interpretation is that 2% of the variability in MYPC role clarity regarding teaming can be explained by FIL support of

MYPC regarding teacher evaluations. Although the effect was significant in the context of the full model, the effect disappeared when I conducted a post hoc analysis. This often happens when analyzing complex models with a high degree of multicollinearity (i.e., when the independent variables in the model are highly correlated).

Table 10

Coefficients for MYPC Role Clarity Regarding Leader Teaming Regressed on Control Predictors and FIL Support of MYPC

Predictor	Unstandardized *B*	Standardized *B*
School size	.03	.03
Number of people on leadership team	.06	.05
School type	-.04*	-.16*
Profit vs. nonprofit	.32	.08
IBAEM vs. IBA vs. AP	-.02	-.06
FIL Support of MYPC in General	.99***	.80***
FIL Support of MYPC Regarding Teacher Evaluations	.09*	.14*

*$p < .05$. ***$p < .0005$.

The interpretation of the unstandardized coefficient for role clarity regarding job goals is as follows: as the FIL support of MYPC in general goes up one point, the MYPC role clarity pertaining to job goals goes up .78 points. With regard to FIL support of MYPC regarding teacher evaluations, when this coefficient goes up by one point, the MYPC role clarity pertaining to job goals also goes up .22 points. The standardized coefficient for FIL support of MYPC in general is .55. When that is squared, it becomes

.30 and converts to 30%. The interpretation is that 30% of the variability in MYPC role clarity pertaining to job goals can be explained by FIL support of MYPC in general. This effect is significant at $p < .0005$. The standardized coefficient for FIL support of MYPC regarding teacher evaluations is .28 points. When squared, it becomes .08 and converts to 8%. The interpretation is that 8% of the variability in MYPC role clarity pertaining to job goals can be explained by FIL support of MYPC regarding teacher evaluations. The significance level is $p < .01$.

Table 11

Regression of Role Clarity Pertaining to Job Goals and Tasks Regressed on Control Predictors and FIL Support of MYPC

Predictor	Unstandardized *B*	Standardized *B*
Role Clarity pertaining to Job Goals		
School size	.05	.04
Number of people on leadership team	-.07	-.05
School type	-.05	-.16
Profit vs. nonprofit	.28	.06
IBAEM vs. IBA vs. AP	-.03	-.09
FIL Support of MYPC in General	.78***	.55***
FIL Support of MYPC Regarding Teacher Evaluations	.22**	.28**
Role Clarity Pertaining to Job Tasks		
School size	-.07	-.10
Number of people on leadership team	-.01	-.01
School type	-.00	-.02
Profit vs. nonprofit	-.38	-.13

Predictor	Unstandardized *B*	Standardized *B*
IBAEM vs. IBA vs. AP	-.05*	-.23*
FIL support of MYPC in general	.31**	.34**
FIL support of MYPC regarding teacher evaluations	.03	.05

*$p < .05$. **$p < .001$.

The interpretation of the unstandardized coefficient for role clarity regarding job tasks is as follows: as the FIL support of MYPC in general goes up one point, the MYPC role clarity pertaining to job tasks goes up .31 points. In this instance, FIL support of MYPC regarding teacher evaluations was not significant. The standardized coefficient for FIL support of MYPC in general is .34. When that is squared, it becomes .12 and converts to 12%. The interpretation is that 12% of the variability in MYPC role clarity pertaining to job goals can be explained by FIL support of MYPC in general. This effect is significant at $p < .001$.

The significant effect linked to the regions was as follows: the mean score on this variable had the Asia Pacific region with a significantly greater mean than the Americas. This effect was explained by the fact that in the Asia Pacific region, the mean was 1.32 (SD = .55). The value 1.32 corresponds with "strongly agree." In contrast the mean score for the Americas was 1.90, (SD = .86), which corresponds to "agree." There was more agreement to the variable role clarity pertaining to job tasks in the Asia Pacific region than in the Americas.

Research Questions 3A and 3B: The Links Among Role Clarity and Professional Self-Efficacy

Table 12 provides the data which will answer Research Questions 3A and 3B: Is there a relationship between MYPCs' perception of the clarity of their role and their

sense of their own professional self-efficacy? If there is a relationship as stated in 3A, does role clarity mediate the impact of perceived FILs' support on professional self-efficacy?

Table 12

Coefficients for MYPC Professional Self-Efficacy Regressed on the Control Predictors, Role Clarity, and FIL Support of the MYPC

Predictor	Model 3A	Model 3B1	Model 3B2
School size	.05[a]/.11[b]	.04/.07	.05/.09
Number of people on leadership team	-.03/-.05	-.00/-.01	.00/.01
School type	.01/.08	-.00/-.02	.00/.01
Profit vs. nonprofit	-.09/-.04	-.14/-.07	-.09/-.04
IBAEM vs. IBA vs. AP	.01/.09	-.00/-.02	.01/.06
Role clarity regarding leader teaming	.14/.27*		-.03/-.06
Role clarity regarding tasks	.23/.32***		.20/.27**
Role clarity regarding goals	.12/.27*		.11/.23*
FIL support of MYPC in general		.39/.60***	.28/.42*
FIL support of MYPC regarding teacher evaluations		.05/.13	.02/.06

*$p < .05$. ***$p < .0005$. [a]Unstandardized *B*. [b]Standardized *B*.

In Table 12 Model 3A, I regressed MYPC professional self-efficacy on the control predictors and role clarity. The first coefficient in the column is the unstandardized *B* and the second coefficient in the column is the standardized *B*. None of the control predictors was significantly related to coordinator professional self-efficacy.

All three of the role clarity indicators significantly predicted professional self-efficacy such that greater role clarity was linked to greater professional self-efficacy. Less role clarity was linked to lower levels for professional self-efficacy. The strongest of the three role clarity variables was role clarity regarding tasks. As role clarity regarding tasks increased by one point, professional self-efficacy increased by .23 points. Moreover, role clarity regarding tasks accounted for 10% of the variance in professional self-efficacy. Role clarity regarding teaming accounted for 7% of the variation in professional self-efficacy. Role clarity regarding goals accounted for another 7% of the variance in professional self-efficacy. In total, the three role clarity variables accounted for 24% of the variance in professional self-efficacy.

For Model 3B1, a similar pattern emerged with the control predicators as none of them were linked to professional self-efficacy. FIL support in general and concerning teaching evaluations was also included in this model and only FIL support in general was significantly linked to professional self-efficacy. As FIL support in general increased by one point, professional self-efficacy increased by .39 points. Moreover, FIL support in general accounted for 36% of the variance on professional self-efficacy.

Finally, I examined Model 3B2. The logic of this model was to test whether the impact of FIL support on professional self-efficacy was either partially or completely mediated by the role clarity variables (role clarity regarding leader teaming, tasks, and goals). Once again, none of the control predictors was significantly linked to professional self-efficacy. As hypothesized, role clarity regarding tasks and goals significantly predicted professional self-efficacy. Role clarity regarding tasks accounted for 7% of the variance in professional self-efficacy. Role clarity regarding goals

accounted for 5% of the variance in professional self-efficacy. In total, role clarity regarding tasks and goals explained 12% of the variance in professional self-efficacy. FIL support in general was significant linked to professional self-efficacy, accounting for 18% of the variance in professional self-efficacy. There was a reduction from 36% of the variance explained in Model 3B1 to only 18% of the variance explained in Model 3B2. Thus, I concluded that some of the impact of FIL support on professional self-efficacy is direct and some of the impact of support on professional self-efficacy is indirectly linked and is mediated through the variable, coordinators' role clarity.

Structural Equation Model and Model Fit Indices

As a result of testing Models 3A, 3B1, and 3B2, I concluded that there was a direct and indirect path from MYPC's perceptions of FIL support to their perceptions of their own professional self-efficacy (Figure 3). All the other paths in the model were as I had hypothesized them. Because of this discovery, the next step was to submit the entire model to a structural equation-modeling test of fit using AMOS software program. I examined four indices of model fit. The first index was called the *Chi-square* divided by *degrees of freedom* index (symbolized as CMIN/DF or χ^2/df). Wheaton, Muthèn, Alwin, & Summers (1977) suggested that the researcher compute a *relative* chi-square/df test. They suggest a ratio of approximately five or less "as beginning to be reasonable." They stated, however, that in their experience, χ^2/df ratios in the range of 2 to 1 or 3 to 1 are indicative of an acceptable fit between the hypothetical model and the sample data" (Carmines & McIver, 1981, p. 80). The value for my model was 1.85 and thus I concluded based on this index that the data fit the model.

Next, I looked at the Tucker-Lewis index (TLI) and the comparative fit index (CFI). The typical range for TLI lies between 0 and 1. TLI values close to 1 indicate very good fit. The CFI ranges from 0 to 1. CFI values close to 1 indicate a very good fit (Arbuckle & Wothke, 1999). The criterion for a good fit for a relatively small sample, which describes the current sample, is .90 or higher (T. Huang personal communication, 23 June 2013). The values of the data were .88 for TLI and .90 for CFI. Although the TLI index was slightly below the criterion, given that the CMIN/DF indicated a fit, I concluded that these two indices also led to the conclusion that the data fit the model.

> Finally, the root mean square of approximation (RMSEA) was examined, where …a value of RMSEA of about .05 or less would indicate a close fit of the model in relation to the degrees of freedom. This figure is based on subjective judgment. It cannot be regarded as infallible or correct, but is more reasonable than the requirement of exact fit with RMSEA = 0. We are also of the opinion that a value of about .08 or less for the RMSEA would indicate a reasonable error of approximation and would not want to employ a model with RMSEA greater than .1. (Browne & Cudek, 1993, p. 136)

The RMSEA for my model was .09, which was acceptable because it was less than the .1 criterion for an acceptable fit asserted by Browne and Cudek (1993).

In sum, three of the four indicators reached the criterion levels for an acceptable or very good fit. I conclude that the data fit the model based on both the quantitative indices and based on the power of the logic and personal experience and observations that drove the development of the model. These personal experiences and observations were validated by three out of four empirical fit indices. Moreover, the one fit index that did

not reach the criterion for a *very good fit* (TLI = .88) is very close to the criterion of .90. The causal model and the measurement model are presented in Figure 3. All coefficients represent the standardized effects.

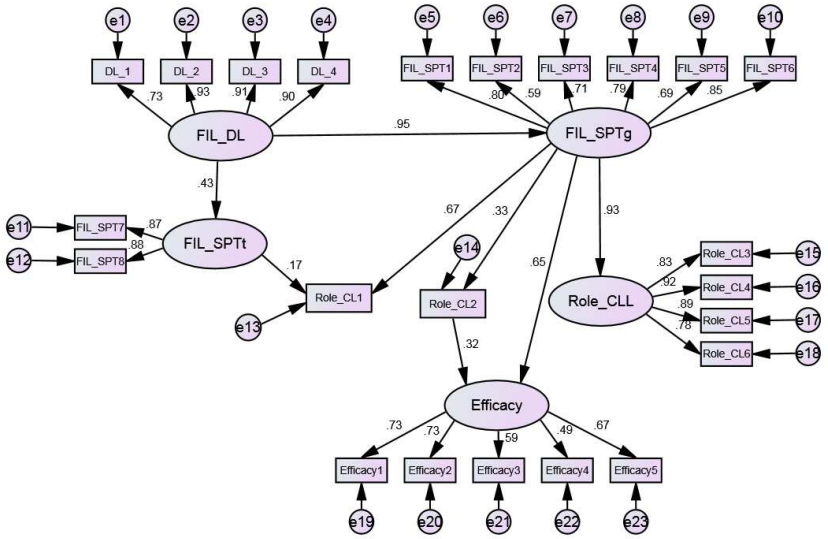


Figure 3. Causal model and measurement model for the effect of commitment to distributed leadership on coordinators' professional self-efficacy.

Explanation of Figure 3

The latent variables are represented as ovals; the observed variables are represented as rectangles. The latent variables represent the causal model and the observed variables represent the measurement models. The numbers on each path represent the standardized direct effects. The first latent variable, FIL commitment to DL (FIL_DL), was measured with four observed variables (DL_1 through DL_4). The factor loadings for the measured variables ranged from .93 to .73. The strongest loading, .93,

was for DL_2 (I feel my FIL understands the concepts of distributional leadership). Each observed variable has an error term. This is because no variable can be measured perfectly; there is always some degree of error in measurements of this type. The standardized direct effects are interpreted the same way as standardized regression coefficients. So, for example, the coefficient of .95 on the path from FIL commitment to DL (FIL_DL) to support for MYPC, general (FIL_SPTg) should be squared and converted to a percent, showing that FIL_DL explains 90% of the variation in FIL_SPTg.

The second latent variable, FIL_SPTg or FIL support for MYPC, general was measured with six observed variables (FIL_SPT1 through FIL_SPT6). The factor loadings for the measured variables ranged from .85 to .61. The strongest loading, .85, was for FIL_SPT6 (I have an appropriate level of autonomy in decision making). The standardized direct effect is interpreted as follows: The coefficient of .93 on the path from support for MYPC, general (FIL_SPTg) to role clarity with respect to leadership teaming (Role_CLL) shows that FIL_SPTg explains a 87% of the variation in Role_CLL.

