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Publisher: Routledge

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Leadership and Policy in Schools

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/nlps20>

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Philip Hallinger^a & Moosung Lee^a

^a Hong Kong Institute of Education, Hong Kong

Version of record first published: 12 Oct 2012.

To cite this article: Philip Hallinger & Moosung Lee (2012): A Global Study of the Practice and Impact of Distributed Instructional Leadership in International Baccalaureate (IB) Schools, *Leadership and Policy in Schools*, 11:4, 477-495

To link to this article: <http://dx.doi.org/10.1080/15700763.2012.700990>

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A Global Study of the Practice and Impact of Distributed Instructional Leadership in International Baccalaureate (IB) Schools

PHILIP HALLINGER and MOOSUNG LEE

Hong Kong Institute of Education, Hong Kong

Over the last half century, international schools have come to represent an increasingly important sector in the changing global education context. International Baccalaureate (IB) schools in particular, and international schools more generally, can be viewed as specific types of educational contexts for leadership practice. In this article we report the results of a mixed-methods study of instructional leadership practices in IB schools located throughout the world. In the quantitative phase, we analyzed data from a global survey of IB program IB coordinators conducted in 2008. The broad trends revealed by the quantitative analysis were then considered in light of qualitative data obtained through in-depth case studies of five IB World Schools in East Asia. Reference to the qualitative data enabled us to explore how instructional leadership was distributed in these schools, as well as how these leadership practices contributed to smoother student transitions across IB programs. Our combined results suggest that instructional leadership is widely distributed in IB schools and contributes to creating cross-program coherence. The study contributes to research on school leadership by illuminating how instructional leadership is distributed in international schools, a heretofore under-researched domain of educational leadership.

INTRODUCTION

International education has, over the past decade, experienced a boom across the globe (Hayden & Thompson, 2008). International Baccalaureate (IB) schools have led this trend by creating a brand associated with a

Address correspondence to Philip Hallinger, Hong Kong Institute of Education, 10 Lo Ping Road, Tai Po, New Territories, Hong Kong. E-mail: hallinger@gmail.com

socially responsible international curriculum, multicultural student composition, global portability of the secondary school certificate, and preparation for highly competitive university entrance. These factors have combined to make IB World Schools¹ increasingly influential in the international education sector. This is especially true in Asia Pacific, where aspiring parents increasingly seek alternatives to government school systems that they perceive as providing an overly narrow, traditional, or rigid educational experience (e.g., Doherty, 2009; Hallinger, Lee, & Walker, 2011, in press).

This study explores how instructional leadership is distributed in IB schools. The rationale for selecting this particular school context for the study of instructional leadership derives from several structural features of IB schools. First, a rising number of IB schools are comprised of discrete primary, middle, and secondary school units, each of which offers one of the IB's three educational programs. These K–12 schools, known as “full continuum IB schools,” face the unique challenge of sustaining curricular and instructional coherence across the school's operational units. Given the broad schoolwide nature of this challenge, we view this as a responsibility of schools' leadership.

Second, rigorous qualification criteria for a school's acceptance by the IB organization ensures that these schools are, at a minimum, well-resourced. Basic pupil-teacher ratios are low, supplementary staffing tends to be generous, and ongoing professional development is a signature feature in IB schools. Thus, these schools operate with an enhanced, if not optimal, capacity in terms of their human resources. This should facilitate, though certainly not guarantee, greater capacity for change in general and IB program implementation in particular.

Finally, the combination of structural complexity in combination with generous staffing suggests the *possibility* that IB World Schools may operate with a more elaborate web of formal and informal leadership roles (e.g., a school head, school-level principals, vice principals, IB coordinators, subject and grade leaders, teachers) than many other schools. This assumption is consistent with a perspective on school leadership as a distributed, naturally occurring, organic phenomenon as opposed to a policy-driven management structure such as school management teams (Gronn, 2002, 2003; Spillane, 2006). Thus, we suggest that IB schools represent a particularly interesting species in which to observe both how instructional leadership is distributed and the means by which it fosters coherence among the discrete school's educational units and programs.

The current mixed-methods study explores how school leadership is deployed to meet the challenge of creating curricular and instructional coherence faced by a particular *type* of IB schools: schools offering multiple IB programs. In the first phase of the study, we analyzed data obtained from a global survey of IB program coordinators conducted by the IB Organization

in 2008. The survey solicited perceptions of the IB coordinators concerning issues of cross-program transition and coherence, a problem identified by schools that have adopted multiple IB programs. We then conducted in-depth, qualitative case studies of five full-continuum IB schools located in East Asia to obtain a more nuanced understanding of the quantitative results. These mixed-methods analyses addressed three research questions:

1. How are instructional leadership responsibilities distributed in IB Schools?
2. Does school leadership contribute to staff perceptions of more effective program transition?
3. How does instructional leadership contribute to successful transition between IB programs and enhance cross-program coherence?

