Play in the Grade One Classroom: An Exploration of Teacher Beliefs, Classroom Organization, and Obstacles to Implementation in Quebec

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Abstract

A mixed methods investigation into Grade One teachers' beliefs and practices about play in the classroom was conducted in a French public school board in Quebec. Forty-three teachers completed questionnaires, while a subset of 10 classrooms were photographed, and open-ended interviews were conducted with 7 teachers. Correlation between beliefs, practices, and experience teaching showed that 'learning through play' was positively associated with belief in 'educational toys and manipulation' (r_s=0.313, $p < 0.05$), and greater frequency of teacher self-reported play activities (r=0.524, $p<0.01$). Teachers who had more experience teaching Grade One, believed less in 'learning through play' (r=-0.341, $p<0.05$) and reported using fewer play practices in their classes (r=0.365, $p<0.05$). Total years teaching was also negatively correlated with belief in 'learning through play' (r=-0.410, $p<0.01$). Photographs revealed minimal variation between classrooms, with some elements of play in half of the classrooms. Interviews revealed that teachers found play to be an effective learning strategy, that they primarily used games as play activities in their classrooms, and that school personnel and personal experience supported their use of play, while lack of time, budget and materials limited the amount of play activities implemented.

Introduction

Play is central to both theory and curriculum at the preschool and kindergarten levels in Canada and abroad (Bennett, Wood & Rogers, 1997; Frost, Wortham & Reifel, 2005; Ministère de

l'emploi, de la solidarité sociale et de la famille, 2004; Moyles, 2005; Murphy, 2006; Quebec Ministry of Education, 2001). However, despite the fact that the National Association for the Education of Young Children (NAEYC) defined early childhood as birth through age eight (Bredekamp & Copple, 1997), there is a lack of time, space and materials for play in most Grade One classrooms (Hartmann & Rollett, 1994; Patton & Mercer, 1996; Yeom, 1998), and play is not included in curricular expectations for this age level (Quebec Ministry of Education, 2001, 2005; Ontario Ministry of Education & Training, 2005, 2006).

Research has shown that play supports children's cognitive, physical, social and emotional development (Bredekamp & Copple, 1997; Frost, Wortham & Reifel, 2005; Levy, Schaefer & Phelps, 1986), and that a play-oriented, developmentally-appropriate curriculum in primary school correlates positively with children's creativity and literacy achievement (Huffman & Speer, 2000; Patton & Mercer, 1996; Sefer, 1995). As children mature, their play becomes more purposeful, reflective, thoughtful, and "serious", as they continue to learn through active play, both spontaneously and through teacher-directed actions (Bredekamp & Copple, 1997; Jones & Cooper, 2006; Wasserman, 1992).

However, research on teacher beliefs about play has been limited to the kindergarten and preschool levels (Bennett, Wood & Rogers, 1997; Keating, Fabian, Jordan, Mavers & Roberts, 2000; Wood & Bennett, 2001), while research on teacher beliefs at the Grade One level has focused on developmentally appropriate or child-centred practice, orientations which include, but do not explicitly identify, play (Buchanan, Burts, Bidner, White & Charlesworth, 1998; Maxwell, McWilliam, Hemmeter, Ault & Schuster, 2001; Stipek & Byler, 1997). This research often dichotomizes developmentally appropriate practice (DAP) with developmentally inappropriate practice (DIP), or child-centred with curriculum-centred practice (Buchanan et al., 1998; Keating et al., 2000; Rusher, et al., 1992; Stipek & Byler, 1997). However, there are vast differences in how the concept of DAP is translated into practice, and a lack of agreement on how it differs across grade levels (Maxwell et al., 2001; Van Horn & Ramey, 2004; Van Horn, Karlin, Ramey, Aldridge & Snyder, 2005). Previous research has pointed to the need to narrow the focus to specific aspects of DAP in order to illustrate exactly which practices constitute a quality program throughout early childhood and beyond (Maxwell et al., 2001).

An understanding of teacher beliefs and practices related to the role of play in Grade One would be useful to researchers, teachers, parents, and especially administrators and policy-makers, in order to illuminate whether or not a gap between theory and practice exists at this level. As well, it would be useful to describe any factors which support or challenge teachers' implementation of play-based activities within the Grade One classroom.