The third latent variable, FIL_SPTt or FIL support for MYPC regarding teacher evaluations was measured with two observed variables, FIL_SPT7 (My FIL encourages me to participate in summative evaluations of teachers) and FIL_SPT8 (My FIL encourages me to participate in formative evaluations of teachers). The factor loadings for the two variables were similar at .87 for SPT7 and .88 for SPT8. However, the standardized direct effect of the coefficient on the path from FIL commitment to DL (FIL_DL) to FIL support for MYPC regarding teacher evaluations (FIL_SPTt) was .43 showing that FIL commitment to DL explains only 18% of the variation in FIL support for MYPC regarding teacher evaluations.

Regarding the causal link on the path between the latent variable FIL support for MYPC, general (FIL_SPTg) to the observed variable role clarity regarding clear job related goals (Role_CL1), the standardized direct effect of the coefficient was .67 showing that FIL support for MYPC, general explains 45% of the variation in role clarity regarding clear job related goals. The path between FIL support for MYPC, general (FIL_SPTg) to role clarity pertaining to tasks and duties (Role_CL2) has a coefficient of .33 indicating that FIL Support for MYPC, General explains only 11% of the variation in role clarity pertaining to tasks and duties.

The fourth latent variable, Role_CLL or role clarity with respect to leadership teaming, was measured with four observed variables (Role_CL3 through Role_CL6). This latent variable did not have a direct path to the other latent variables. The factor loadings for the measured variables ranged from .92 to .78. The strongest loading for this variable, .92, was for Role_CL4 (People on the leadership team respect each other's areas of expertise).

The fifth latent variable, efficacy or professional self-efficacy, was measured with five observed variables (Efficacy 1 through Efficacy 5). The factor loadings for the measured variables ranged from .73 to .59. The two strongest loadings (at .73) were for Efficacy 1 (I am a pedagogical leader in my school) and Efficacy 2 (I am a change agent in my school). The path from FIL_SPTg to efficacy has a coefficient of .65. The standardized direct effect shows that FIL_SPTg explains 42% of the variation in efficacy. The path from Role_CL2 or role clarity pertaining to tasks and duties to professional self-efficacy has a standardized direct effect coefficient of .32. This shows that role clarity pertaining to tasks and duties explains 10% of the variation in professional self-efficacy.

After computing the direct effects as explained above, and in order to compute the total effects of the variables, I computed the indirect effects. Firstly, I considered the paths of the indirect effect of support on efficacy. The two indirect paths are as follows: The effect of support on Role_CL2 is .33. The effect of Role_CL2 on efficacy is .32 and when multiplied together the effect of the paths were .11. When the indirect path (.11) was added to the direct path (.65), the result was a total effect of .76 and squared was .58. Thus, the total effect of FIL support explains 58% of the variation in efficacy.

I next computed the indirect effects of FIL commitment on role clarity regarding clear job-related goals (Role_CL1). The indirect paths are as follows: The effect of FIL_DL on FIL_SPTt is .43. FIL_SPTt on Role_CL1 is .17. Multiplied together, the effect of the paths is .07. The effect of FIL DL on FIL_SPTg is .95 and SPTg on Role_CL1 is .67. Multiplied together the effect of these paths is .64. When the two indirect paths are added together, the result was a total effect of .71 and squared was .50. Thus, the total effect of FIL_DL explains 50% of the variation in role clarity regarding clear job-related goals.

To obtain the total effects of FIL_DL to role clarity regarding tasks and duties (Role_CL2), I computed the two indirect paths, which are as follows: The effect of FIL_DL on FIL_SPTg is .95 and FIL_SPTg on Role_CL2 is .33. Multiplied together, the effect of these paths is .31, which is .10 when squared. Thus, the total effect of FIL_DL explains 10% of the variation in role clarity regarding tasks and duties.

Regarding the total effects of FIL_DL to role clarity regarding teaming (Role_CLL), I computed the two indirect paths, which are as follows: The effect of FIL_DL on FIL_SPTg is .95 and FIL_SPTg on Role_CLL is .93. Multiplied together,

the effect of these paths is .88, which is .77 when squared. Thus, the total effect of FIL_DL explains 77% of the variation in role clarity regarding teaming.

Finally, I computed the total effect of FIL_DL on professional self-efficacy. The two indirect paths are as follows: The effect of FIL_DL on FIL_SPTg is .95. The effect of FIL_SPTg on efficacy is .65. Multiplied together, the effect of the two paths is .62. The effect of FIL_DL on FIL_SPTg is .95. The effect of on FIL_SPTg on Role_CL2 is .33 and the effect of Role_CL2 on efficacy is .32. Multiplied together, the effects of the three paths are .10. When the two indirect paths were added together (.62 +.10), the result was a total effect of .72 and squared was .52. Thus, the total effect of FIL commitment to DL explains 52% of the variation in efficacy.

Tables 13 to 15 contain the standardized total effects for the data fitting the causal model of the effect of commitment to DL on coordinators' professional self-efficacy. Tables H to J (Appendices H to J) contain the unstandardized total, direct, and indirect effects, respectively, for the data fitting the causal model of the effect of commitment to DL on coordinators' professional self-efficacy. Tables K and L (Appendices K and L) contain the standardized and unstandardized regression coefficients for the model, respectively. These are useful because one can examine the significance level associated with each coefficient. In these tables, three asterisks represent a significance level of $p <$ .0005.

Table 13

Standardized Total Effects for the Data Fitting the Causal Model of the Effect of Commitment to Distributed Leadership on Coordinators' Professional Self-Efficacy

	FIL_DL[a]	FIL_SPTt[b]	FIL_SPTg[c]	Role_CLL[d]	Role_CL2[e]	Role_CL1[f]	Efficacy[g]
FIL_SPTt	.430	.000	.000	.000	.000	.000	.000
FIL_SPTg	.955	.000	.000	.000	.000	.000	.000
Role_CLL	.886	.000	.928	.000	.000	.000	.000
Role_CL2	.315	.000	.330	.000	.000	.000	.000
Role_CL1	.712	.169	.670	.000	.000	.000	.000
Efficacy	.727	.000	.761	.000	.323	.000	.000
Efficacy1	.530	.000	.555	.000	.235	.000	.729
Efficacy2	.533	.000	.559	.000	.237	.000	.734
Efficacy3	.432	.000	.453	.000	.192	.000	.595
Efficacy4	.357	.000	.374	.000	.159	.000	.491
Efficacy5	.488	.000	.511	.000	.217	.000	.671
Role_CL6	.695	.000	.728	.785	.000	.000	.000
Role_CL5	.789	.000	.827	.891	.000	.000	.000
Role_CL4	.819	.000	.858	.925	.000	.000	.000
Role_CL3	.740	.000	.775	.835	.000	.000	.000

	FIL_DL[a]	FIL_SPTt[b]	FIL_SPTg[c]	Role_CLL[d]	Role_CL2[e]	Role_CL1[f]	Efficacy[g]
FIL_SPT7	.374	.870	.000	.000	.000	.000	.000
FIL_SPT8	.377	.878	.000	.000	.000	.000	.000
FIL_SPT6	.815	.000	.854	.000	.000	.000	.000
FIL_SPT5	.662	.000	.694	.000	.000	.000	.000
FIL_SPT4	.755	.000	.791	.000	.000	.000	.000
FIL_SPT3	.677	.000	.709	.000	.000	.000	.000
FIL_SPT2	.567	.000	.594	.000	.000	.000	.000
FIL_SPT1	.762	.000	.798	.000	.000	.000	.000
DL_4	.900	.000	.000	.000	.000	.000	.000
DL_3	.915	.000	.000	.000	.000	.000	.000
DL_2	.928	.000	.000	.000	.000	.000	.000
DL_1	.730	.000	.000	.000	.000	.000	.000

FIL_DL[a] = FIL's commitment to distributed leadership, FIL_SPTt[b] = FIL's support for MYPC regarding teacher evaluations, FIL_SPTg[c] = FIL's support for MYPC, general, Role_CLL[d] = Role clarity regarding leader teaming, Role_CL2[e] = Role clarity regarding tasks and duties, Role_ CL1[f] = Role clarity regarding goals, and Efficacy[g] = Professional self-efficacy

Table 14

Standardized Direct Effects for the Data Fitting the Causal Model of the Effect of Commitment to Distributed Leadership on Coordinators' Professional Self-Efficacy

	FIL_DL[a]	FIL_SPTt[b]	FIL_SPTg[c]	Role_CLL[d]	Role_CL2[e]	Role_CL1[f]	Efficacy[g]
FIL_SPTt	.430	.000	.000	.000	.000	.000	.000
FIL_SPTg	.955	.000	.000	.000	.000	.000	.000
Role_CLL	.000	.000	.928	.000	.000	.000	.000
Role_CL2	.000	.000	.330	.000	.000	.000	.000
Role_CL1	.000	.169	.670	.000	.000	.000	.000
Efficacy	.000	.000	.655	.000	.323	.000	.000
Efficacy1	.000	.000	.000	.000	.000	.000	.729
Efficacy2	.000	.000	.000	.000	.000	.000	.734
Efficacy3	.000	.000	.000	.000	.000	.000	.595
Efficacy4	.000	.000	.000	.000	.000	.000	.491
Efficacy5	.000	.000	.000	.000	.000	.000	.671
Role_CL6	.000	.000	.000	.785	.000	.000	.000
Role_CL5	.000	.000	.000	.891	.000	.000	.000
Role_CL4	.000	.000	.000	.925	.000	.000	.000

	FIL_DL[a]	FIL_SPTt[b]	FIL_SPTg[c]	Role_CLL[d]	Role_CL2[e]	Role_CL1[f]	Efficacy[g]
Role_CL3	.000	.000	.000	.835	.000	.000	.000
FIL_SPT7	.000	.870	.000	.000	.000	.000	.000
FIL_SPT8	.000	.878	.000	.000	.000	.000	.000
FIL_SPT6	.000	.000	.854	.000	.000	.000	.000
FIL_SPT5	.000	.000	.694	.000	.000	.000	.000
FIL_SPT4	.000	.000	.791	.000	.000	.000	.000
FIL_SPT3	.000	.000	.709	.000	.000	.000	.000
FIL_SPT2	.000	.000	.594	.000	.000	.000	.000
FIL_SPT1	.000	.000	.798	.000	.000	.000	.000
DL_4	.900	.000	.000	.000	.000	.000	.000
DL_3	.915	.000	.000	.000	.000	.000	.000
DL_2	.928	.000	.000	.000	.000	.000	.000
DL_1	.730	.000	.000	.000	.000	.000	.000

Table 15

Standardized Indirect Effects for the Data Fitting the Causal Model of the Effect of Commitment to Distributed Leadership on Coordinators' Professional Self-Efficacy

	FIL_DL[a]	FIL_SPTt[b]	FIL_SPTg[c]	Role_CLL[d]	Role_CL2[e]	Role_CL1[f]	Efficacy[g]
FIL_SPTt	.000	.000	.000	.000	.000	.000	.000
FIL_SPTg	.000	.000	.000	.000	.000	.000	.000
Role_CLL	.886	.000	.000	.000	.000	.000	.000
Role_CL2	.315	.000	.000	.000	.000	.000	.000
Role_CL1	.712	.000	.000	.000	.000	.000	.000
Efficacy	.727	.000	.107	.000	.000	.000	.000
Efficacy1	.530	.000	.555	.000	.235	.000	.000
Efficacy2	.533	.000	.559	.000	.237	.000	.000
Efficacy3	.432	.000	.453	.000	.192	.000	.000
Efficacy4	.357	.000	.374	.000	.159	.000	.000
Efficacy5	.488	.000	.511	.000	.217	.000	.000
Role_CL6	.695	.000	.728	.000	.000	.000	.000
Role_CL5	.789	.000	.827	.000	.000	.000	.000
Role_CL4	.819	.000	.858	.000	.000	.000	.000

	FIL_DL[a]	FIL_SPTt[b]	FIL_SPTg[c]	Role_CLL[d]	Role_CL2[e]	Role_CL1[f]	Efficacy[g]
Role_CL3	.740	.000	.775	.000	.000	.000	.000
FIL_SPT7	.374	.000	.000	.000	.000	.000	.000
FIL_SPT8	.377	.000	.000	.000	.000	.000	.000
FIL_SPT6	.815	.000	.000	.000	.000	.000	.000
FIL_SPT5	.662	.000	.000	.000	.000	.000	.000
FIL_SPT4	.755	.000	.000	.000	.000	.000	.000
FIL_SPT3	.677	.000	.000	.000	.000	.000	.000
FIL_SPT2	.567	.000	.000	.000	.000	.000	.000
FIL_SPT1	.762	.000	.000	.000	.000	.000	.000
DL_4	.000	.000	.000	.000	.000	.000	.000
DL_3	.000	.000	.000	.000	.000	.000	.000
DL_2	.000	.000	.000	.000	.000	.000	.000
DL_1	.000	.000	.000	.000	.000	.000	.000

In sum, the findings allowed me to construct a model of the relationships of the variables around MYPC perceptions of the leadership environment of their school and how it impacted their perceptions of their ability to perform the duties of their specific role as MYPC. All hypotheses were supported in the data and the full model (integrating all hypotheses) was also supported.