The disadvantage of highly contextualized studies of leadership, of course, lies in their more limited generalizability. Thus, studies of leadership practices in well-resourced international schools may offer few insights for leadership in schools that operate in very different contexts (e.g., rural Chinese primary schools or urban secondary schools in the U.S.). Nonetheless we suggest that the current study offers a unique opportunity to explore the emergence of distributed instructional leadership in contexts that both call for leadership and feature highly supportive conditions (Gronn, 2003; Spillane, 2006). Thus, despite the limited generalizability, studying the enactment of distributed instructional leadership under highly favorable conditions offers the possibility of potentially useful contributions to this literature.

DISTRIBUTED INSTRUCTIONAL LEADERSHIP IN INTERNATIONAL SCHOOLS

Our review of the relevant literature is organized into two sections. In the first section, we provide background information on the context of international schools. We seek to clarify the nature of the school contexts under investigation and the challenges that face leaders in multi-program IB schools. The second section focuses on the phenomenon of distributed instructional leadership. As suggested above, the past decade has witnessed increasing interest in understanding how instructional leadership is provided across a range of school staff holding formal and informal leadership roles (Lee, Hallinger & Walker, in press). The review provides an overview of how distributed instructional leadership is conceptualized both in the leadership literature as well as in this study. We close with an overview of empirical studies of distributed instructional leadership in international schools.

The Context of IB World Schools

Over the last decade, the number of IB programs adopted by schools around the world increased by almost 400%, from 923 programs in 1999 to 3,439 in 2010 (IBO, 2009). The International Baccalaureate Organization (the governing organization of the IB programs) projects that there will be 10,000 authorized IB schools serving more than two million students by the year 2020 (IBO, 2009). These statistics highlight not only the numeric growth of IB programs, but also its increased influence in the international education sector (Hayden & Thompson, 2008). This rapid growth in the adoption of IB programs has been led by schools in Asia Pacific, where private and independent schools have viewed the IB as a “quality brand” recognized and sought after by parents (Doherty, 2009; Hallinger, Lee, & Walker, 2011; Hayden & Thompson, 2008).

The IB has built progressively on the early success of its Diploma Program (DP). First offered in the late 1960s, by 2010 more than 2,000 public and private schools² around the world had adopted the DP (IBO, 2011). More recently, and concurrent with the growing popularity of the DP, the IB undertook development of the Middle Years program in 1994, and the Primary Years Program in 1997 (IBO, 2011). In the past 15 years there has been a growing trend of schools adopting multiple IB program (IBO, 2009). For example, today more than 400 schools in the Asia-Pacific region are offering two or more IB programs.

Although the three IB programs share a common lineage, they differ in several important respects. The DP was designed as a college preparatory curriculum with an international orientation. Students study subject disciplines and learning is assessed through external IB examinations. While the Middle Years Program (MYP) shares a similar international perspective with the DP, it is not designed as a school-leaving certificate and does not comprise an actual curriculum (Stobie, 2007). The Primary Years Program (PYP) emphasizes student construction of interdisciplinary knowledge fostered by structured inquiry (Biro, 2003; IBO, 2009). Thus, despite some shared values (e.g., global perspectives, multicultural diversity, community service), the three IB programs are grounded in very different approaches to curriculum design, instructional delivery, and assessment. This results in significant transition challenges as students move from one program to another, even within the same IB school. Stated differently, IB school leaders face the challenge of creating a coherent schoolwide mission out of these different programs, each of which has its own distinctive educational philosophy and approach.

This challenge was first identified in Millikan’s (2001), research which identified “structural differences both within and between programmes” (p. 4). He noted that different terminology used in the three programs to describe key features of the learning process and outputs created confusion

and represented an obstacle to achieving coherence. Millikan recommended more intentional articulation of linkages and the development of a common language among the IB programs in order to meet the coherence challenge.

Stobie's (2007) research found that differences in curriculum design and approaches to assessment were challenges to achieving coherence and consistency across the programs. Likewise, several features appeared to enhance coherence and consistency between the IB programs. These included sharing the same IB vision, staff collaboration in achieving international perspectives, emphasizing the learning process, focusing on critical thinking skills and application of knowledge, and encouraging lifelong learning (Stobie, 2007).