Purpose and Research Questions

The purpose of the present study was to investigate the beliefs of teachers from a French public school board, in an urban centre in Quebec, about the role of play at the Grade One level, whether the structure of their classrooms is congruent with those beliefs, and whether there are any factors that influence their ability to incorporate elements of play into their classrooms.

The following research questions guided this study:

- To what extent do teachers believe that play is an important element of learning at the Grade One level?
- Is there a relationship between teacher beliefs and the way that teachers structure their classroom environment?
- What factors do teachers identify as influencing their ability to implement play within their program?

Literature Review

The Relationship Between Teacher Beliefs and Practice

According to Clark and Peterson (1986, in Bennett, Wood & Rogers, 1997), the purpose of studying teacher beliefs is to:

> make explicit the often implicit frames of reference through which teachers perceive and process information, on the assumption that a teacher's cognitive and pedagogical behaviours are guided by, and make sense in relation to, a personally held system of beliefs, values and principles (p.18).

Research has shown that teacher beliefs have an impact on classroom practice (Fehring, 1998; Martin, Yin, and Baldwin, 1997), and on students' learning and achievement (Agne, Greenwood & Miller, 1994; Lunenburg & Schmidt, 1989). According to Rusher, McGrevin and Lambiotte (1992), what takes place in the classroom is almost fully dependent on the belief systems of school personnel and not so much (as perceived by many) on mandated reforms, policies, standards, or practices. Though a formal curriculum must be taught, ultimately, it is in the teacher's hands to present as he/she deems appropriate, and to link policy with practice. In contrast, Stipek and Byler (1997) found that although there is an association between teacher beliefs and practices, many teachers were not able to implement the program they wanted. Parents were identified as the primary source of pressure, which led them to increase the amount of structure and academic emphasis of their programs, although school and governmental policies were also cited.

Buchanan et al. (1998) found that teachers' perceived relative influence predicted teacher practices in terms of developmentally appropriate classroom practice at the first, second and third grade levels. Teachers who perceived they lacked influence were more likely to have a greater degree of structured, developmentally inappropriate classrooms, even when this contradicted with their beliefs about how children learn.Rusher et al. (1992) studied the discrepancy between what teachers believe about developmentally appropriate practice (DAP) at the kindergarten level, what teachers believed about their district's philosophy, and what their principals believed about DAP. They found that though teachers perceived that the district was more favourable to academics and less favourable to child-centred practices, including play-based learning, female principals and the teachers both believed strongly in a child-centred philosophy. It was only the male principals who supported a more academic and structured program in kindergarten.

Furthermore, Murphy (2006) found that though a child-centred, play-based curriculum was mandated at the infant level in Ireland, most teachers implemented a traditional, teacher-centred curriculum. He found that many teachers defined play as a discrete activity rather than an all-pervasive methodology, and that the high teacher-student ratio prevented many teachers from implementing more "child-centred activity" (p. 123). Conversely, in the U.K., Wood and Bennett (2001) found that teachers were resistant to implementing structured literacy and numeracy instruction at the reception (kindergarten) level, because doing so contradicted their strong beliefs in the value of play.

Developmentally Appropriate Practice at the Grade One Level

Stipek & Byler (1997) found that Grade One teachers believed in both a direct instruction approach and a learner-centred approach simultaneously. They explained this finding as reflecting the fact that both direct-instruction and learning through play are developmentally appropriate practices (DAP) at this level, and need to be balanced in order to create a high quality program. Those researchers who studied classroom practice and teacher beliefs longitudinally from Kindergarten to third grade, found that the prevalence of DAP decreased as the grade level increased (Buchanan et al., 1998; Maxwell et al., 2001; Stipek & Byler, 1997). More over, research has consistently identified discrepancies between teacher beliefs and actual practices related to play and DAP at the preschool and early primary levels. These discrepancies have been linked to teacher concerns over parental pressure, administrators and policies which favour more structured basic-skills instruction approaches over DAP or a child-centred orientation, and high student-teacher ratios (Buchanan et al., 1998; Maxwell et al., 2001; Murphy, 2006; Stipek & Byler, 1997). In addition, with the notable exception of Murphy (2006), all these studies found that teachers strongly believed in DAP or play, but are unable to translate those beliefs into their practice. However, the literature has also found inconsistencies within both the definition and implementation of DAP, as well as an inability to define teachers as holding either basic-skills beliefs or child-centred beliefs at the Grade One level (Stipek & Byler, 1997; Van Horn & Ramey, 2004; Van Horn et al., 2005).