Qualitative Analysis

Content analysis of the open-ended question (What additional support, and from whom, would improve your ability to carry out your role as an MYPC?) mirrored the analysis employed in the pilot study. The analysis of the responses included identification of themes. For each theme, specific comments were listed from the responses in support of the theme (Appendix M). Two investigators undertook the identification of the themes independently. After the independent thematic analysis, the investigators met and discussed the interpretation of the answers. A final set of themes was identified and agreed upon through this discussion.

Thematic Analysis

The number and percentage of people who provided a response containing each theme is reflected in Table 16. Eighty-four people responded to the open-ended question, but there were 111 themed responses, as some people made more than one comment. The thematic analysis revealed four major themes: time, role clarity, FIL understanding, and support. Subthemes emerged from two of the themes: role clarity and support. The three role clarity subthemes were role clarity in the school, clarity of role definition, and clarity from the IB. The four support subthemes were FIL support needed, FIL support positive, support from others in the school, and support from outside the school.

Numbers in parentheses in the right-hand column of Table 16 represent the percent of comments that pertained to each subtheme. In this column, only the percentages associated with theme level comments (the percentages in bold font) were summed 100%. The percentages associated with subtheme level comments (the percentages given in parentheses) were not included in the calculation of the total because doing so would effectively count the percentages twice. Note that the percentages at the subtheme level (those in parentheses) can be added together to equal the percentages that appear directly above them at the theme level (in bold). For example, the percentages for the three subtheme level comments for role clarity (n = 8 + 8 + 7) adds to the theme level percentage for role clarity (n = 23).

The numbers under the column heading "Theme (n)" represent the number of comments exemplifying each theme. The numbers under the column heading "Subtheme (n)" represent the number of comments exemplifying each subtheme. Note that some themes are broken out into subthemes. For example, the theme role clarity had 26 responses (n = 26) and subsumed three subthemes: role clarity in school, role clarity regarding definition, and role clarity from the IB.

Qualitative Findings

Time. Not surprisingly, *the need for more time* was a popular response to the question: "What additional support, and from whom, would improve your ability to carry out your role as an MYPC?" Some MYPCs simply responded with a statement that "more time" was needed for them to do their job more effectively. They cited issues such as lack of time to be a pedagogical leader, work collaboratively with colleagues, and

provide in-house training and a heavy teaching load, as all hindering them from being effective in their roles. Such comments represent concerns expressed in this theme:

- "I do not feel that I am fulfilling my pedagogical leadership role because I do not have the time to do so."
- "The teaching load for MYP coordinator must be such that the coordinator can do justice to the job."
- "If I'm released from responsibilities that interfere with the time required to implement and improve our MYP program."

One respondent stated getting more time next year and was thus excited at the prospect of being able to lead in the role.

Table 16

Open-Ended Question: What Additional Support, and From Whom, Would Improve Your Ability to Carry Out Your Role as an MYP Coordinator? Number and Percentage of Comments for Each Theme and Subtheme

Themes	Theme (*n*)	Subtheme (*n*)	Sample (%)
Time	18		**17**
Role clarity	26		**23**
Clarity of role in school		9	(8)
Clarity of role definition		9	(8)
Clarity from IB		8	(7)
More FIL understanding	7		**6**
FIL support	20		**18**
More needed		11	(10)
Has been positive		9	(8)
Support from others	40		**36**
In the school		22	(20)
Outside of school		18	(16)
Total *n*	111		100

Role clarity. Comments about role clarity in the qualitative data confirmed the results of the quantitative data. Role clarity was an important component for MYPCs to carry out their jobs more effectively. Qualitative responses indicated that MYPCs believed they needed clear goals to be effective, and those goals must be articulated by their FIL. Comments in this theme included:

- "Clear communication, as well as clear professional guidance [from my FIL] would improve a lot my ability to carry out the MYPCs role."
- "Additional support would include improved communication with FILs."

Other comments on role definition spoke to the need to define a coherent plan for clarity, and to define responsibilities by role, specifically those of assistant principal (not all schools had this role) and MYPC. Three respondents saw their dual roles as MYPC and assistant principal (FIL), confusing in defining their role. The three respondents further commented that having two roles meant they were unable to give the role of MYPC the time and attention they felt it deserved.

Finally, clarity of the roles within the leadership team was seen as an important component to help MYPCs carry out their roles. Respondents further commented on the need for more clarity from the IB:

- "The biggest obstacle is the IB."
- "From IB, specifically clear job goals, and a mandate that a MYPC can only teach so many hours/classes."
- "The IB working better to supply us with better information! The IB having a better understanding of curriculum."

- "A clearer description of the role and its implications by the IB including the number of hours and type and function relationship of leadership in others."

MYPCs felt that clearer guidelines and help in general from the IB would allow for better execution of their roles. These comments are further discussed in Chapter 5.

FIL understanding. There was a general request from the coordinators for the FILs to become more knowledgeable about the program. One respondent suggested the FILs would benefit from being in the coordinator role previously in order to understand the nature and philosophy of the MYP. Another commented that most FILs do not understand the MYPC role and "therefore at times the intricacy and time-consuming nature of the job is not fully appreciated." The comments were consistent with the quantitative data that showed when FILs bought into the concept of DL, the MYPC perceived them to be more supportive in general. If FILs were not committed to DL, then MYPCs felt they were not supported in their role.

Support. The area of support yielded the greatest overall response rate and was categorized into the following subthemes: FIL support, positive comments on support, and support from within and outside of the school. MYPCs frequently commented on a need for more support from the FIL. This is consistent with the MYPCs' perceptions of the need for FILs' understanding of the MYPC role. Respondents noted that the FIL, as the main decision maker, was the one in a position to allocate extra time, find the funds for professional development, and support interdisciplinary units, among other things.

One MYPC reported to three FILs and felt that none of them could give the support needed to be more effective in the MYPC role. Another MYPC stated that the

FIL was not supportive, but felt that it was because of a lack of the FIL's understanding for the program.

There were nine positive comments on FIL support. For example, one comment was, "Actually, my boss is a born leader who enjoys working in a shared leadership, enabling us to develop our practice in a confident [manner] and make our own decisions." Other MYPCs commented on positive board support and strong leadership teams. A second positive comment stated, "I am completely supported in my role. The leadership team works genuinely as a team and we are free to express our opinions and to disagree with each other to ensure that we are critical about the learning experiences we provide students. This is our main focus." This comment speaks to one of the guiding hypotheses of the current study and is consistent with the part of the causal model that shows when MYPCs are supported by the FIL, they become clear about the tasks of their role, and this leads to greater MYPC professional self-efficacy.

Other areas within the school where many MYPCs indicated greater support would be helpful ranged from the need to have more secretarial help with the many administrative tasks, to having other teachers share their workload. An example of this was to have a teacher be responsible for the personal project. Two IB continuum schools employed a curriculum coordinator to oversee the work of the IB coordinators and this was viewed as a positive step. Some MYPCs stated they needed help from other middle-level leaders (e.g., subject area leaders) to help carry out their duties. Other comments indicated there was insufficient commitment from the teachers and the school community. For example, one comment in this category was as follows: "The lack of buy in among the staff makes it difficult to do my job effectively."

There were 18 comments concerning the need for MYPC support outside of school. One area where MYPCs felt there was a need for support was from the IB regional office. Comments concerning more support from the IB included:

- "I feel I would like to have a specific person I could contact through MYP for items and concerns."
- "Someone from IB who touches base regularly with us like our consultant did."

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Schools which had adopted the MYP but had to adhere to state regulations found this frustrating. A response that summed this up was, "My school is obsessed with statewide required testing which is a priority over anything IB." MYPCs commented that in these circumstances, they needed support from organizations outside of the school, not only the IB regional coordinator, but also at district level, state association members and the government.

Synthesis of Qualitative and Quantitative Findings

A synthesis of the qualitative and quantitative findings allowed for further validation and credibility of the data (Maxwell, 2012; Trochim &Donnelly, 2008). Role clarity regarding leadership teaming emerged as one of the constructs measured by the questionnaire during the psychometric validation process. Although this construct was not linked to MYPCs professional self-efficacy, there was a strong, positive, direct effect from FIL support in general (direct effect/total effect = .93).

Moreover, there was a strong, positive, indirect effect from FIL commitment to DL (indirect effect/total effect = .95 X .93 = .88). According to the analysis of the structural equation model, the data are consistent with a model that specifies the following chain of causality: When the FIL is more committed to DL, this leads to greater

support for the MYPC, which in turn, leads to better clarity of the MYPC role with regard to leadership teaming.

With regard to the main themes that emerged from the qualitative data (the need for more time, greater role clarity, greater FIL understanding of DL, and more support of the MYPC), the latter three themes reinforced patterns found in the quantitative data.

The qualitative data were consistent with the causal model I examined in the quantitative part of the study, which is as follows: When the FIL is committed to DL, this brings about greater perceived support by MYPCs in that area of both teacher evaluation and in general. When MYPCs feel more support regarding teacher evaluations, this brings about greater clarity with regard to the goals of their role. Moreover, when MYPCs feel greater support in general this leads to greater role clarity regarding tasks and goals, greater feelings of job efficacy, and greater role clarity regarding leadership teaming. Finally, the model specifies that greater role clarity regarding tasks and duties cause further increases in feelings of professional self-efficacy.

CHAPTER 5

Discussion and Conclusions

Introduction

The main purpose of this study was to investigate (a) IBMYPCs' perceptions of their FILs' commitment to distributed leadership, (b) the extent to which coordinators felt supported by the instructional leaders, and (c) how those variables impacted their role clarity and professional self-efficacy. This empirical study provided both quantitative and qualitative support for the theory that FILs' commitment to distributed leadership and support for the MYPC would bring about greater role clarity and improved feelings of professional self-efficacy for the MYPC.

This chapter covers most noteworthy findings from Chapter 4 and explanations for the study conclusions. The strengths and limitations of the study are also discussed. In addition, implications for future policy and practice are suggested and directions for possible future research are recommended.

Key Findings and Implications

The IBMYP is a concept-based curriculum framework with the objective that learning is current, concurrent, relevant, and meaningful (Marshman, 2010). The program requires a change in methodology from the mastery of curriculum content to inquiry-based learning, with a strong emphasis on teacher development of learning modules. These modules include interdisciplinary units that enable students to grasp international mindedness in the context of their studies. The roles of MYPCs are important, as they help guide teachers in developing appropriate and challenging modules that promote critical thinking of students. I hypothesized that in order for the IBMYP

and philosophy to be successful in schools, a DL approach would be necessary and further that when FILs made a commitment to DL, this would bring about greater support, thus empowering the MYPCs as middle-level leaders. This, in turn, would have a positive effect on student learning and achievement. The IB advises schools to adopt a DL model when implementing the MYP (International Baccalaureate Organization, 2008). If a DL model had not been embraced in schools following the adoption of MYP, and traditional hierarchical structures had remained, I hypothesized the MYP would not be delivered optimally.

The study examined the perceptions of MYPCs in the three IB global regions and included three categories of schools identified by the IB as private international, private national, and public state. The study collected data regarding the perceptions of MYPCs on (a) the FILs' commitment to formal distribution of leadership, (b) support from the FILs to the MYPCs, (c) the MYPCs' role clarity, and (d) the MYPCs' professional self-efficacy.

Data were collected through an online survey resulting in responses from 135 MYPCs representing 36 different countries. Of the 135 respondents, 84 MYPCs responded to the following open-ended question: What additional support, and from whom, would improve your ability to carry out your role as an MYP coordinator? This allowed me to examine convergent validity of the data, which both supported the quantitative survey data and added further information (Maxwell, 2012; Trochim & Donnelly, 2008).

The following research questions were used to guide the study:

RQ1: Is there a relationship between Middle Years Program Coordinators' perceptions of the formal instructional leaders' commitment to distributed leadership and Middle Years Program Coordinators' perception of support from their formal instructional leaders?

RQ2: Is there a relationship between the Middle Years Program Coordinators' perceptions of the formal instructional leaders' support of them and the perceived clarity of their role?

RQ3A: Is there a relationship between Middle Year Program Coordinators' perception of the clarity of their role and their sense of their own professional self-efficacy?

RQ3B: If there is a relationship as stated in 3A, does role clarity mediate the impact of perceived formal instructional leaders' support on professional self-efficacy?

The theoretical model specified the following sequence of action: When FILs are more committed to DL, this leads to MYPCs feeling greater levels of support. This increased support leads to increased feelings of professional self-efficacy and improvements in role clarity with regard to tasks and duties. Moreover, this improved role clarity further enhances MYPCs' feelings of professional self-efficacy. All of the hypotheses from the research questions were supported by the empirical data and were reinforced by the qualitative data. Moreover, when the hypotheses were taken together and examined as a full structural equation model (SEM), the causal model was consistent with the empirical data collected.