In sum, as the IB brand has gained wider international acceptance it has become increasingly common for schools to expand from offering a single IB program (usually the DP) to two or more IB programs. Yet, staff in multi-program IB schools have increasingly reported problems related to program transition and cross-program coherence. This led to the IB Organization's decision to conduct a global survey of IB coordinators in multi-program IB schools in order to better ascertain the nature of this problem as well as potential solutions.

Distributed Instructional Leadership and International Schools

We propose that the task of achieving cross-program coherence and smooth student transition represents largely unanticipated challenges for school leaders following the adoption of multiple IB programs (Hallinger et al., 2011, in press; IBO, 2009; Lee et al., in press). As noted earlier, we viewed this as a context that was uniquely suited for examining the distribution of instructional leadership. Examining how leadership is distributed has been an issue of emerging importance in school leadership research over the past decade (e.g., Gronn, 2003; Leithwood, Mascall, & Strauss, 2009; Robinson, 2008; Spillane, 2006).

At the early stage of its conceptual development, distributed leadership was largely understood as the "presence of multiple leaders" (e.g., leadership teams, differentiated administrative hierarchy). This "leader-plus perspective" captured the phenomenon of multiple agents contributing to the enactment of leadership (Grubb & Flessa, 2006; Heller & Firestone, 1995; Spillane, 2006). While multiple leaders are a necessary condition for distributed leadership, scholars have pointed out that the leader-plus perspective illuminates only a portion of the meaning and potential power of distributed leadership (Gronn, 2002; Heller & Firestone, 1995; Mayrowetz, 2008; Spillane, 2006).

Gronn and Spillane have been among the intellectual leaders who have sought to unpack this construct. For example, Gronn (2002) distinguished between the concepts of "numerical action" (i.e., the contributions made by multiple leaders) and "concertive action" (p. 429). More specifically, he identifies three types of concertive action: spontaneous collaboration,

intuitive working relations, and institutionalized practices. Spontaneous collaboration is the naturally occurring interaction among staff as they seek to accomplish tasks. Successful features of these interactions may become adopted as working practices, even after the working group disbands. Intuitive working relations are the common understandings and shared approaches to working that may emerge from close interdependency among staff over a period of time. This interdependency can trigger the development of distributed leadership practices among members in order to achieve shared goals. Institutionalized practices are formalized in school policies, working structures (e.g., a curriculum framework), and organizational structures (e.g., grade-level teams or a school management committee). Gronn (2002, p. 434) further elaborates that concertive forms of distributed leadership can be based on joint work in the same site (e.g., co-performed tasks within a school unit or program) or collaboration across different sites (e.g., collectively performed tasks across school units or programs).

Spillane's (2006) typology of distributed leadership largely overlaps with Gronn's framework. However, he also calls attention to the possible contribution of "coordination distribution." This is comprised of "sequentially arranged leadership tasks" that are enacted by multiple staff (p. 67). As such it combines features of collective and concertive action.

The perspective on distributed leadership adopted in this study encompassed both collective and concertive action. Given the elaborate web of formal leaders that typify IB World Schools, we were interested in examining the extent and nature of collective action among the leaders. However, we were also attuned to the importance of exploring forms of concertive action (e.g., co-performed, collectively performed, and coordinated work) that may have emerged among the staff as they addressed cross-unit challenges (Gronn, 2002; Spillane, 2006).

Leadership research in international schools is still an underdeveloped research field, which requires more systematic inquiry as the size of this global sector increases (Bunnell, 2008; Hallinger et al., 2011; Hayden & Thompson, 2008; Riesbeck, 2008; Walker & Cheng, 2009). The dearth of empirical research on leadership in international schools is further accentuated if we limit our selection to research on distributed leadership. Indeed, we were only able to identify five empirical studies with the focus of distributed leadership (Bunnell, 2008) or distributed instructional leadership (Hallinger et al., 2011, in press; Lee et al., in press).

Bunnell's (2008) study documented leadership practices in an international school in China. His case study of the Yew Chung International School in Shanghai found that a co-principalship system employed in the school (i.e., Western co-principal and Chinese co-principal) functioned as a "cross-cultural model of distributed leadership" (p. 191). The case study suggested that the unique organizational leadership structure of the Yew Chung International School was a driver creating one of the forms of distributed leadership practices (i.e., co-performed leadership).

Equipped with the conceptual framework of distributed leadership, Bolivar's (2009) study revealed collective interactions among school staff across area departments in order to build the initial curricular foundation of the MYP in an IB school in Venezuela. Using social network analysis, the case study showed how the initial implementation of the MYP requires the collective interactions among teachers and administrators as they launch the challenging international education program. Hallinger and colleagues' (2011) case study, exploring schools with the three IB programs, showed how complexity of formal organizations generate program implementation challenges in terms of consistency and coherence.