Methodology

Research Design

The research questions were addressed using an explanatory mixed method design, which combined survey, image-based and narrative interview data in order to develop a general understanding of teacher beliefs about play in Grade One, and an in-depth understanding of how Grade One teachers explain the discrepancy between their beliefs and practices. A three-phase model of data collection was used. The first phase of data collection involved a questionnaire, which was used to gather information about teacher beliefs, practices and demographics. Subsequently, photographs of classroom organization were collected from a subset of 10 participants, in order to link beliefs about play to visible manifestations, such as open areas for play and toys displayed at a height accessible to children (Harms, Clifford, & Cryer, 1998). Finally, open-ended interviews were conducted with a subset of 7 teachers, to probe how they integrate play into their classrooms, and which factors support and/or limit this process.

Participants and Setting

All of the elementary schools studied where within a large French public school board in an urban centre in the province of Quebec. Forty-three Grade One teachers from 26 different schools returned the surveys. To approximate representative samples of participants, maximal variation sampling was used to select the participants for the second and third phases of the project, with respect to both their beliefs (as reflected in the questionnaires), and the geographic location and SES make-up of the schools. Four of the teachers whose classrooms were photographed also participated in the interview phase of the project.

Instruments and Procedures

Questionnaire

The first section of the questionnaire was adapted from Stipek and Byler's (1997) measure of teacher beliefs about how children learn, which has been validated with respect to preschool, kindergarten and Grade One teachers. An additional six questions related to play were included (worded both positively and negatively), distinct from questions Stipek and Byler (1997) identified as looking at DAP or child-centred beliefs. The second section of the questionnaire included 13 questions about practice, adapted from Buchanan et al. (1998). The questionnaire was validated with respect to teachers of grade levels one to three. Four questions were included about basic-skills and child-centred orientations, and five were about play. The scale used asked teachers how often they included various activities in their program. Finally, a demographic section was included. Although previous research has not found an association between number of years teaching and teacher beliefs about developmentally appropriate practice (Buchanan et al., 1998), the research team were interested in exploring whether years of teaching experience, years of specific Grade One teaching, or previous experience with younger students or older students would be related to teacher beliefs about play.

At the end of the questionnaire, participants were asked if they would be willing to participate in the photograph or interview phases of the research.After being pilot tested in English with a small group of teachers, minor modifications were made before the questionnaire was professionally translated into French. Copies of the questionnaire were mailed to all elementary schools in the school board. A draw for a $50 gift certificate was an incentive for the return of completed questionnaires in the enclosed self-addressed and stamped envelope. To avoid influencing responses, participants were informed only that the project aimed to look at teaching philosophies, strategies, and classroom settings, and not the focus on play and DAP.

Classroom Photographs

The second stage of data collection involved digital photographs taken of classrooms from various angles and perspectives, without students present. Before photographs were taken, teachers were asked to sign a consent form. One teacher chose to take photos himself and was e-mailed detailed instructions as well a copy of the consent form which was returned by post.

Interview Protocol

For the final stage of the project, teachers were interviewed by telephone and provided verbal consent for the audio recording of the interview with the Pretty May software program. The original interview questions focused on personal definitions of play, types of play activities implemented, and factors which supported or challenged teachers' ability to put their beliefs about play into practice. The interview protocol was pilot tested with one teacher, resulting in minor modifications.

Results

The first part of the questionnaire, teacher beliefs, was coded on a four-point Likert scale and treated as interval data. Items that were negatively worded in the questionnaire were reverse coded in order to allow all item responses to be compared on the same scale, moving from 1 (minimal amounts of play or DIP), to 4 (maximal amounts of play and DAP). In the second part of the questionnaire, teachers were asked to report on the frequency of practices in their classroom (every day, once or twice a week, once or twice a month, and never). These items were not reverse coded, as frequency was more easily compared when the original scale was retained. Demographic information was also coded, and the statistical analysis software SPSS was used to analyze the data. HyperRESEARCH, qualitative data analysis software was used to code the qualitative data. Text segments were coded and categorized using open-coding, and translated from French to English. Categories were then grouped into themes, representing ideas that emerged from the data. The photographs were coded based on the presence of play materials, space for play, and written indications (i.e., daily schedules, storage labels, classroom rules and routines) of play activities. Classrooms were then categorized as having many, some, or no elements of play.