The study's key findings reinforced the point that it is important for FILs to have a detailed and comprehensive understanding of DL. The findings of the study were

consistent with previous literature that showed that without the understanding and support of FILs, successful implementation of DL was unlikely (Harris, 2011; Murphy et al., 2009). The study also reinforced the idea that FILs must demonstrate support of MYPCs. According to the theory postulated in this study, this support will lead to increased clarity of role, and is crucial in helping MYPCs to do their jobs optimally, thus leading to greater student learning and achievement. Overall, the empirical data were consistent with the theoretical model hypothesized regarding the causal links among FIL commitment to DL, FIL support of MYPCs, role clarity, and professional self-efficacy.

Discussion of Findings Related to Research Question 1

An analysis of the data responses to all the survey questions can be found in Chapter 4.

Research Question 1: Is there a relationship between MYPCs' perceptions of the FILs' commitment to DL and MYPCs' perception of support from their FILs?

Support was divided into two subscales: support in general of the MYPC and support of the MYPC regarding teacher evaluations.

I hypothesized that when the MYPCs perceived FILs have greater commitment to DL, this would lead to MYPCs' perceptions of greater support for them. Findings showed a strong correlation between FIL's commitment to DL and perceptions of support by the MYPC in general, thus supporting my hypothesis. The result was also consistent with previous literature that stated DL required FILs to support and facilitate others in leading (Harris, 2011; Murphy et al., 2009; Scribner et al., 2007).

However, the statistical significance was not as robust regarding FIL support of MYPCs being involved in teacher evaluations. One possible reason to explain this

weaker correlation could be that there are divergent opinions about middle-level leaders such as MYPCs being involved in teacher evaluations. In many schools, leadership tasks are distributed to middle-level coordinators in all areas except summative teacher evaluation. The responsibility remains in the hands of the FIL and assistant FIL, thus maintaining a traditional system in that particular area. Data in this study appeared to support findings in previous studies by Hulpia et al. (2009). Teachers indicated they preferred to be supervised by individuals at the highest levels of leadership within the school. Hulpia et al. (2009) concluded that supervisory roles were perceived to be solely the function of principals (FILs) and assistant principals.

Consistent with this explanation is the fact that there was a significant difference in the mean level of support regarding teacher evaluations between the private international and public state schools. MYPCs at private international schools felt more supported than those in public state schools. The reason for this could have to do with state or government regulations. Private international schools in general are not bound by governmental restrictions regarding how they run their schools and distribute their leadership. From the outset, I was aware that MYPC involvement in teacher evaluations was a controversial issue in many schools. I believe that MYPCs, as pedagogical leaders, should be involved in and empowered to evaluate teachers, as they are trained to understand the curriculum being delivered and thus, would be qualified to conduct the evaluations. Results from the qualitative question indicated that some MYPCs were involved in both formative and summative evaluations of faculty.

Robertson's (2011a) study on the role of the MYP coordinator in the implementation of the MYP, their responsibilities, challenges, and opportunities as

middle-level leaders concluded that as middle-level leaders, MYPCs might encounter challenges to their leadership and authority from teachers. In such cases, the MYPCs needed to receive supervisory support from their FIL who explained the role of the MYPC in a DL model clearly to the faculty. This would empower MYPCs to perform their supervisory leadership roles with clarity and confidence. MYPCs, as leaders and practitioners, are trained to understand the nature of the MYP framework and how best to deliver curriculum through concept-based teaching. They are therefore best suited to be in classrooms giving both informal and formal feedback to help teachers improve their instructional delivery. To avoid role conflict for MYPCs when tasked with the role of both mentoring and evaluating teachers, the FIL and MYPC as leaders must work as a team. They should have a clear plan for the evaluation process, which ensures that pedagogy improves in all classrooms.

Discussion of Findings Related to Research Question 2

Research Question 2: Is there a relationship between the MYPCs' perceptions of the FILs' support of them and the perceived clarity of their role?

Role clarity was divided into three categories: role clarity regarding leader teaming, role clarity regarding job goals, and role clarity regarding job tasks. I hypothesized that when MYPCs perceived greater support from FILs, they would have greater role clarity. Results showed a direct and statistically significant relationship between general supports from the FIL in all three types of role clarity.

The strongest statistical link was to role clarity regarding teaming. MYPCs felt their leadership teams communicated clearly about the distribution of leadership. The second strongest statistical relationship was with role clarity regarding clear job-related

goals. The data are consistent with the theory that when a MYPC had clear goals for their position, they perceived it was because their FIL supported them in their leadership role. Thus, according to this theory, when MYPCs felt confused as to what their role was precisely, this was partly because the FIL did not provide enough support for them. In these cases, there was a call from participants for clearer guidelines from the IB.

The weakest statistical relationship was to role clarity regarding job tasks. The study by Mayers and Zepeda (2002) found that if roles involving duties and tasks required to achieve goals are not clear, then middle-level leaders undertaking these roles experienced ambiguity and tension. These findings are consistent with the following proposed theory: The support of the formal instructional leader has a positive impact on all three categories of role clarity.

The support has the strongest impact on role clarity in the area of teaming and the weakest impact on role clarity in the area of job tasks. MYPCs may perceive more support in the area of teaming and less support in the area of job tasks, as FILs may be experienced and knowledgeable in how to coordinate and deliver leadership in general and help the MYPC grow and develop as a member of a team. However, the FIL may not have experience in the role of the MYPC and therefore be unable to offer guidance about the details of the job. The impact of FIL support on all areas of role clarity is significant. In sum, the data support the proposed theoretical proposition that when FILs are more supportive of MYPCs, this brings about increases in the MYPCs feelings of role clarity in all three areas: teaming, goals, and tasks.

With regard to FIL support as it pertains to teacher evaluation and role clarity, there is only one statistically significant link. Again, the data were consistent with the

following proposed theory: When FILs are more supportive of MYPCs being a part of the teacher evaluation process, this brings about increases in MYPCs feelings of clarity regarding their job goals. The effect is small at .17 but still it is significant. According to Cohen (1988), effect sizes for correlations have the following cut points: less than .3 are small, .3 to .5 are moderate in size, greater than .5 are large. General support from the FIL yielded more statistically significant results related to role clarity (e.s. = .67) than they did for support regarding teacher evaluations.

I believe FIL general support has a stronger impact on role clarity than FIL support regarding teacher evaluations because of the issue regarding the desire by many teachers who only choose to be evaluated by their FIL for references purposes and even job security. For example, teachers often perceive the formal evaluations as a process for *hire* or *fire*, as it is documented, signed by both parties and put into their individual file. If a situation arose where a teacher's ability was questioned by a parent (e.g., having been successfully formally evaluated by the FIL), could make the teacher feel there was evidence in their favor. In some international schools, the formal evaluation documents can be used for legal purposes, thus furthering the desire by the teacher to be evaluated by the FIL.

Discussion of Findings Related to Research Question 3

Research Question 3 was in two parts.

Research Question 3A: Is there a relationship between MYPCs' perception of the clarity of their role and their sense of their own professional self-efficacy?

Research Question 3B: If there is a relationship as stated in 3A, does role clarity mediate the impact of perceived FILs' support on professional self-efficacy?

Research Question 3B pertained to the direct and indirect effects of support on professional self-efficacy. I had predicted that the impact of support would be indirect, that is, it would be mediated through the impact of the role clarity variable. Some of the impact of support was indeed mediated by the role clarity variable and hence, I found moderate support for my hypothesis. However, I had not predicted that such a large part of the hypothesized impact of support would have a direct effect upon professional self-efficacy. This was an unexpected finding in the data.

Of the three role clarity variables, role clarity regarding tasks and duties had the most statistical significance. A possible reason for this is that there is a written job description of MYPCs and there are certain explicit tasks that must be completed as part of the position. This subscale was directly related to themselves only: I have a clear idea of the duties and tasks that are required to achieve my goals. To have answered they were unclear would be a reflection on themselves, rather than their FILs attitude to DL.

Support (general) was much more strongly linked to professional self-efficacy. When MYPCs felt overall support from their FILs, whether the FIL understood or was committed to DL as a concept, they felt self-efficacious. This response was similar to that found in previous studies of support and self-efficacy in teachers (Pines & Aronson, 1981; Brouwers & Tomic, 2001). When teachers felt supported by their FIL, they experienced self-efficacy in their job. However, support regarding teacher evaluations is not as strongly linked to professional self-efficacy. Perhaps all of the weak statistical relationships around the support for MYPCs and teacher evaluation are a result of FILs either not supporting the idea of MYPCs conducting formal teacher evaluations or lacking the desire to change in this particular area. This might be a statistical

manifestation of indecision. So, if FILs feel ambivalent about sharing authority in the area of MYPCs conducting teacher evaluations, the MYPCs will probably pick up on this and may feel some ambivalence themselves. This ambivalence may undermine their feelings of professional self-efficacy.

Discussion of Unanticipated Findings

Although I did not predict the direct effect of support (general) on professional self-efficacy, this effect did materialize. I had hypothesized that full mediation through role clarity would occur, because my assumption was that in order for MYPCs to be self-efficacious, their role would need to be clear. Some of the impact of support (general) was mediated through role clarity (tasks), making some of the impact due to an indirect effect. However, not all of the impact was mediated (i.e., indirect). Some of the impact was direct. A possible reason for this is that even if a MYPC was not clear about their role in a DL model, but felt supported by their FIL in that they were given more control to assert leadership, this would lead to greater professional self-efficacy (Heck & Hallinger, 2009). So, even when MYPCs have some role ambiguity, they can still experience feelings of professional self-efficacy in that they may be asserting leadership in some areas, and even though they are not sure they have authority in this area, MYPCs see positive effects from their efforts. Often MYPCs are future FILs and this may cause a dynamic relationship between the two leaders and an ongoing process of negotiation as both vie for leadership and authority in the school.

Discussion of Qualitative Findings

The open-ended question on the questionnaire was, "What additional support, and from whom, would improve your ability to carry out your role as [an] MYP

coordinator?" I presented a summary of the qualitative data in Chapter 4. Four major themes emerged from the qualitative data: time, role clarity, FIL understanding and support, the latter three of which were the three key variables in the study. The comments from the themes in the qualitative data confirmed the results of quantitative data. The respondents expressed the need for more clarity from the IB organization, stating that the IB needed to be more specific with MYPC job goals. An example of this was the time required to do the roles assigned in the job description. Indeed the need for more time was a recurring theme in the responses. This finding was expected as more time is often seen as the answer for improvement.

Some MYPCs would like the amount of time to be specified by the IB, so that they did not have to negotiate it with their FIL, especially if the FIL was not knowledgeable about the program. One such comment was, "A clearer description of the role and its implications by the IB including the number of hours and type and function relationship of leadership in others." This comment and others indicated that the MYPCs felt that clearer guidelines and help in general from the IB would allow for better execution of their roles.

The area of support produced the greatest response rate. MYPCs commented on the importance of FILs supporting them in their roles. They reported that FILs had the power to make decisions and so FIL understanding of the role of a MYPC had an impact on the MYPCs ability to carry out all the tasks required. A common remark was that FILs simply did not know anything about the MYP or the role of the MYPC. MYPCs found this frustrating. Further, support from the IB (beyond clearer guidelines) and others was identified as important. MYPCs called for subject area leaders and area of

interaction leaders to be more involved and supportive of them in the running of the program. A few comments came from MYPCs who reported to two or three FILs. They felt that not only was their role confusing, as a consequence of reporting to more than one FIL, but that they did not get the required support either. Overall, the qualitative responses echoed the findings of the quantitative data.

Implications for Future Policy and Practice

The findings of this study suggested it would be beneficial to use professional development to increase awareness of DL, educate FILs about the importance of DL in 21st century education, and encourage them to practice DL. A previous study on middle-level leadership resonated with this finding (Mayers & Zepeda, 2002). Further, as well as an increase in awareness of DL, how can FILs be taught to be supportive? Through professional networking and development of leadership, FILs can reflect on their current practice and how it may or may not reflect the reality of a complex educational organization. Given the nature of schools today, FILs need to adjust how they and their constituents view their power and authority. This can be achieved by openly developing and supporting middle-level leaders and by empowering them to have responsibility and accountability amongst the faculty, students, and parent population.

The IB requires the distributed leadership model to schools that want to be authorized to offer any or all three of the IB programs: The PYP and the DP as well as the MYP. Therefore, the IB needs to educate the school community, particularly school leadership, at the authorization stage about the needs of the coordinator given the job description and role definition that the organization prescribes. There needs to be suitable follow-up and action taken if DL is not embraced by the school and in particular,

by the FIL. The IB organization must specify in more detail what a DL model is and the definition of a pedagogical leader. To date, the only official document on pedagogical leadership from the IB (2009) is in relation to the PYP. Both DL and pedagogical leadership need further emphasis and need to be outlined clearly in detail in the written job description. These views were echoed in the qualitative responses gathered in this study from MYPCs. Further, schools that choose to adopt the IBMYP must understand the philosophical framework of the MYP, the importance of the role of the MYPC as a pedagogical leader, and the necessity of a DL model to support the MYPC in the position.