METHODOLOGY

The study employed a sequential explanatory, mixed-methods research design (Creswell, 2007). This research design begins with quantitative analyses that are designed to reveal broad trends related to a theoretical issue or practical problem. These are followed by in-depth qualitative case studies that seek to provide a more fine-grained understanding of the phenomenon of interest. The qualitative data are employed to help explain the findings from the quantitative phase.

In this study, we analyzed quantitative data collected in a global survey of IB schools conducted by the IB in 2008. These data represented the perceptions of IB coordinators from throughout the world concerning issues related to program transition in multi-program IB schools. We then examined the trends revealed in the quantitative phase through reference to case study data collected by the authors in five full-continuum IB schools in Asia Pacific.

Sample

Consistent with the mixed-methods research design, we consider two samples for this study. The global survey was undertaken by the IB in order to gain an understanding of the program transition challenges facing schools that were offering multiple IB programs. Thus, the IB schools targeted in the survey were offering, at a minimum, both the MYP and DP. Some were full continuum schools offering all three IB programs: PYP, MYP, and DP. Of the 177 schools worldwide that met the criteria for inclusion in the survey, 175 schools (98.8%) from 54 countries returned completed questionnaires.³

The surveys were completed by 235 IB coordinators. Of the 235 IB coordinators, 125 IB coordinators were from full continuum schools. The other 110 IB coordinators were from schools offering the MYP and DP (103 coordinators), the MYP (six coordinators), or the DP (one coordinator). For the

purposes of this report we have excluded the seven IB coordinators from schools that offered single programs since their responses were not relevant to our subject of investigation (i.e., no transition issues between the different programs).⁴ The survey covered a range of issues particularly related to program transition challenges.

For the qualitative phase of the study, we conducted case studies of five schools for the purpose of investigating leadership strategies associated with successful IB program implementation. Our focus in investigating program implementation targeted issues of cross-program transition and coherence. Five IB schools in Thailand, Vietnam, Hong Kong, and China were selected from a list of IB schools in East Asia, after considering a variety of school characteristics.⁵ First, we reduced the list to full-continuum IB schools. The IB organization further reduced the number of potential schools to those that had been assessed as successful in terms of program implementation during school evaluation studies conducted over the prior several years. Then school performance was considered. On average, the selected schools all showed significantly better school performance in the DP-level mean subject grades than IB schools around the world. Finally, we also considered diversity in terms of country, school size, and type of student populations.

Data Sources

The survey employed in this study consisted of 19 main items coupled with more specific sub-items. The questions employed structured binary and categorical responses. Some questions included “check all that apply” or open-ended questions. Data collection was administered by the IBO in September, 2008.

The qualitative data were collected data through interviews conducted with teachers, administrators, and students. In total, we interviewed 68 teachers and administrators, as well as 25 students. Most of the administrators were individually interviewed for half an hour to one hour while teachers and students were generally interviewed in group settings for about one hour. At least two interviewers were involved in most of the interviews. The semi-structured interview protocol focused on key staff members’ and students’ perceptions of challenges in association with IB program implementation. By employing similar interview procedures with the same basic protocol, the iterative process of data collection functioned as a variant of the constant comparative method (Corbin & Strauss, 1998).

Data Analysis

Since the survey dataset included largely binary or ordered categorical variables, we mainly used a series of chi-square tests to analyze the data.

We focused on IB coordinators as the unit of analysis. There are several reasons for using IB coordinators instead of schools as the unit of analysis, despite the lower response rate (i.e., 49%, see endnote 3). First, although the dataset contained school IDs, some of the schools included responses from at least two IB coordinators. Furthermore, there were inconsistent responses between the two or three IB coordinators responding within the same schools.⁶ Therefore, schools do not represent a consistent unit of analysis. Second, it was not feasible to construct a composite variable by combining the responses of multiple IB coordinators within one school because the data consisted largely of categorical or binary variables, which do not lend themselves to averaged responses.

Qualitative data analysis for this study centered on interview data gathered from teachers and administrators. In order to reduce the approximately 150 hours of interview data into a smaller number of analytical units, we conducted pattern coding based on similar themes (Miles & Huberman, 1994). We contextualized the data by first integrating each theme into an individual school profile and then aggregating and comparing thematic coding across schools.