Analysis

Descriptive statistics were run for each of the questionnaire items, to establish whether any particular item elicited extreme responses from all or most participants. Some items were then excluded from further analysis since they indicated little to no difference in the sample. Correlational analyses were conducted on each of the questionnaire items, as a first step in establishing factors into which the 32 items could be collapsed. Next, factor analysis was used to determine which items loaded together, along with the correlations and discussion about the theoretical congruence of these items resulted in four factors (or composites) regarding teacher beliefs, and two factors regarding self-reported practices.

Correlational analyses (both parametric and non-parametric) were conducted to determine whether any relationships exist between the factors. Correlational analyses were also conducted to examine the relationship between the demographic information and the factors identified within the beliefs and practices sections. Independent t-tests were used to consider the difference between mean scores of teachers belonging to the distinct groups of those with experience teaching older children and those without; also t-test were used to examine differences in means

scores between teachers with experience teaching younger children, and those without. As no classrooms were rated as having many elements of play, independent-sample t-tests were used to compare responses to the questionnaire items for teachers whose classrooms contained either some elements of play with those whose classrooms containing no elements of play, though no significant differences were found.

Teacher Beliefs

Descriptive statistical tests were run for all items in the teacher beliefs section of the questionnaire (see Table 1), followed by Pearson product moment and Spearman's rho correlations. The majority of respondents (90.7%) agreed or strongly agreed with questionnaire item Number 2, "basic skills should be the teacher's top priority", yet no significant correlations between this and any other items were found. Therefore, this item was removed from further analysis. Although there was a correlation between "homework" and "dramatic play", those items were excluded from further analysis as well, as there was no logical connection between the two (see Table 2).

Table 1
Descriptive Statistics: Teacher Beliefs

	N	Minimum	Maximum	Mean	Std. Deviation
1)Curricular areas should be taught as separate subjects at separate times	43	1.00	4.00	2.8333	.72100
2)Basic skills should be the teacher's top priority	43	1.00	4.00	1.7500	.70076
3)Children learn best through active, self-initiated exploration	43	2.00	4.00	3.0116	.60246
4)Worksheets and workbooks are not a good way for children to master academic skills such as math and reading	43	1.00	4.00	2.1628	.75373
5)It is unacceptable for children to move around the class while they are working	43	1.00	4.00	3.1860	.76394
6)School work should not be graded in the early elementary grades	43	1.00	4.00	1.9302	.70357
7)Teachers should not emphasize right and wrong answers	43	1.00	4.00	2.2316	.77227
8)Children should work silently and independently on seatwork	43	1.00	4.00	2.9884	.69427
9)Educational toys are an important part of the Grade One curriculum	43	2.00	4.00	3.0465	.61542
10)Having children experiment with writing through drawing, scribbling or inventing their own spelling is a good way for children to develop literacy skills	43	1.00	4.00	2.3953	.92940
11)Homework is important for reinforcing skills taught in class	43	1.00	4.00	2.0930	.78115
12)It is through work and not play that children learn in Grade One	43	2.00	4.00	2.9419	.53685
13)Teachers should not permit a child to leave an activity or task before finishing it	43	1.00	4.00	2.7791	.59062
14)How well a student can complete a task is more important than the enthusiasm and interest they show for the activity or subject matter	43	2.00	4.00	3.0233	.66327

15)Giving rewards and extra privileges for good performance is not an effective way to motivate children to learn	43	1.00	4.00	2.1744	.81565
16)Children do not learn through active manipulation and play with materials	43	2.00	4.00	3.6395	.54909
17)By playing together, children can help each other understand new ideas	43	1.00	4.00	3.3140	.69027
18)Pretend play should not be an integral part of the Grade One curriculum	43	2.00	4.00	3.2023	.64605
Valid N (listwise)	43				