Directions for Future Research

According to the theory supported by this research, increased FIL commitment to DL will increase support of MYPC, which will then lead to increased professional self-efficacy, ultimately leading to improved student learning and achievement. It was beyond the scope of this study to test student learning and achievement empirically. However, other studies have shown that when teachers, either individually or collectively, have a high sense of self-efficacy this is associated with greater student learning and achievement (Ashton & Web, 1986; Goddard et al., 2004; Hoy & Miskel, 2008; Midgley et al., 1989; Ross, 1992; Tschannen-Moran et al., 1998). Future researchers who continue this line of inquiry could look at possible correlations between middle-level leaders' professional self-efficacy and the effect on student learning and achievement.

Possible lines of research could include building on prior studies on efficacy of teachers and principals (FILs) by specifically examining the link between student

learning and efficacy of middle-level leaders. Further, more research is needed to explore the reasons why FILs seem to support MYPCs more in the area of teaming and less in the area of job tasks. A possible approach to exploring this relationship could include the use of quantitative methodology. Future researchers might attempt to discover whether FILs who were formerly MYPCs are more likely to (a) adopt a DL model with their middle-level leaders and notably MYPCs and (b) allow them to participate in the teacher evaluation process. Finally, this study could be replicated with other groups of coordinators in the IB PYP and DP programs as well as other instructional programs that mandate similar roles. Many academic programs have program leaders and it would be interesting to study how those leaders are integrated into leadership teams.

Strengths and Limitations of the Study

Strengths of external validity. The results of the study are generalizable to the accessible population from whom I drew the sample. The findings are particularly helpful with the introduction of *MYP: The Next Chapter* (due to be launched in September 2014), which is a revised, enhanced MYP. It aims to appeal to a larger audience by improving the engagement of students and the motivation of teachers through empowerment and ownership of the curriculum.

The role of the MYPC as a pedagogical leader is more important than ever. Therefore, the results of this study are pertinent to the IB: At the authorization and implementation stage, the nature and purpose of the MYP as a DL model must be clearly understood and embraced by FILs in schools. The study results are likely generalizable to IB coordinators in the other two programs: PYP and DP. Both positions have proximal

similarity to the role of the MYP as middle-level and pedagogical leaders. However, there are some contextual differences within the programs and the age ranges of the students that may inhibit generalizability of the findings to the PYPC and DPC in relation to the MYPC. Lastly, the results are pertinent to any school eager to adopt a DL model.

Construct validity. The careful construction and psychometric analysis of the research instrument in this study is very strong. I used the Delphi process to establish the context validity and the Cronbach alphas to establish reliability of the instrument. Finally, I used factor analysis to establish factor validity of the instrument.

Conclusion validity. The power of the tests is .80 (Kraemer & Thiemann, 1987), and thus conclusion validity is deemed to be strong. I selected the correct statistical methods for the type of data collected. Also, I have convergent validity because the qualitative and quantitative findings converged on the same general conclusions.

Internal validity. The study is limited by the fact that this is a non-experimental study. Even though the hypotheses were supported by the data and the expected correlations were revealed, this does not mean the causal model is correct. However, I implemented several design tools that improved the strength of drawing causal inferences. One design tool was the inclusion of "control predictors." This allowed me to eliminate many third variable explanations for the findings.

I also used analysis of covariance (in the regression tests for Models 3B1 and 3B2) and this increased the internal validity of the design. Finally, I implemented SEM, which is a strong statistical tool for drawing causal inferences because it allows the researcher to tease apart the direct and indirect effects between sets of variables. In addition, SEM provides estimates of total effects among variables. This design provides

moderate to strong support for the underlying causal model. Certainly, this design which included SEM and ANCOVAs has superior internal validity compared to a simple correlational study.

As mentioned, the study design was non-experimental, as is typical in much of social science research. Thus compared to an experimental study, the internal validity was not as strong. However, I *was* able compare the relative merits of several hypothetical causal models based on the outcomes of ANCOVA tests. There are many other models I could generate that might fit the data even better than the one I postulated in Model 3B. The gold standard for generating a model with strong internal validity is a randomized, controlled study. Such a study would be impractical, difficult, and perhaps unethical for the current research context. For example, it would be unlikely that MYPCs would be willing to participate in a study in which they were randomly assigned to FILs who were supportive or FILs who were not supportive. The application of a series of ANCOVA models and SEM were ideally suited to maximize internal validity in the current research context.

Further, this research would have been a lot more straightforward and a census could have been undertaken of all MYPCs had the sampling strategies been easier to navigate. The IB was bound by law not to pass out list serves, nor could they send the survey for me. Added to this, when I attempted to contact MYPCs on the IB webpage, I was cut off after every third attempt. I then had to go on individual websites, which then became an extensive undertaking to contact my study participant. Future research should include sampling strategies supported by the IB.

Final Reflection

This research on the perceptions of middle-level leaders on FIL commitment to DL contributes to the developing body of literature on DL. This specific study of DL in the MYP context extends knowledge of DL in general by focusing on the importance of a DL model in schools following an innovative and concept-based curriculum framework. The study concluded that DL is a powerful type of leadership in schools, but that DL needs to be purposefully planned if it is to have a positive impact on student learning and achievement. DL deliberately sets out to address the increased pressures and demands on schools by requiring a more responsive approach of leaders and their followers (Harris & Spillane, 2008). Thus, FILs must empower people at middle-level leadership positions such as MYPCs by supporting their leadership, decision making, and control over resources (Leithwood et al., 2009).

Ultimately, for DL to flourish in schools, FILs must be committed to and show an understanding of the part they play in supporting those chosen, to take on the coordination of the instructional program, and the nature of the support needed by these coordinators. Further, DL requires ensuring careful selection of personnel, and also that leadership boundaries are open and fluid, changing depending on the task required.

The study does not claim that formal leadership structures are taken away or are obsolete (Harris, 2011), rather that leadership is reframed and redesigned to allow for greater leadership capacity at the middle level (Gronn, 2002; Harris, 2006). This study demonstrates that in order for a distributed leadership structure to be successful, the IB effectively mandates a DL structure, and the formal leadership of the school must recognize the extent and form of the support needed to make it work. Eventually, the

organization is recultured to embrace and empower middle-level leaders, so everyone learns that DL is essential for optimal functioning in schools.

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Appendix A

The Role of the MYP Coordinator

The MYP, by its very nature and driving principles, requires whole school discussions of basic pedagogical issues and concerted efforts in the development of interdisciplinary activities and projects within and across traditional departments (horizontal articulation) and grade levels/years (vertical articulation).

All MYP schools must appoint a coordinator who is normally recruited from the MYP teaching staff. The coordinator should have proven teaching ability and be able to act as a pedagogical leader of the MYP in the school.

Together with the senior management of the school, the MYP coordinator is involved in the whole school implementation of the MYP and therefore, has a central function in the organization of the programme.

The MYP coordinator maintains contact with area leaders, subject departments and teachers, and with the IB. All IB correspondence regarding the MYP is addressed to this coordinator.

The duties performed by MYP coordinators will vary depending on the number of students, the general management structure, and the type of school.

In particular, MYP coordinators **must**:

- keep up to date with and **inform** all staff of developments and new publications
- set up systems for communication with the entire professional staff to ensure cooperation in implementing the programme in the school
- be able to communicate with the IB offices in English, French, or Spanish
- circulate to teachers and students **all** relevant information received from the IB

- ensure that all regulations set by the IB concerning the programme and all procedures are adhered to properly, and that all deadlines are met
- oversee the implementation of the areas of interaction (approaches to learning, community and service, health and social education, environments, human ingenuity) according to IB guidelines
- oversee the implementation of the published subject-specific assessment criteria
- ensure that the concepts of international awareness and international mindedness permeate all subjects
- provide teachers and students with guidance concerning the personal project
- maintain accurate school information via the IB information system (IBIS)
- ensure that the document entitled General regulations: Middle Years Programme is distributed to parents.

The IB recommends that:

- coordinators involve a team (implementation team or MYP steering committee) in both long-term and short-term planning within the school
- sufficient release time be provided for coordinators to carry out their responsibilities
- coordinators be allocated appropriate office space, equipment and secretarial help
- newly appointed and inexperienced coordinators attend MYP training workshops.

MYP: From principles into practice (2008) provides further guidance on the role of the MYP coordinator.

MYP Coordinator Handbook 2012–2013

Appendix B

Letter in English

Informed Consent Form for Distributed Leadership Survey

Dear MYP Coordinator,

My name is Oli Tooher-Hancock. As a candidate for a doctorate in Educational Leadership at Lehigh University, I am conducting doctoral research on how the work of Middle Years Program Coordinators' (MYPCs) is impacted by Distributed Leadership (DL) in schools. The research project will seek to investigate perceptions of a) your role as MYP Coordinator and, b) the impact Distributed Leadership has on the work of MYPCs.

To my knowledge, it is the first time MYPCs have been asked to participate in a survey regarding their perceptions of their job.

One of my committee members is Malcolm Nicolson, Head of IB Diploma Program Development and Ex-Head of the IB Middle Years Program Development. The results of this survey will have input into the upcoming review of the IB program standards and practices. Your participation in this research is completely voluntary. However, I encourage you to choose to complete the survey. Your participation will improve the quality of the information that is presented to the IB.

I would truly appreciate if you would consider completing a web-based survey. It should only take approximately 10-15 minutes to complete. At the end of the survey is one open-ended question.

I assure you that the strictest confidentiality will be maintained throughout this study.

My handling of the data will be consistent with the Federal Policy for the Protection of

Human Subjects (Federal Register, 1991), and the Ethical Principles in the Conduct of Research with Human Participants (APA, 1982). There will be no distinguishing data on the survey that could be used to identify you or your school.

Furthermore, data will be reported in aggregate form only, with no identification of individuals or schools. Please print this page for your information regarding informed consent and reference.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact my advisor, Dr. Jill Sperandio (jis204@lehigh.edu), Susan E. Disidore at (610)758-3020 (email: sus5@lehigh.edu) or Troy Boni at (610)758-2985 (email: tdb308@lehigh.edu) of Lehigh University's Office of Research and Sponsored Programs. All reports or correspondence will be kept confidential.

To participate you must click the "I agree to participate" link below to enter the survey and complete it. You have a choice of answering the questions in English, French, Spanish, or Mandarin.[Insert link here]

Please complete the survey by May X, 2013. Thank you in advance for your time and assistance with this research.

Oli Tooher-Hancock

Appendix C

Letter in Spanish

Informed Consent Form for Distributed Leadership Survey

Estimado Coordinador de PAI (MYP),

Mi nombre es Oli Tooher-Hancock. Como candidata a un doctorado en Liderazgo Educacional en la Universidad Lehigh, estoy llevando a cabo una investigación doctoral sobre cómo el trabajo de los Coordinadores del Programa de los Años Intermedios (CPAI), es impactado por el Liderazgo Distribuido (LD) en los colegios. El proyecto de investigación, busca investigar percepciones de a) su rol como (CPAI) y b) el impacto que LD, tiene en el trabajo de los CPAIs.

Uno de los miembros de mi comité es Malcolm Nicolson, Jefe del IB Diploma Programa de IB Diploma de Desarrollo y Ex Jefe del Programa de los Años Intermedios del IB. Los resultados de esta encuesta contribuiran en la próxima revisión de las normas y prácticas del programa IB. Su participación en este proyecto de investigación es completamente voluntaria. Sin embargo, se espera que todos los que sean posibles completen la encuesta para darle validez y credibilidad a la investigación.

Apreciaría mucho que ustedes consideraran completar una encuesta virtual. Les tomará completarla aproximadamente sólo 10-15 minutos. Al final de la encuesta hay una pregunta abierta.

Les aseguro que se mantendrá la mayor confidencialidad a través de este estudio. Mi manejo de la información será consistente con la Política Federal para la Protección de los Temas Humanos (Registro Federal, 1991) y con los Principios Éticos de la Conducta de Investigación con Participantes Humanos (APA, 1982). No habrá información identificatoria en la encuesta que pueda usarse para identificarlo a usted o a su colegio.

Aún más la información se dará solamente en forma conjunta, sin identificar al individuo o a los colegios. Por favor imprima esta página para su información en relación a su consentimiento y referencia.

Si tuviera preguntas o inquietudes respecto a este estudio y desearía hablar con alguna persona, además del investigador, le animaría a contactar a Dr. Jill Sperandio.

(jis204@lehigh.edu, Susan E. Disidore en (610)758-3020 (correo electrónico: sus5@lehigh.edu) o Troy Boni en (610)758-2985 (correo electrónico: tdb308@lehigh.edu de la Universidad de Lehigh, Oficina de los Programas Auspiciados y de Investigación. Todos los reportes se mantendrán en reserva.

Para participar debe hacer click en la frase que figura abajo para ingresar a la encuesta y completarla.

https://www.surveymonkey.com/s/MYPSPANISHVERSION

Por favor sírvase completar la encuesta hasta Mai 29, 2013.