Several efforts were made to address validity and reliability of the data analysis. First, we checked possible factual errors in our interview data by cross-checking with each principal of the selected schools and relevant archival data. Second, we used analytic memos in triangulating the interview data. Third, the two data analysts coded the data independently and then checked data coding with a partner. To ensure coding reliability, inter-rater reliability was checked with 10 randomly selected interview files. Fourth, we also sought feedback from other members of the multicultural interviewing team (i.e., American, Australian, Chinese, and Korean). This feedback solicitation process enabled us to surface alternative interpretations of the same transcript and contributed to a better understanding of seemingly discrepant statements. Finally, all data were organized using NVivo 8 software in order to organize the information for thematic analysis and cross-school comparisons.

RESULTS

We organize the presentation of results in terms of the two datasets employed in the study. We address the stated research questions by presenting trends revealed in the global survey of IB coordinators. These analyses focus on the linkage between leadership and program transition and our exploration of distributed instructional leadership. We follow this presentation of broad trends related to leadership and program implementation with the analysis of case-study data obtained from the five Asia Pacific IB schools.

Quantitative Results

The first research question concerned the perceived impact of leadership on program implementation. We began by analyzing the trend in perceptions of quality of program implementation. As illustrated in Figure 1, approximately 35.7% of the 235 IB coordinators evaluated the program transition in their schools as “good,” while another 29.8% assessed it as “satisfactory” and 28.6% of the IB coordinators felt that transition either needed improvement or demonstrated “no connection.” Only 6% of the IB coordinators indicated the program transition as “excellent.” This pattern of response suggests that the IB coordinators were offering a fairly critical assessment of program transition.

Next we sought to assess the IB coordinators’ perceptions of school leadership as to their evaluations of the program transition. Approximately 72% of the IB coordinators indicated that school leadership extends across different IB programs for addressing the MYP-DP transition. More importantly, IB coordinators from schools where school leadership extends across programs were more likely to characterize the transition as “excellent or good.” Conversely, they were less likely to characterize the transition as “needing improvement or no connection”: $\chi^2(1) = 7.26, p = .0070$.⁷ (see Table 1).

For the next question we explored “more specific” types of leadership practices and their association with the successful program transition. More specifically, we focused on three practices that reflect distributed instructional leadership discussed earlier in this article: (1) articulation strategies, (2) cross-program teaching, and (3) cross-program collaboration by teachers and administrators.

To this end, we utilized two survey questions. The first question was “how would you characterize the transition from MYP to DP at your school?” The IB coordinators responded to the question by indicating their evaluation

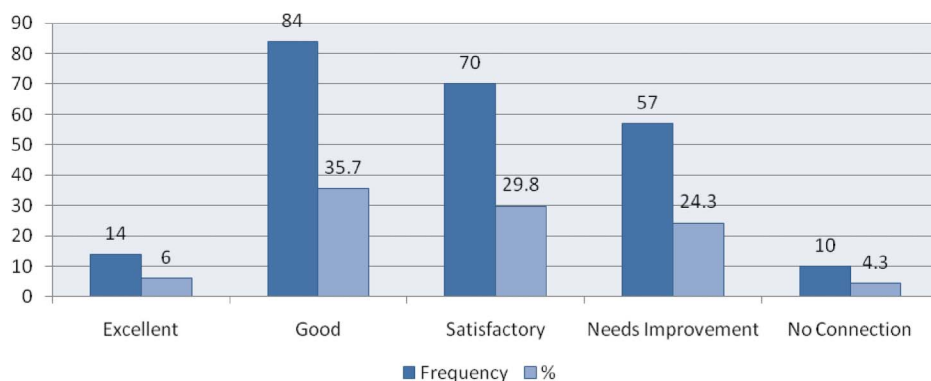


FIGURE 1 Evaluation of IB program transition ($N = 235$ IB coordinators) (color figure available online).

TABLE 1 Association Between School Leadership and Evaluation of Program Transition ($N = 217$).

	Evaluation	Needs			Mantel-Haenszel Chi-square Test
		Excellent/ Good	Satisfactory	Improvement/ No Connection	
School leadership across programs	No	17 (26.7)	22 (36.1)	22 (36.1)	$\chi^2 (1) = 7.26,$ $p = .0070$
	Yes	78 (50.0)	40 (25.6)	38 (24.4)	

Note. We reduced five categories of evaluation to three categories for a clear interpretation of the pattern and also for a rigorous chi-square test by addressing the small number of frequency in the category of “No Connection.”