Table 2
Teacher Beliefs: Pearson Product Moment Correlation

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	-	.163	.196	-.008	.058	.023	.009	.163	.394**	.272	-.099	.190	.023	.149	.145	-.005	.371*	.151
2		-	-.106	-.011	.289	-.048	.132	.263	.000	-.055	.174	.182	.180	.179	-.120	.039	.043	.128
3			-	-.162	-.289	-.026	.008	-.114	-.034	-.030	-.154	.297	-.026	-.045	.383*	-.131	.335*	-.116
4				-	.112	.157	.363*	-.087	.137	.348*	.216	.053	.056	.349*	.088	.404*	.243	.209
5					-	.113	.177	.588**	.184	.330*	.090	.056	.542**	.273	-.263	.419**	.180	.043
6						-	.600**	-.075	.008	.334*	.272	.021	-.038	-.047	.208	.026	-.076	-.036
7							-	-.005	.052	.144	.269	.106	.077	.222	.304*	.202	.039	.139
8								-	.168	.081	-.174	.190	.269	.388*	-.312*	.145	.256	.058
9									-	.175	.189	.080	.029	.143	-.349*	.403**	.189	.335*
10										-	.047	.071	.336*	.255	.111	.309*	.154	.169
11											-	-.129	.020	-.165	.105	.052	-.166	.363*
12												-	.315*	.288	.010	.149	.388*	.052
13													-	.363*	-.079	.171	.014	.042
14														-	-.107	.334*	.361*	.236
15															-	-.109	.017	-.080
16																-	.416**	.261
17																	-	.199
18																		-

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

Factor analysis was conducted to determine which items could be collapsed together into statistically and theoretically meaningful categories (see Table 3). This process revealed four factors, explaining 59% of the variance in responses. The first factor included items relating to teacher control and movement in the class (e.g., it is unacceptable for children to move around the class while they are working; children should not work silently and independently on seatwork), with the Eigen value showing as 3.429 and explaining 23% of variance. The second factor included items relating to student product versus process and an emphasis on rewards and marks (e.g., school work should not be graded in the early elementary grades; giving rewards and extra privileges for good performance is not an effective way to motivate children to learn), with

the Eigen value showing as 2.142 and explaining 14% of the variance. The third factor included items relating to educational toys and active manipulation (e.g., educational toys are an important part of the Grade One curriculum; children do not learn through active manipulation and play with materials), with the Eigen value showing as 1.896 and explaining 12% of the variance. The final belief factor included items relating to learning through play (e.g., children learn best through active, self-initiated exploration; it is through work and not play that children learn in Grade One), with the Eigen value showing as 1.395 and explaining 9% of the variance.

Table 3
Factor Analysis: Teacher Beliefs

	Factor	Factor 1	Factor 2	Factor 3	Factor 4
	Eigenvalue	3.429	2.142	1.896	1.395
	Percentage of variance	22.858	14.278	12.640	9.300
	Questionnaire items				
5	It is unacceptable for children to move around the class while they are working	**.797**	.131	.232	-.182
13	Teachers should not permit a child to leave an activity or task before finishing it	**.789**	.121	-.146	7.231E-02
8	Children should work silently and independently on seatwork	**.719**	-.222	.152	7.161E-02
14	How well a student can complete a task is more important than the enthusiasm and interest they show for the activity or subject matter	**.541**	.167	.303	.246
7	Teachers should not emphasize right and wrong answers	8.245E-02	**.799**	2.889E-02	2.227E-02
6	School work should not be graded in the early elementary grades	-2.499E-02	**.752**	-6.257E-02	-8.856E-02
4	Worksheets and workbooks are not a good way for children to master academic skills such as math and reading	4.657E-03	**.556**	.489	-2.550E-02
15	Giving rewards and extra privileges for good performance is not an effective way to motivate children to learn	-.309	**.516**	-.396	.397
10	Having children experiment with writing through drawing, scribbling or inventing their own spelling is a good way for children to develop literacy skills	.300	**.500**	.274	.105
9	Educational toys are an important part of the Grade One curriculum	3.040E-02	-9.490E-02	**.767**	8.895E-02
16	Children do not learn through active manipulation and play with materials	.264	.245	**.679**	2.791E-02
3	Children learn best through active, self-initiated exploration	-.195	-4.945E-03	-.249	**.774**
17	By playing together, children can help each other understand new ideas	.163	-7.495E-04	.450	**.664**
12	It is through work and not play that children learn in Grade One	.362	3.098E-02	-2.928E-02	**.619**
1	Curricular areas should be taught as separate subjects at separate times	2.629E-03	-1.710E-02	.328	**.570**

Teacher Practice

Descriptive statistical tests, as well as Pearson product-moment and Spearmans's rho correlations, were run for the 13 items in the teacher practice section of the questionnaire (see Tables 4 and 5). Questionnaire item Number 5, "participate in whole-class teacher directed instruction" was excluded from further analysis because 88.4% of respondents indicated that they engaged in this practice on a daily basis.