Gracias anticipadas por su tiempo y ayuda con esta investigación.

Oli Tooher-Hancock

Incoming Head at The International School of Hyderabad, India

Ed.L Candidate, Lehigh University

Appendix D

Letter in French

Informed Consent Form for Distributed Leadership Survey

Cher Coordinateur MYP,

Je m'appelle Oli-Tooher-Hancock. Je suis candidate au diplôme de doctorat en Administration Educative à Lehigh University. Je poursuis ma thèse de doctorat sur une analyse de l'impact de la Direction Partagée (DP) sur le travail des Coordinateurs de collèges. (MYPC, Middle Years Program coordinators). Ce projet de recherche s'attache à rassembler, a) la conception de votre rôle de MYPC and b) l'impact que la DP peut avoir sur votre rôle de MYPC

A ma connaissance, c'est la première fois que les MYPC seront invités à participer à une enquête sur la conception de leur rôle.

Un des membres de mon comité est Malcolm Nicolson, directeur du développement des programmes pour le diplôme de l'IB et ancien directeur du développement du programme pour les "Middle Years". Les résultats de cette enquête devront entrer dans la prochaine révision des normes et des pratiques du programme de l'IB. Votre participation à ce projet de recherche est entièrement volontaire. Cependant, j'espere que le plus grand nombre possible d'entre vous compléteront l'enquête, afin de donner validité et crédibilité a cette recherche.

Je vous demanderai de bien vouloir compléter l'enquête électroniquement. Cela ne devrait pas prendre plus de dix ou quinze minutes. L'enquête se terminera par une question ouverte.

Je vous assure que la plus stricte confidentialité sera maintenue durant le déroulement de l'enquête. La gestion des données sera consistante avec les Principes Fédéraux de Protection de la Personne Humaine (Federal Register, 1991), et des Principes Éthiques de Conduite de Recherche avec Participants Humains (APA, 1982). Les données ne permettront ni de vous identifier, ni d'identifier votre établissement scolaire.

De plus, les données seront rapportées sous forme abrégée, sans identification individuelle ou scolaire. Veuillez imprimer cette page pour référence et information sur le consentement informé.

Si vous avez des questions concernant cette enquete et souhaiteriez parler à quelqu'un d'autre que le chercheur, je vous invite à contacter mon conseiller, Dr. Jill Sperandio (jis204@lehigh.edu), Susan E. Disidore at (610)758-3020 (courriel: sus5@lehigh.edu) or Troy Boni at (610)758-2985 (courriel: tdb308@lehigh.edu) à Lehigh University's Office of Research and Sponsored Programs. Tout rapport ou correspondance restera confidentiel.

Pour participer vous devez cliquer sur ci-dessous pour entrer dans l'enquête, et la compléter.

https://www.surveymonkey.com/s/MYPFRENCHVERSI

Prière de compléter l'enquête avant le Mai 29 er 2013.

Merci à l'avance pour votre assistance et participation dans cette recherche.

Oli Tooher-Hancock

Incoming Head at The International School of Hyderabad, India

Ed.L Candidate, Lehigh University

Appendix E

Revised Distributed Leadership Correlates Inventory Survey in English

If you have received this survey, it means that you have agreed to participate in my research. Thank you. Please complete the following survey concerning your perceptions of leadership at your school by responding to each item below. There are no right or wrong answers. I am interested in your honest opinion. All data is confidential and no one will have access to either your identity, or your schools' identity.

The survey consists of 36 short answer questions and one open question and it should take no more than 15 minutes.

Distributed Leadership (DL) is defined as the building of leadership capacity by sharing leadership activities in schools among multiple leaders. DL in practice focuses upon the interactions, rather than the actions of FILs and middle-level leaders, such as MYPCs.

Are you currently the MYPC at your school?

fi Yes

If you answered "yes," please go to question 2.

fi No

If you answered "No," thank you for taking part in the survey.

Unfortunately you do not qualify as a subject. Please do not complete this survey.

Background Information

Demographic variables

1. How long have you worked with your current FIL as an MYPC?

2. Most items below refer to a person called the Formal Instructional Leader (FIL). I am interested in YOUR perceptions about YOUR FIL. Prior to responding to the items below, take a moment to identify who you consider to be your FIL. My FIL is my principal, my head of section, my divisional principal, my school head, other (please specify).

3. How long have you worked with your current FIL as MYPC?

4. How long have you been an MYPC at current school?

5. How long have you been an MYPC (in total)?

School structure variables

6. What is the size of your school (Total pre-K-12)?

Less than 250 students, 251-450 students, 451-700 students, 701- 1200 students, more than 1200 students.

7. How many people are on the leadership team?

8. What type of school is yours?

Private international, private national, public/state

9. What type of school is yours?

For profit, not for profit

10. In which IB region is your current school situated?

Europe, Africa, and the Middle East

The Americas

Asia Pacific

11. In which country is your current school situated**?**

The Survey (which will be located on survey monkey)

Response options for FIL support for MYPC

Strongly agree, Agree, Slightly agree, Slightly disagree, Disagree, Strongly disagree

12. I am a member of my school's leadership team. yes/no

13. Leadership is distributed in my school for activities critical for student learning.

14. My Formal Instructional Leader (FIL) encourages me to try new practices consistent with the MYP framework.

15. I have clear job-related goals.

16. I am a pedagogical leader in my school.

17. I am given autonomy with regards to the organization of the time allotted to my role.

18. My FIL encourages me to help teachers in the development of their units of work.

19. The term 'change agent' is defined as a person who leads change in a school by advocating for change and by managing and planning the implementation of change. I am a change agent in my school.

20. I have a clear idea of the duties and tasks that are required to achieve my goals.

21. I feel my FIL understands the concepts of distributed leadership.

22. My FIL encourages me to look out for the personal welfare of teachers.

23. I raise student achievement through implementing best practice assessment procedures.

24. Leadership roles are clear in our school.

25. My FIL encourages me to participate in formative observations of teachers.

26. My FIL is committed to the distribution of leadership at our school.

27. I ensure that concepts of international awareness and international mindedness permeate all subjects.

28. I have an appropriate level of autonomy in decision-making.

29. The leadership team communicates clearly about distribution of leadership.

30. I feel my FIL and I work well together in a leadership capacity.

31. My FIL supports my efforts to develop professional learning communities for teachers.

32. I facilitate student learning in my school.

33. The leadership team has a clear process for distributing leadership functions**.**

34. I feel we have an appropriate range of leadership positions at our school.

35. People on the leadership team respect each other's areas of expertise.

36. My FIL encourages me to participate in summative evaluations of teachers.

Open-ended question.

What additional support, and from whom, would improve your ability to carry out your role as a MYP coordinator?

Thank you again for your time and assistance.

Oli Tooher-Hancock, Ed.L Candidate, Lehigh University.

Appendix F

Revised Distributed Leadership Correlates Inventory Survey in Spanish

Inventario del Liderazgo Distribuído Revisado

Si ha recibido esta encuesta esto significa que usted ha aceptado participar en mi investigación. Gracias. Sírvase completar la siguiente encuesta sobre sus percepciones de Liderazgo en su colegio respondiendo a cada punto. No hay respuestas correctas o incorrectas. Me interesa su honesta opinión. Toda la información es confidencial y nadie tendrá acceso a su identidad o a la de su colegio.
La encuesta consiste de 36 preguntas cortas y una pregunta abierta y no debe tomar más de 15 minutos.

El Liderazgo Distribuido (LD) se define como la formación de la capacidad de liderazgo compartiendo las actividades de liderazgo en los colegios entre sus múltiples líderes. LD en la práctica se enfoca en las interacciones y no en las acciones de los LIFs y los Líderes de mando medio, tales como los CPAIs.

1. Es usted actualmente el CPAI en su colegio?

fi Sí
Si usted contestó “sí”, por favor pase a la pregunta 2.

fi No

Si usted respondió “No”, gracias por tomar parte en la encuesta.
Desafortunadamente usted no califica como participante. Por favor no complete esta encuesta.

Datos Personales

Variables Demográficas

2. La mayoría de los artículos siguientes se refieren a una persona que se llama el líder formal de Instrucción (FIL). Estoy interesado en sus percepciones acerca de sus FIL. Antes de responder a los elementos a continuación, tome un momento para identificar quién considera usted que es su FIL. Mi FIL es: mi director, mi jefe de sección, mi director divisional, mi cabeza escuela.

3. Cuánto tiempo ha trabajado con su actual LIF como CPAI?

4. Por cuánto tiempo ha sido CPAI en su colegio actual?

5. Cuánto tiempo ha sido CPAI (en total)?

Variables de la Estructura del Colegio

6. Cuál es el tamaño de su colegio? (Total pre-K-12)

Menos de 250 alumnos, 251-450 alumnos, 451-700 alumnos, 701-1200 alumnos, más de 1,200 alumnos.

7. Cuántas personas están en el equipo de liderazgo?

8. Qué tipo de colegio es el suyo?

Privado internacional, privado nacional, publico/estatal

9. Qué tipo de colegio es el suyo?

Para lucro, sin lucro

10. En qué región de IB está situado su actual colegio?

Europa, África u Oriente Medio

Las Américas

Asia Pacífico

11. ¿En qué país se encuentra su escuela actual?

La Encuesta (que será presentada como encuesta de fácil manejo)

Opciones de Respuestas

Muy de acuerdo, De acuerdo, Ligeramente de acuerdo, Ligeramente en desacuerdo, En desacuerdo, Muy en desacuerdo

12. Soy miembro del equipo de liderazgo de mi colegio. Si/no

13. El liderazgo está distribuido en mi colegio por actividades de acuerdo al aprendizaje del alumno

14. Mi Líder de Instrucción Formal (LIF) me alienta a llevar a cabo nuevas prácticas consistentes con el marco del PAI

15. Yo tengo metas claras relacionadas con mi trabajo.

16. Soy un líder pedagógico en mi colegio.

17. Me dan autonomía respecto a la organización del tiempo que se asigna a mi rol.

18. Mi LIF me alienta a ayudar a los profesores en el desarrollo de sus unidades de trabajo.

19. El término “agente de cambio” se define como una persona que lidera cambios en el colegio propulsando el cambio, mediante el manejo y planeamiento de su implementación. Soy un agente de cambio en mi colegio.

20. Tengo una clara idea de los deberes y tareas que se necesitan para lograr mis metas.

21. Siento que mi LIF comprende los conceptos de Liderazgo Distribuído.

22. Mi LIF me alienta a preocuparme por el bienestar personal de los profesores.

23. Evalúo el logro del alumno a través de la implementación de una mejor práctica de procedimientos de evaluación

24. Los roles de liderazgo están claros en nuestro colegio.

25. Mi LIF me alienta a participar en la evaluación formativa de los profesores.

26. Mi LIF está comprometido con la Distribución de Liderazgo en nuestro colegio.

27. Me aseguro que los conceptos de conocimiento internacional y el pensamiento internacional lleguen a todos.

28. Tengo un apropiado nivel de autonomía para tomar decisiones.

29. El equipo de liderazgo se comunica claramente sobre la distribución del liderazgo.

30. Yo siento que mi LIF y yo trabajamos bien juntos en capacidad de liderazgo.

31. Mi LIF apoya mis esfuerzos para desarrollar comunidades de aprendizaje profesional para los profesores.

32. Facilito el aprendizaje del alumno en mi colegio.

33. El equipo de liderazgo tiene un claro proceso para distribuir las funciones de liderazgo.

34. Siento que tengo un rango apropiado de posiciones de liderazgo en nuestro colegio.

35. Los miembros del equipo de liderazgo respetan las áreas de especialidades de cada uno.

36. Mi LIF me alienta para participar en evaluaciones sumativas de los profesores.

Pregunta abierta final

Qué apoyo adicional y de quién mejoraría su habilidad para llevar a cabo su rol de Coordinador PAI?

Nuevamente, gracias, por su tiempo y colaboración.

Oli Tooher-Hancock

Ed.L Candidate, Lehigh University

(Translated by: Vanina Camere, Secretary for the Secondary Principal at Colegio FDR, The American School of Lima, Peru and edited by Dr. Marilia Raez, Head of Spanish at Colegio FDR, The American School of Lima).

Appendix G

Revised Distributed Leadership Correlates Inventory Survey in French

Inventaire Remanié d'une Direction Partagée :

Vous avez reçu cette enquête parce que vous avez accepté de participer à mes recherches. Je vous en remercie.

Veuillez compléter l'enquête ci-jointe décrivant la direction de votre école ainsi que vous la percevez, en répondant à chacune des questions. Il n'y a ni bonne, ni mauvaise réponse. Votre opinion personnelle m'intéresse au plus haut point. Toutes les données sont confidentielles, aussi bien votre identité, que les informations concernant votre établissement.

L'enquête consiste en 36 réponses courtes, plus une question ouverte, et ne devrait pas prendre plus de quinze minutes.