Since the survey dataset includes largely binary or ordered categorical variables, a series of chi-square tests was conducted (mostly Mantel-Haenszel chi-square tests).

such as excellent, good, satisfactory, needs improvement, and no connection. The second question was “How is the transition from MYP to DP managed in your school?” The IB coordinators indicated various strategies or practices. Of their responses, we noted that the following practices are closely related to what we have discussed as examples of distributed instructional leadership practices:

- Development of subject vertical and horizontal articulation documents
- Teachers teaching both of the programs (i.e. MYP and DP)
- Meetings/collaboration between teachers of each program
- Meetings/collaboration between MYP and DP coordinators

“Development of subject vertical and horizontal articulation documents” can be viewed as an articulation strategy. This was commonly identified in the form of documentation in our previous case study (Hallinger et al., 2011, in press; Lee et al., in press). “Teachers who were teaching in more than one program (i.e., MYP and DP)” is conceptually matched with cross-program teaching in the previous case study (Lee et al., in press). “Meetings/collaboration between teachers of each program” and “Meetings/collaboration between MYP and DP coordinators” well reflect cross-program collaboration by teachers and administrators, which was found as a key distributed leadership practice for curriculum implementation in IB schools in the case study (Lee et al., in press). Therefore, we investigated the association between these leadership practices and IB coordinators’ evaluation of program transition.

To seek an answer to the second research question, let us first summarize how those distributed instructional leadership practices are used for addressing the challenge of program transition:

- 57.1% of the IB coordinators indicated the development of subject vertical and horizontal articulation documents from age 11 to age 18 for managing program transition.

- 82.5% of the IB coordinators indicated that teachers teach in both programs for managing program transition.
- 83.9% of the IB coordinators indicated that there are meetings/collaboration between MYP and DP IB coordinators for managing program transition.
- 68.7% of the IB coordinators indicated that there are meetings/collaboration between teachers of each program for managing program transition.

As noted above, a majority of the IB coordinators (57.1%) perceived that documentation enabled articulation for the program transition. This supported our earlier finding reported in the case studies. Cross-program teaching was a frequently identified practice (82.5%). Cross-program collaboration among IB program IB coordinators was the most saliently reported practice (83.9%). Cross-program collaboration by teachers was also a commonly reported practice (68.7%). In summary, these practices for the distribution of instructional leadership identified from our previous research were also widely reported from the IB global survey.

More importantly, these distributed instructional leadership practices were positively associated with the level of IB coordinators' evaluation of cross-program transition. This is illustrated in Table 2. First, IB coordinators from schools that develop subject vertical and horizontal articulation documents from age 11 to age 18 were more likely to characterize the transition as excellent or good. Conversely, they were less likely to characterize the transition as needing improvement or no connection: $\chi^2(1) = 6.12, p = .0133$.

Second, IB coordinators from schools where there are meetings/collaboration between teachers of each program were more likely to

TABLE 2 Association Between Practices for the Distribution of Leadership and IB Coordinators' Evaluation on the Transition.

	Evaluation	Needs			Mantel-Haenszel Chi-square Test
		Excellent/ Good	Satisfactory	Improvement/ No Connection	
Develop subject vertical and horizontal articulation documents	No	33 (35.5)	27 (29.0)	33 (35.5)	$\chi^2(1) = 6.12,$ $p = .0133$
	Yes	62 (50.0)	35 (28.2)	27 (21.8)	
Meetings/collaboration between teachers of each program	No	18 (26.5)	21 (30.9)	29 (42.6)	$\chi^2(1) = 14.94,$ $p = .0001$
	Yes	77 (51.7)	41 (27.5)	31 (20.8)	
Meetings/collaboration between MYP and DP coordinators	No	8 (22.9)	12 (34.3)	15 (42.9)	$\chi^2(1) = 7.87,$ $p = .0050$
	Yes	87 (47.8)	50 (27.5)	45 (24.7)	
Teachers teaching both programs	No	11 (28.9)	11 (28.9)	16 (42.1)	$\chi^2(1) = 5.71,$ $p = .0168$
	Yes	84 (46.9)	51 (28.5)	44 (24.6)	

characterize the transition as excellent or good. Conversely, they were less likely to characterize the transition as needing improvement or no connection: $\chi^2(1) = 14.94, p = .0001$. This showed the strongest association.

Third, IB coordinators from schools where there are meetings/collaboration between MYP and DP coordinators were more likely to characterize the transition as excellent or good. Conversely, they were less likely to characterize the transition as needing improvement or no connection: $\chi^2(1) = 7.87, p = .0050$. Finally, IB coordinators from schools where teachers teach in both MYP and DP were more likely to characterize the transition as excellent or good. Conversely, they were less likely to characterize the transition as needing improvement or no connection: $\chi^2(1) = 5.71, p = .0168$.