Factor analysis of teacher-reported practices supported the use of two factors, and final selection of items for inclusion in the composites was chosen based on this analysis, theoretical congruence, and correlational analysis. The first factor (composite) score related to developmentally appropriate practice (e.g., select centres (reading, math, science, writing, etc.) and using manipulatives (like geoboards, Legos, unifix cubes, tangrams, base 10 blocks). The second factor related to play (e.g., play with self-selected toys, games or activities; while my students play, I play with them).

Table 4
Descriptive Statistics: Teacher Practices

	N	Minimum	Maximum	Mean	Std. Deviation
1. copy from the chalkboard	42	1.00	4.00	2.1667	.88115
2. participate in dramatic play activities	42	2.00	4.00	2.7619	.84995
3. chose an activity when they are finished their work	43	1.00	4.00	1.4884	.73589
4. select centres (reading, math, science, writing, etc.)	43	1.00	4.00	2.6744	1.12802
5. participate in whole-class teacher directed instruction	43	1.00	3.00	1.1628	.48453
6. lose the privilege of play or choice time because of misbehaviour or incomplete homework	43	1.00	4.00	2.3953	.87667
7. play with self-selected toys, games or activities	43	1.00	4.00	2.2558	.58117
8. circle, underline, and/or mark items in workbooks or on worksheets	41	1.00	4.00	1.9756	1.01212
9. use manipulatives (like geoboards, Legos, unifix cubes, tangrams, base 10 blocks)	43	1.00	4.00	1.8140	.69884
10. colour in pre-drawn shapes or images	41	1.00	4.00	2.7561	.76748
11. participate in hands-on activities	42	1.00	3.00	1.5714	.59028
12. While my students play, I am occupied with other activities.	43	1.00	4.00	2.8605	.91499
13. While my students play, I play with them.	43	1.00	4.00	2.6047	.90342
Valid N (listwise)	36				

Table 5
Teacher Practices: Pearson Product Moment Correlations

Question	1	2	3	4	5	6	7	8	9	10	11	12	13
1	-	.011	.212	.111	.160	-.052	.102	.000	.131	.201	-.422**	.036	.000
2		-	.232	.190	.098	-.096	.226	-.215	.085	-.266	.262	-.044	.249
3			-	.311*	.373*	.173	.480**	.050	.320*	.267	.255	.280	.154
4				-	-.119	-.228	.203	-.204	.284	.155	.021	.024	.034
5					-	.349*	.102	.069	.021	.178	-.084	.214	.042
6						-	.217	.071	-.033	.252	.013	.130	.202
7							-	.096	.237	.312*	.191	.472**	.288
8								-	.131	.406*	.036	-.058	-.118
9									-	.242	.267	.107	.145
10										-	-.154	.127	-.095
11											-	-.045	.279
12												-	.479**
13													-

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

Additional Analyses

Pearson product-moment as well as Spearman's rho correlational analyses were conducted to determine whether there were any significant correlations between factors (unweighted composites) from sections 1 and 2, and the demographic items (See table 6). A more permissive belief in movement and control was positively associated with belief in educational toys and hands-on manipulation ($r=0.321$, $p<0.05$). Belief in learning through play was positively associated with belief in educational toys and hands-on manipulation ($r_s=0.313$, $p<0.05$). Belief in learning through play was associated with greater frequency of teacher self-reported play activities ($r=0.524$, $p<0.01$). Years teaching Grade One was negatively correlated with belief in learning through play ($r=-0.341$, $p<0.05$). Total years teaching was negatively correlated with belief in learning through play ($r=-0.410$, $p<0.01$), and with belief in educational toys and hands-on manipulation ($r=-0.307$, $p<0.05$). Years teaching Grade One was negatively associated with a more permissive belief towards movement and control ($r=-0.326$, $p<0.05$). Years teaching Grade One was associated with a lack of teacher self-reported play practices ($r=0.365$, $p<0.05$). Total years teaching was not significantly correlated with teacher self-reported practices.

Independent sample t-tests revealed no significant difference when respondents were grouped based on past experience teaching older grades or experience teaching in preschool or childcare.