La Direction Partagée (DP) se définie en tant qu'élément fondamental de la direction d'un établissement scolaire par la distribution des rôles et fonctions de direction a travers de multiples responsables. La DP, en pratique, se concentre sur les interactions des LIF et des divers leaders intermédiaires, MYPC ou autres, plutôt que sur leurs actions directes.

Etes-vous le coordinateur MYP dans votre établissement?

- Oui

Si vous avez répondu par « oui », allez à la question 2

- Non

Si vous avez répondu par « non », vous n'êtes pas qualifié pas pour ce questionnaire, merci d'avoir répondu à cette enquête.

Démographiques variables

1. Depuis combien de temps travaillez-vous comme MYPC avec votre actuel LIF ?
2. La plupart des items se rapportent à une personne désignée Leader Instructeur Formel (LIF). Avant de répondre aux questions ci-dessous, prenez un moment pour identifier qui représente le LIF dans votre rôle de MYP coordinateur (MYPC). Mon LIF est: proviseur, directeur de division, chef d'établissement
3. Combien de temps avez-vous travaillé avec votre LIF que MYPC?
4. Depuis combien de temps êtes-vous MYCP dans votre établissement ?
5. Depuis combien de temps êtes-vous MYPC au total ?

Structures scolaires variables

6. Quelle est la taille de votre établissement ? (Total primaire/collège/lycée)

Moins de 250 élèves, de 251-450 élèves, 451-700 élèves, 701-1200 élèves, plus de 1200 élèves.

7.Combien de personnes dans l'équipe de direction ?
8.Quel type d'établissement est le vôtre ?

Privé international, privé national, public/établissement d'état

9.Quel type d'établissement est le vôtre ?

A bit lucratif, Associatif

10.Dans quelle zone de l'IB votre établissement est-il situe ?

Europe, Afrique, Moyen Orient

Les Ameriques

Asie Pacifique

11.Dans quelle pays votre établissement est-il situe ?

L'Enquête (réalisée sur Survey Monkey)

fortement d'accord, se mettre d'accord, Plutôt d'accord, légèrement en désaccord, être en désaccord, fortement en désaccord

Réponses optionnelles pour LIF soutien de MYPC

12. J'appartiens à l'équipe de direction de mon établissement oui/non - 12

13. La direction est partagée dans mon établissement pour toute activité fondamentale aux apprentissages des élèves - 13

14. Mon Leader Instructeur Formel (LIF) m'encourage à innover de nouvelles pratiques pédagogiques en liaison avec la structure MYP

15. Mes objectifs sont clairs, et en relation avec mon rôle

16.Je suis un leader pédagogique dans mon établissement
17.Je peux organiser le temps attribue à mon rôle de manière autonome
18.Mon LIF m'encourage à aider les enseignants a développer leurs unité de travail
19.Je suis un élément facteur de changement dans mon établissement
20.Les responsabilités et tâches à accomplir pour atteindre mes objectifs sont clairs
21.Mon LIF comprend le concept de la direction partagée
22.Mon LIF m'encourage à préserver le bien-être personnel des enseignants
23.J'élève les compétences des élèves à travers une procédure d'évaluation d'excellence
24. Les rôles de direction sont explicites dans notre établissement
25.Mon LIF m'encourage à procéder à des évaluations formatives des enseignants
26.Mon LIF est engagé dans la direction partagée
27.J'assure l'intégration des notions de sensibilisation internationale et d'esprit international dans toutes les matières.
28.Je suis autonome dans mes prises de décision

29. L’équipe de direction communique clairement à propos de la distribution de l’autorité
30. Je pense que mon LIF et moi travaillons en équipe de direction réalisée
31. Mon LIF soutien mes efforts dans le développement d’une communauté enseignante d’apprenants
32. Je facilite l’apprentissage des élèves dans mon établissement
33. La direction de l’école a un processus établi de distribution des rôles de direction
34. Je pense que nous les rôles de directions sont adéquats dans mon établissement
35. Les personnes aux postes de direction respectent mutuellement leur expertise
36. Mon LIF m’encourage à participer à des évaluations sommatives des enseignants.

Quel soutien supplémentaire, et de quel source, pourrait vous permettre d’améliorer votre rôle de coordinateur MYP ?

Merci encore pour votre temps et soutien à ce projet.

Oli Tooher-Hancock

Ed.L Candidate, Lehigh University

(Translated by: Dominique Velociter, Head of School and Founder at French-American School, Rhode Island)

Appendix H

Table H

Unstandardized Total Effects for the Data Fitting the Causal Model of the Effect of Commitment to Distributed Leadership on Coordinators' Professional Self-Efficacy

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
FIL_SPTt	.917	.000	.000	.000	.000	.000	.000
FIL_SPTg	1.348	.000	.000	.000	.000	.000	.000
Role_CLL	1.320	.000	.979	.000	.000	.000	.000
Role_CL2	.363	.000	.269	.000	.000	.000	.000
Role_CL1	1.296	.144	.863	.000	.000	.000	.000
Efficacy	.517	.000	.383	.000	.199	.000	.000
Efficacy1	.618	.000	.458	.000	.238	.000	1.195
Efficacy2	.759	.000	.563	.000	.293	.000	1.468
Efficacy3	.476	.000	.353	.000	.184	.000	.922
Efficacy4	.417	.000	.309	.000	.161	.000	.806
Efficacy5	.517	.000	.383	.000	.199	.000	1.000

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
Role_CL6	1.241	.000	.921	.940	.000	.000	.000
Role_CL5	1.401	.000	1.040	1.062	.000	.000	.000
Role_CL4	1.473	.000	1.093	1.116	.000	.000	.000
Role_CL3	1.320	.000	.979	1.000	.000	.000	.000
FIL_SPT7	.917	1.000	.000	.000	.000	.000	.000
FIL_SPT8	.955	1.041	.000	.000	.000	.000	.000
FIL_SPT6	1.310	.000	.972	.000	.000	.000	.000
FIL_SPT5	1.127	.000	.836	.000	.000	.000	.000
FIL_SPT4	1.319	.000	.979	.000	.000	.000	.000
FIL_SPT3	1.003	.000	.744	.000	.000	.000	.000
FIL_SPT2	.843	.000	.625	.000	.000	.000	.000
FIL_SPT1	1.348	.000	1.000	.000	.000	.000	.000
DL_4	1.659	.000	.000	.000	.000	.000	.000
DL_3	1.795	.000	.000	.000	.000	.000	.000

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
DL_2	1.925	.000	.000	.000	.000	.000	.000
DL_1	1.000	.000	.000	.000	.000	.000	.000

Appendix I

Table I

Unstandardized Direct Effects for the Data Fitting the Causal Model of the Effect of Commitment to Distributed Leadership on Coordinators' Professional Self-Efficacy

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
FIL_SPTt	.917	.000	.000	.000	.000	.000	.000
FIL_SPTg	1.348	.000	.000	.000	.000	.000	.000
Role_CLL	.000	.000	.979	.000	.000	.000	.000
Role_CL2	.000	.000	.269	.000	.000	.000	.000
Role_CL1	.000	.144	.863	.000	.000	.000	.000
Efficacy	.000	.000	.330	.000	.199	.000	.000
Efficacy1	.000	.000	.000	.000	.000	.000	1.195
Efficacy2	.000	.000	.000	.000	.000	.000	1.468
Efficacy3	.000	.000	.000	.000	.000	.000	.922
Efficacy4	.000	.000	.000	.000	.000	.000	.806
Efficacy5	.000	.000	.000	.000	.000	.000	1.000

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
Role_CL6	.000	.000	.000	.940	.000	.000	.000
Role_CL5	.000	.000	.000	1.062	.000	.000	.000
Role_CL4	.000	.000	.000	1.116	.000	.000	.000
Role_CL3	.000	.000	.000	1.000	.000	.000	.000
FIL_SPT7	.000	1.000	.000	.000	.000	.000	.000
FIL_SPT8	.000	1.041	.000	.000	.000	.000	.000
FIL_SPT6	.000	.000	.972	.000	.000	.000	.000
FIL_SPT5	.000	.000	.836	.000	.000	.000	.000
FIL_SPT4	.000	.000	.979	.000	.000	.000	.000
FIL_SPT3	.000	.000	.744	.000	.000	.000	.000
FIL_SPT2	.000	.000	.625	.000	.000	.000	.000
FIL_SPT1	.000	.000	1.000	.000	.000	.000	.000
DL_4	1.659	.000	.000	.000	.000	.000	.000
DL_3	1.795	.000	.000	.000	.000	.000	.000

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
DL_2	1.925	.000	.000	.000	.000	.000	.000
DL_1	1.000	.000	.000	.000	.000	.000	.000

Appendix J

Table J

Unstandardized Indirect Effects for the Data Fitting the Causal Model of the Effect of Commitment to Distributed Leadership on Coordinators' Professional Self-Efficacy

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
FIL_SPTt	.000	.000	.000	.000	.000	.000	.000
FIL_SPTg	.000	.000	.000	.000	.000	.000	.000
Role_CLL	1.320	.000	.000	.000	.000	.000	.000
Role_CL2	.363	.000	.000	.000	.000	.000	.000
Role_CL1	1.296	.000	.000	.000	.000	.000	.000
Efficacy	.517	.000	.054	.000	.000	.000	.000
Efficacy1	.618	.000	.458	.000	.238	.000	.000
Efficacy2	.759	.000	.563	.000	.293	.000	.000
Efficacy3	.476	.000	.353	.000	.184	.000	.000
Efficacy4	.417	.000	.309	.000	.161	.000	.000
Efficacy5	.517	.000	.383	.000	.199	.000	.000

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
Role_CL6	1.241	.000	.921	.000	.000	.000	.000
Role_CL5	1.401	.000	1.040	.000	.000	.000	.000
Role_CL4	1.473	.000	1.093	.000	.000	.000	.000
Role_CL3	1.320	.000	.979	.000	.000	.000	.000
FIL_SPT7	.917	.000	.000	.000	.000	.000	.000
FIL_SPT8	.955	.000	.000	.000	.000	.000	.000
FIL_SPT6	1.310	.000	.000	.000	.000	.000	.000
FIL_SPT5	1.127	.000	.000	.000	.000	.000	.000
FIL_SPT4	1.319	.000	.000	.000	.000	.000	.000
FIL_SPT3	1.003	.000	.000	.000	.000	.000	.000
FIL_SPT2	.843	.000	.000	.000	.000	.000	.000
FIL_SPT1	1.348	.000	.000	.000	.000	.000	.000
DL_4	.000	.000	.000	.000	.000	.000	.000
DL_3	.000	.000	.000	.000	.000	.000	.000

	FIL_DL	FIL_SPTt	FIL_SPTg	Role_CLL	Role_CL2	Role_CL1	Efficacy
DL_2	.000	.000	.000	.000	.000	.000	.000
DL_1	.000	.000	.000	.000	.000	.000	.000

Appendix K

Table K

Unstandardized Regression Coefficients for the Data Fitting the Causal Model of the Effect of Commitment to Distributed Leadership on Coordinators' Professional Self-Efficacy

			Estimate	S.E.	C.R.	P	Label
FIL_SPTg	<---	FIL_DL	1.348	.163	8.259	***	par_19
FIL_SPTt	<---	FIL_DL	.917	.225	4.084	***	par_20
Role_CLL	<---	FIL_SPTg	.979	.105	9.287	***	par_21
Role_CL1	<---	FIL_SPTt	.144	.066	2.173	.030	par_22
Role_CL1	<---	FIL_SPTg	.863	.114	7.606	***	par_23
Role_CL2	<---	FIL_SPTt	.000				
Role_CLL	<---	FIL_SPTt	.000				
Role_CL2	<---	FIL_SPTg	.269	.077	3.482	***	par_25
Efficacy	<---	Role_CLL	.000				
Efficacy	<---	Role_CL2	.199	.051	3.876	***	par_24
Efficacy	<---	Role_CL1	.000				
Efficacy	<---	FIL_SPTt	.000				
Efficacy	<---	FIL_SPTg	.330	.060	5.470	***	R1
DL_1	<---	FIL_DL	1.000				
DL_2	<---	FIL_DL	1.925	.192	10.037	***	par_3
DL_3	<---	FIL_DL	1.795	.180	9.948	***	par_4
DL_4	<---	FIL_DL	1.659	.172	9.673	***	par_5
FIL_SPT1	<---	FIL_SPTg	1.000				
FIL_SPT2	<---	FIL_SPTg	.625	.094	6.656	***	par_6
FIL_SPT3	<---	FIL_SPTg	.744	.090	8.312	***	par_7
FIL_SPT4	<---	FIL_SPTg	.979	.104	9.451	***	par_8
FIL_SPT5	<---	FIL_SPTg	.836	.105	7.971	***	par_9
FIL_SPT6	<---	FIL_SPTg	.972	.092	10.537	***	par_10
FIL_SPT8	<---	FIL_SPTt	1.041	.083	12.485	***	par_11
FIL_SPT7	<---	FIL_SPTt	1.000				
Role_CL3	<---	Role_CLL	1.000				
Role_CL4	<---	Role_CLL	1.116	.087	12.828	***	par_12
Role_CL5	<---	Role_CLL	1.062	.089	11.977	***	par_13
Role_CL6	<---	Role_CLL	.940	.095	9.858	***	par_14
Efficacy5	<---	Efficacy	1.000				
Efficacy4	<---	Efficacy	.806	.175	4.599	***	par_15
Efficacy3	<---	Efficacy	.922	.167	5.530	***	par_16
Efficacy2	<---	Efficacy	1.468	.231	6.354	***	par_17
Efficacy1	<---	Efficacy	1.195	.189	6.323	***	par_18