With respect to the third research question, we found that leadership practices strategically aiming to deploy instructional leadership responsibilities were positively associated with successful program transition. This suggests that instructional leadership distributed across different program levels in the form of articulation (documentation in particular) and cross-program teaching, and collaboration, contributed significantly to the cross-program transition.

Qualitative Results

We followed this quantitative analysis of the global survey with the analysis of interview data obtained from teachers, administrators, and students in five full-continuum schools in Asia Pacific. We employ the qualitative data as a means of illustrating and elaborating on how instructional leadership was distributed (i.e., research question 2) as well as how this web of formal and informal interaction and influence contributed to enhanced cross-program coherence and student transition (i.e., research question 3). In organizing the results, we categorized the collective interactions among school staff across different IB programs into three types of distributed instructional leadership practices: articulation strategies, cross-program activities, and staffing (see also Hallinger et al., 2011, in press; Lee et al., in press). Here we focus on two features of distributed instructional leadership (articulation strategies and cross-program activities) because those leadership practices were also identified in the global survey of IB coordinators.

The qualitative analysis found that articulation strategies were commonly employed to enhance program transition among IB programs within the case schools. One articulation strategy was documentation. This “leadership tool” was employed across hierarchical positions, levels, and subjects in the schools (Spillane, 2006). For example, through an articulation committee, some schools tried to create an “overarching school philosophy statement” that went beyond the three individual IB programs. Committee members also used the *IB Learner Profiles*⁸ (i.e., a set of schoolwide learning outcomes) to provide more concrete instructional guidelines designed

to enhance coherence across the programs. In other words, documentation was an institutionalized leadership tool that enabled the articulation of curriculum linkages between different IB programs. Documentation served as a form of instructional support that boosted the capacity of teachers, individually and collectively, to achieve curriculum coherence (Conley & Goldman, 1994; Rosenblum, Louis, & Rossmiller, 1994) across the three IB programs.

Whereas articulation practices were usually initiated by senior leaders to improve consistency and coherence, cross-program activities were sustained by teachers and middle-level leaders such as IB coordinators, grade-level leaders, and subject leaders (Hallinger et al., in press). Cross-program activities engaged staff in learning more about the other programs through both formal meetings and informal interactions. With respect to formal meetings, teachers and administrators tended to learn more about other programs from various formal meetings such as regular staff meetings, curriculum articulation committees, and school-wide workshops. Informal interactions with staff across school units and programs represented naturally occurring interactions akin to Gronn's (2002) concept of "spontaneous collaboration," although it was not aimed at accomplishing a specific task. In sum, formal and informal cross-program activities created a higher level of staff interdependence, which triggered the emergence of distributed instructional leadership (Gronn, 2002; Spillane, 2006).

Cross-program involvement represented another type of cross-program activity. This included: (1) cross-program collaboration (e.g., where a teacher assumes responsibility for mentoring or supervising a student in another program), as well as (2) cross-program teaching (i.e., where a teacher taught in more than one program, such as both the MYP and the DP). Although these types of cross-program involvement were often employed opportunistically rather than strategically, over time staff came to see their value as means of deepening both cross-program relationships among staff as well as understanding of the philosophy, goals, and content of other programs.

Notably, these cross-program interactions were encouraged by senior leaders and sustained over the course of a full school year (see also Hallinger et al., 2011, in press; Lee et al., in press). Through these forms of cross-program involvement, many more teachers in the case schools exercised instructional leadership through interactions with colleagues working in different school units, grade levels, departments, and programs. This distributed leadership activity enhanced understanding of the schoolwide mission (i.e., as opposed to program-level goals) and fostered a sense of collective responsibility for its achievement.

Moreover, articulation strategies and cross-program activities appeared to bridge teachers and administrators who were structurally compartmentalized in different programs (PYP, MYP, DP), and/or departments.

Consequently, they enabled the staff across subunits of the schools to forge collective perspectives that contributed to improving program consistency and coherence (Hallinger et al, in press). In other words, teachers and administrators perceived smoother transitions when program linkage was clearly articulated through documentation, and pedagogical approaches were more consistently made through cross-program activities.

DISCUSSION

This study was undertaken with the purpose of illuminating patterns of distributed instructional leadership practice in international schools that provide multiple programs designed by the International Baccalaureate. At the outset, we asserted that these IB schools represent a rich context in which to study how instructional leadership practices are enacted by a range of actors who occupy both formal and informal leadership roles. The dependent variable in our study was represented by perceptions of successful IB program implementation. Our analysis of program implementation focused specifically on student transition between the multiple IB programs that comprise these schools. The rationale for employing this criterion of implementation effectiveness was that the structural differentiation of these multi-program IB schools creates a challenge for achieving cross-program coherence. We were, therefore, interested in exploring if and how leadership, and more specifically, instructional leadership, was associated with successful program transition. Our analysis of the IB global survey revealed several salient patterns of school leadership practices related to program transition in IB world schools.