Table 6
Pearson Product Moment Correlations: Beliefs, Practices, and Experience

	movement and control	product vs. process	educational toys and manipulation	learning through play	DAP	play	years teaching	years teaching Grade One
movement and control	-	.126	.321*	.188	-.155	-.061	-.232	-.326*
product vs. process		-	.157	.157	-.058	-.045	-.126	-.025
educational toys and manipulation			-	.248	-.191	-.261	-.307*	-.203
learning through play				-	-.011	-.524**	-.41**	-.341*
DAP					-	.263	.075	.272
play						-	.189	.365*
years teaching							-	.718**
years teaching Grade One								-

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

Photographed Content

Photographs were taken of ten classrooms, one of which was in an alternative school, one of which had a male teacher, and three that were split-level Grade One and Two classes. The schools were located in diverse geographical locations within the city, and served families from diverse SES and cultural backgrounds, including three which provided lunch and snack programs.

Qualitative analysis revealed much less variation than anticipated. Most classrooms had commercial wordwalls, desks arranged in small groups, a bookshelf with children's books, a daily timetable, manipulatives, and commercially produced textbooks and workbooks. Half of the classrooms photographed included items that were linked to play, such as board games, puzzles, manipulatives, puppets, fish, large tables, timetables that included time for free choice, and a carpet or an empty space which could be used for group meetings or floor play. Some classrooms had a number of these items, while others had only one or two. It is important to note that the research team expected, but did not find, Grade One classrooms that more closely resembled kindergarten classrooms, containing, for example, a dramatic play corner, sand and water tables, and designated centres for particular types of play.

Interview Data

Telephone interviews were analyzed using HyperRESEARCH to code the various themes relating to play, DAP, and the influences on the Grade One teacher and classroom. These interviews were conducted using open-ended questions beginning with the teachers' definitions

of play. Responses pointed to a general sense of play as fun and as a way of learning. When asked about play in their Grade One classroom, respondents noted the use of small group workshops, board games, manipulatives, games to learn French, and math logic games. The teachers were eager to point out the value of using these types of activities to teach social skills and academic skills and concepts, in a fun and enjoyable way for the children. For example, one teacher noted that "play is a good way to facilitate understanding and learning in a way that is easier for the child." Another teacher referred to the developmentally appropriate use of play by commenting, "the younger they are, the more we use play… it's one strategy, among others, to teach." Some teachers did make the distinction, however, between play in the classroom, and play at recess or in after-school daycare where children are able to, in their words, "choose what to play, and who to play with."

Major themes emerged when teachers were asked whether or not they were able to implement their philosophy with regards to play in their classrooms. Some of the interviewees responded that they were able to use play to the extent that they believed was ideal, and identified the following as supporting factors: reformed curriculum, past experience, other teachers and school personnel (including pedagogical consultants), principals, and the philosophy of the school. One participant claimed " I think that the personnel at the school (is supportive) like the pedagogical consultant. She brings us new ideas, demonstrates games, workshops, and science experiments, and that can help."

Other teachers listed obstacles that limited the implementation of play in their classrooms. Prominent and recurring themes were the restraints of time and budget. Teachers noted that time was needed to prepare materials and plan play activities, on top of completing curriculum objectives. Furthermore, school and classroom budgets to purchase play material was lacking. One teacher explained " we are pretty much on our own when it comes to investing our time to make up new games or put together materials…also the school budget…the school doesn't always have all the money for us to buy commercial games…as a teacher we have a lot to do each day, we have all our preparation so we have less time to create games…we don't always have the financial resources at school to supply the demands of all the teachers." Another teacher agreed by stating, "no [I am not able to put my beliefs about play into practice], because we don't have enough time to create games. I would appreciate having more time to dedicate to play, but there is not enough material designed for that [learning through play], or the material is very expensive, so we can't be equipped to satisfy all our needs."

Two teachers also expressed concern about student characteristics which they felt compromised their ability to present open-ended play activities to their class, such as the large number of children who spoke French as a second language or behavioural issues. Another issue was children without siblings whom one teacher felt were not as skilled at playing cooperatively (despite several years of daycare) as other children. The same teacher also listed class size as an impediment to play, although the range of interviewee class sizes was from 16 to 18 students.

Discussion

Teacher Beliefs

This study shed light on different elements of developmentally appropriate practice at the Grade One level. In contrast to previous research which dichotomized developmentally appropriate and inappropriate practice (Buchanan et al., 1998; Keating et al., 2000; Rusher et al., 1992; Stipek & Byler, 1997), this study found that the vast majority of Grade One teachers prioritize the teaching and learning of basic language and mathematic skills, but that this is unrelated to their other beliefs. Four separate aspects of DAP were found at the Grade One level: movement and control; product versus rewards; learning through play; and educational toys and manipulation. Future research could examine these concepts in greater depth, in Grade One and beyond. It is also interesting to note that while there were associations among beliefs about educational toys and manipulation, learning through play, and movement and control, the belief in product versus process was independent in that it was not significantly associated with the other composites.