Appendix L

Table L

Standardized Regression Coefficients for the Data Fitting the Causal Model of the Effect of Commitment to Distributed Leadership on Coordinators' Professional Self-Efficacy

			Estimate
FIL_SPTg	<---	FIL_DL	.955
FIL_SPTt	<---	FIL_DL	.430
Role_CLL	<---	FIL_SPTg	.928
Role_CL1	<---	FIL_SPTt	.169
Role_CL1	<---	FIL_SPTg	.670
Role_CL2	<---	FIL_SPTt	.000
Role_CLL	<---	FIL_SPTt	.000
Role_CL2	<---	FIL_SPTg	.330
Efficacy	<---	Role_CLL	.000
Efficacy	<---	Role_CL2	.323
Efficacy	<---	Role_CL1	.000
Efficacy	<---	FIL_SPTt	.000
Efficacy	<---	FIL_SPTg	.655
DL_1	<---	FIL_DL	.730
DL_2	<---	FIL_DL	.928
DL_3	<---	FIL_DL	.915
DL_4	<---	FIL_DL	.900
FIL_SPT1	<---	FIL_SPTg	.798
FIL_SPT2	<---	FIL_SPTg	.594
FIL_SPT3	<---	FIL_SPTg	.709
FIL_SPT4	<---	FIL_SPTg	.791
FIL_SPT5	<---	FIL_SPTg	.694
FIL_SPT6	<---	FIL_SPTg	.854
FIL_SPT8	<---	FIL_SPTt	.878
FIL_SPT7	<---	FIL_SPTt	.870
Role_CL3	<---	Role_CLL	.835
Role_CL4	<---	Role_CLL	.925
Role_CL5	<---	Role_CLL	.891
Role_CL6	<---	Role_CLL	.785
Efficacy5	<---	Efficacy	.671
Efficacy4	<---	Efficacy	.491
Efficacy3	<---	Efficacy	.595
Efficacy2	<---	Efficacy	.734
Efficacy1	<---	Efficacy	.729

Appendix M

Number of Theme Responses and Specific Comments From the Responses of the Qualitative Data

Themes	No. of responses
Time	18 (Total for Time =18)
Clarity of role in school	9
Clarity of role definition	9
Clarity from IB	8 (Total for Role Clarity = 26)
More FIL understanding	7 (Total for FIL Understanding = 7)
FIL support needed	11
FIL Support positive	9 (Total for FIL Support = 20)
Support from others in the school	22
Support outside of school	18 (Total for Other Support = 40)
Total N	111 (theme responses)

Time = (18)

I do not feel that I am fulfilling my pedagogical leadership role because I do not have the time to do so.

More time to work collaboratively

More time for job next year

Having an equal amount of time in two campuses and times to meet with teachers

The teaching load for MYP Coordinator must be such that the Coordinator can do justice to the job.

Currently, my role has two large aspects, and separating them would be more effective. Having an MYP Coordinator 6 - 10, rather than the position being MSVP and MYP coordinator would improve the coordinator's ability to fulfill the role.

More time x 2

If I'm released from responsibilities that interfere with the time required to implement and improve our MYP program.

This is an issue of time and money of which we can't make more time and there is not a lot of extra money. In the best of all worlds, if I were to be solely the MYP Coordinator is would work to the advantage of the program.

More time of course. Money to send teachers to IB workshops; we currently have none.

Having a single role, hang time I have in my charge the Academic Board of the College

Being able to be full time or have someone to co-lead

Because I am both the MYP and DP coordinator at my school, I just need another body, preferably in the forma of a secretary to assist me with the organizational requirements of the position and with producing some of the documents, forms, arranging of meetings...It is very difficult to complete my job with 100% effectiveness by myself.

The only additional support might be time -

Also more scheduled opportunities to provide in house training to selected groups of teachers in relevant topics.

Time, we need more allocated time to work collaboratively. This would come from our Principal.

Having an equal amount of time at our two campuses. Having MYP tasks being a more focused part of my job. Having a timetable structure that allows for better ID planning Having scheduled times to meet with MYP teachers.

Building horizontal collaborative time that's not blocked will help our potential for interdisciplinary learning opportunities to be created

Clarity of role in school = 7

Clear leadership, accountability, and teacher involvement through MYP leadership teams overseen by the head of schools would be helpful.

Clarity of role in leadership team

Clear communication with FIL, as well as clear professional guidance would improve a lot my ability to carry out the MYPCs role.

Consistency of expectations and a proficient understanding of distributed leadership is essential for the success of a school to deliver the IB programmes

Clearer distribution of teacher expectations between coaching sports & activities Vs interdisciplinary planning and attendance to important meetings

And additional support would include improved communication with FILs.

Clarity of role definition (9)

Being MYP only and not other duties

Confusion about leadership understanding of the head

Coherent plan to define roles

Coherent plan and mandate from leadership

Role definition

Separate role definition (3)

My job is catch all for everything nobody else want to do

Co-leader would help with nature of the role

A better definition of functions as my current tasks

Clarity from IB = 8

From IBO, specifically clear job goals, and a mandate that a MYPC can only teach so many hours/classes.

Someone touching base

The IB organization in specifying more concretely requirements

A clearer description of the role and its implications by the IB including the number of hours and type and function relationship of leadership in others.

The biggest obstacle is the IBO.

The IB working better to supply us with better information! The IB having a better understanding of curriculum.

I feel the IBO should be sure the Principals/Leaders of their authorized schools have an understanding of the principles and philosophies of the IB Programme and a willingness to put them in action before a school is authorized.

The MYP leadership concept (as in FPIP) needs some serious rethinking in terms of 21st century learning, and leading!

More FIL understanding = 7

If Heads of School had previous experience being IB Coordinators it would help. Quite often my position becomes the catch-all for duties that need doing whether the task relates to MYP or not.

The FIL role as this principal has never worked in an IB continuum school before and only had experience with the DP. His understanding of the MYP or even of what the role of the MYPC could/should entail is extremely limited

I think our leadership is strongly guided by our school board, who don't really understand what it means from an educator's point of view

More coherent plan and mandate from senior leadership.

Better understanding

Most Heads of School do not understand the MYP Coordinator role.

The role of the IB coordinator and the MYP coordinator is not completely understood necessarily by some administrative decision makers and therefore at times the intricacy and time-consuming nature of the job is not fully appreciated.

FIL support needed = 11

Time, we need more allocated time to work collaboratively. This would come from our Principal.

I find it very hard to have three FILs

If we had additional support and consideration from our Director of Upper School, we would be much more effective in our jobs

I do think that my FIL does have my best interests at heart, she also has people to report to and pressures on her. I'm not in any way resentful for the lack of support I receive, this is just the way we are as a small school with limited resources trying to develop so we can offer more support to each other (me to the teachers; my FIL to me).

However, this is largely due to the person in the FIL role as this principal has never worked in an IB continuum school before and only had experience with the DP.

The HS principal asks for my input on the needs of the MYP in grades 9-10, and takes steps to implement my recommendations.

More formalized support from the divisional principal

Coordinators need the support of their principal.

Most Heads of School do not understand the MYP Coordinator role.

The head of school and the head of campus (as we have them here) should be more involved with what I do.

I feel the IBO should be sure the Principals/Leaders of their authorized schools have an understanding of the principles and philosophies of the IB Programme and a willingness to put them in action before a school is authorized.

FIL support positive = 9

I have great support from my principal

I am fortunate to be working with a strong leadership team in which my opinions and efforts are valued.

Personally I have benefited from great trust by the Board

My leadership team this year is exceptionally strong. We have a shared vision and mission and our focus is on student learning. We also have a clear understanding of merging state expectations with IB standards. We have a model team to lead our school!

I feel fully supported in my role as coordinator.

Support from owners of the school

I feel I get the support I need to carry out my role as MYP Coordinator.

I am completely supported in my role. The leadership team words genuinely as a team and we are free to express our opinions and to disagree with each other to ensure that we are critical about the learning experiences we provide students. This is our main focus.

Actually, my boss is a born leader who enjoys working in a shared leadership, enabling us to develop our practice in a confident and make our own decisions

My LIF is a very skilled, and inspiring,

Support from others in the school = 22

I would really appreciate some more help. It is difficult for me to hand off jobs to others as some of the work is very specialized. Basically, having others to share in my work-load would help.

As it happens, our school just created an additional role under the title of Curriculum Coordinator. In part, this person is tasked with helping implement the large number of changes associated with the new MYP framework. He will additionally assist me in producing the kind of cultural shift that is necessary for enhanced pedagogy at our school.

Heads of Department need to carry out all their responsibilities regarding pedagogical leadership in order for me to fulfill my job responsibilities

Heads of Faculty Experienced MYP Teachers and Coordinators in school and in the community

Besides the director of the College, who is my boss, I think I should have a more efficient support store administration bodies (accounting, logistics, etc.), as many times these are the areas that hinder rather than help academic work I have to fulfill administrative.

The challenge for me is the degree of administrative work required; currently, I share an assistant with the other Academics program leaders but I could definitely use more dedicated help on a consistent basis.

Secretarial support. I have no secretary and many of the tasks that I need to undertake can be secretarial in nature

I could use more support from the students and parents

From my school board

More formalized support from the divisional principal

Additional Support from Subject Area Leaders (having time to fulfill their duties), to extend the distributed leadership model

Coordinators need the support of their principal. This gives them autonomy to work for what is best for a school implementing IB.

I could use additional support from leaders above my principal in realizing that our IB school is not like the other schools in our district.

If I had more authority to hold teachers accountable to the standards and practices of MYP instead of having to go to the principal each and every time someone is not doing their job properly

I have no authority to train, or help, nor observe teachers

The head of school and the head of campus (as we have them here) should be more involved with what I do. There is no support- I am only left to myself to do my work and i get the support of the head of secondary.

He appears to see his role as DP, with a bit of MYP, and that makes it difficult to feel supported and empowered as an advocate for MYP

The lack of buy in among the staff makes it difficult to do my job effectively

My school is obsessed with statewide required testing which is a priority over anything IB.

Giving heads of departments more responsibility – and accountability – for curriculum development

They would need extra training for this these are all functions that involve direct support and PD for teachers.

Support outside of school = 18

Government support

Professional Development e.g. for Evaluation from the IB

We are lacking in district level support including ability to meet with other IB coordinators, staffs and budget.

District-level understanding of the program (including the IB in total) to better understand the impact of adequate funding on general student learning

If the head of our district understood and respected IB and its unique requirements and philosophy on education. Also, if my Principal felt more responsibility for our Programme, I sometimes feel like IB is my responsibility only.

Someone from IB who touches base regularly with us like our consultant did.

Regional Coordinator

My DP Coordinator as well as Central Service Coordinators

Additional support and consideration from our Director of Upper School, we would be much more effective in our jobs.

Additional support, especially in disseminating and reinforcing pertinent information and monitoring assessment practices, from Department Chairs would be a great help.

The District, Region, ETO

District level knowledge of IB and support.

Other coordinators in the district, district administration, and state association members

I would appreciate the opportunity to talk with and question other coordinators.

I feel I would like to have a specific person I could contact through MYP for questions and concerns

My continual participation in IB workshops and collaboration with other MYPCs

Network within our country between MYP coordinators.

I would love to have closer contact with other coordinators.

Vita

Oli Tooher-Hancock

Professional Experience

International School of Hyderabad, India
School Head
2013–Present

Colegio FDR. The American School of Lima, Peru
Assistant Superintendent
Secondary School Principal
High School Principal
2009–2012

The Overseas School of Colombo, Sri Lanka
Assistant Head of School
Secondary Principal
2005–2008

Canadian Academy, Kobe, Japan
K-12 Director of Student Services
IBDP Coordinator
DP History teacher
2000–2005

International School of Beijing, China
IBDP Coordinator
DP History teacher
1993-2000

St. Peter's RC HS, Orrell, UK
Head of KS3
GCSE History
1991–1993

British Council School, Madrid, Spain
History teacher to IGCSE
1990–1991

St. John Fisher RC HS, Wigan, UK
Teacher of History to GCSE
1988–1990

Education

Lehigh University, PA, USA
Doctorate of Educational Leadership, International Program
2006–2013

Full-time EdD student
2008–2009
2012–2013

Oxford Brookes University, UK
MA in Education for International School Leadership
1997–1999

Liverpool University
PGCE distinction: History (Major), Physical Education (Minor)
Catholic Teaching Certificate
1988

John Moores University
BA Hons. Social Studies, History (Major)
1987