We found that perceptions of the presence of school leadership contributed significantly to perceptions of successful IB program transition. Unfortunately, the survey data did not allow us to gain deeper insight into the means by which school leadership enabled or facilitated successful program transition. Nonetheless, the finding suggests a positive link between the presence of school leadership and successful program transition on a global scale. Given our interest in understanding how leadership is enacted in specific contexts, this finding should be of considerable interest to leaders in the worldwide IB community.

Based on the conceptualizations of Gronn (2002) and Spillane (2006), we explored patterns of how instructional leadership was distributed. We found that the following practices were intentionally employed for enhancing program transition: (1) the development of subject vertical and horizontal articulation documents, (2) teachers teaching in more than one program, (3) collaboration between MYP and DP coordinators, and (4) collaboration between teachers of each program. These practices acted as

tools that enabled or supported the distribution of instructional leadership responsibilities to multiple agents across different IB programs. Arguably, these leadership practices comprised organic, opportunistic and naturally occurring means by which the school staff addressed program transition and coherence challenges.

Our results suggest that a web of interactions among multiple agents, forged by distributed leadership practices, addressed the curricular-programmatic loopholes that are embedded in multi-program IB schools. Thus, for example, cross-program teaching may encourage teachers to assume collective responsibility for schoolwide educational matters. This practice increased staff knowledge of the curricular frameworks of different programs, and also built important relationships with the staff and students in the other programs. Similarly, cross-program collaboration served as a vehicle that enabled staff to gain “an added advantage of specialization within a role set” (Gronn, 2002, p. 433). This type of interaction capitalized on the advantage of different specialties or expertise brought by colleagues to their work.

In this regard, it seems that the full continuum IB schools could accumulate more organizational benefits from collectively added advantages of specialization facilitated by distributed leadership practices. It is interesting to note that IB coordinators from full continuum schools were more likely than their counterparts in partial continuum schools to view program transition as satisfactory: $\chi^2(1) = 4.56, p = .045$. Although caution should be exercised in interpreting this result, it is possible that leaders in full-continuum IB schools feel the need to address issues of program transition and coherence more clearly.

In conclusion, this study employed data that was generated in order to understand a problem that emerged from educational practice (i.e., program transition and coherence in multi-program IB schools). This was employed to contribute to our understanding of a theoretical phenomenon of increasing interest among scholars and practitioners, distributed instructional leadership (Gronn, 2002, 2003; Leithwood et al., 2009; Mayrowetz, 2008; Spillane, 2006). Thus, we proposed that international schools represent an useful context for studying distributed instructional leadership due to structural features related to their organization.

This assertion was supported by our findings, which suggest that the perceived quality of IB program implementation is related to leadership in general, and the distribution of instructional leadership practices and responsibilities in particular. In addition, the results provide support for conceptualizations of shared leadership that go beyond the “multiple leaders perspective” (e.g., Gronn, 2002, 2003; Spillane, 2006). More specifically, we presented mixed-methods data that offered both broad and focused examples of how concertive action was employed as forms of distributed

instructional leadership. We encourage other scholars to build on this initial effort with additional studies of instructional leadership in this increasingly important and interesting sector of education.

NOTES

1. An IB World School is a school that has been authorized by the IB Organization to offer one or more of its programs (IBO, 2007).
2. The trend of adoption is related to geographic location, with IB programs located most commonly in public schools in North America and private schools in Asia Pacific.
3. The 54 countries were from different geographical regions, including Africa, Asia, North America, Central and South America, Western Europe, Eastern Europe, Middle East, and Oceania.
4. In addition, in some of the schools only one of the school's IB coordinators responded to the survey. This led to an observed response rate of 49% of the total number of IB coordinators working at the 175 schools.
5. Notably, the number of case studies (the unit of case is each school) is regarded as sufficient for multi-site sample cases, since our findings from the subsequent case studies "provide compelling support for the initial set of propositions" that emerged from the survey analysis and the initial case study (Yin, 1994, p. 46).
6. For example, there were 59 schools with two or three coordinators (33.7%), which could prove to be problematic if the school were used as the unit of analysis.
7. SAS was used for conducting Mantel-Haenszel chi-square tests.
8. The *IB Learner Profile* specifically indicates "the IB mission statement translated into a set of learning outcomes" (IBO, 2006, p. 1).

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