Self-Reported Practices

Furthermore, an association between belief in learning through play and self-reported play activities indicates that teachers perceived they are able to put their beliefs into practice, to some extent. This result was echoed in the teacher interviews.

Demographic Influences

Previous research failed to find an association between the number of years teaching and teacher beliefs related to DAP (Buchanan et al., 1998). Our research found negative associations between belief in learning through play and total years teaching, as well as years teaching Grade One; between the belief in educational toys and total years teaching; and between a more permissive attitude towards movement and control and years teaching Grade One. This implies that teacher beliefs may be strongly influenced by a teacher's education, given that newer teachers appear to espouse fewer beliefs that are considered traditional and teacher-directed. However, in terms of self-reported practices, a lack of play practices was associated with years teaching Grade One, but not total years teaching. This may be attributable to the fact that teachers who switch grade levels every few years are more open to using different kinds of practice with different age groups, while those who remain in the same position for many years may be more set in their ways and unwilling to incorporate the children's perspectives into their practice. Future research could explore this issue further.

Teachers with experience teaching younger children showed no greater use of play or DAP, nor stronger beliefs in these, though previous research has shown play and DAP to be more common in settings for younger children (Buchanan et al, 1998; Maxwell et al, 2001;). This finding might imply that these participants indeed prefer the traditional classroom, perhaps explaining their present employment as a career move out of play-based, DAP settings, such as childcare and kindergarten.

Classroom Organization

Munoz (2005) found classroom organization to be more predictive of teacher beliefs than either classroom practice (documented through observation) or daily timetables, at the preschool level. Very little variation in classroom organization in Grade One was found and no significant differences between teachers with some elements of play and those with no elements of play was found, on any of the belief or practice factors. The teachers mentioned lack of materials as being a factor that limited their use of play, and this was evident when analyzing the photos.

Interviews

Our research supported the conclusions of Rusher et al. (1992), who found school personnel's beliefs much more influential than official policies or reforms, unlike Stipek & Byler (1997) who identified parents as sources of pressure. Our study identified school personnel and teacher experience (university coursework and in-service training) as supports for play, and time and budget for materials as the main sources of limitations to implementing play, which was not identified by previous research.

Recommendations for Future Research and Policy

Our sample size was relatively small, and further research might, in addressing this limitation, recruit a larger number of participants. Further research could potentially examine teachers in other geographical locations and speaking languages other than French, for example, Anglophone teachers in Quebec or other provinces. Given the results of this study, suggestive of years teaching being associated with less belief in learning through play or practices that are supportive of play, a central recommendation is that schools engage in professional development that encourages play in grades other than kindergarten, thus promoting a fluid transition between kindergarten, Grade One, and later grades. This recommendation is supported by studies that link positive or successful transitions to Grade One to later school success (Ramey & Ramey, 1994; Entwisle & Alexander, 1998). Conversely, difficult or unsuccessful transition has been linked to academic difficulty, as well as social and mental health issues (Neuman and Kagan, 1998).

Limitations of the Study

Limitations of the project relate to the instruments used, and the number of participants recruited. The population sampled in this project is francophone, and despite this being the second language of the research team, it was agreed that this population would provide broader insight, given the large and public nature of the school board in which they teach. The questionnaire, consent letter, and interview were translated to French by a francophone translator only after pilot testing. As the research team collected further information regarding teacher's opinions in the interview phase, it became clear that some of the turns of phrase common in the English educational jargon did not have literal translations to French. This posed difficulties and misunderstandings, especially with regards to the terms "dramatic play", and "play" as opposed to "games" – which both translate to "jeu" in French. Finally, it bears noting that self-reported practices and beliefs of teachers do not directly assess the actual practices of teachers. However,

to observe classrooms effectively requires the consent of children and parents, which would have demanded more time than was feasible for this project.

Conclusion

Despite the limitations identified above, our study did identify a gap between teacher belief and practice with regards to DAP and play at the Grade One level, and did contribute to developing an understanding of DAP in the early primary years. In order to address these issues, administrators and policy-makers should explore ways to increase class budgets and teacher preparation time, and to provide in-service training on play-based instruction.

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