

## Perceived Success and Enjoyment in Elementary Physical Education

By Lois J. Baron, Ph.D., and Peggy J. Downey, Ph.D.

This study investigated children's attributions for success and enjoyment in elementary physical education (PE) activities. Sixty-nine children (35 boys, 34 girls) from Grades 2, 4, and 6 participated. Data were collected over a period of nine weeks with children attending one hour of PE a week. Perceived success and attributions for success in each activity were assessed using the Modified Causal Dimension Scale (Weiss, McAuley, Ebbeck, & Wiese, 1990). Self-ratings of enjoyment were indicated on a 5-point Likert scale. Activity type, gender, and grade affected perceived success scores, attributions, and enjoyment scores ( $p < .05$ ). Results are discussed in terms of attribution theory (Weiner, 1986), achievement goal theory (Nicholls, 1984), and gender typing of activities.

Childhood physical activity behaviour is influential in establishing habits that may affect later participation in physical activity (Malina, 2001; Pate, Baranowski, Dowda, & Trost, 1996; Sallis & Patrick, 1994; Sallis, Prochaska, & Taylor, 2000). The attributions children make for their success or failure in an activity and the enjoyment they derive from the activity have been identified as motivating factors that encourage them to participate, succeed, and potentially continue in the activity (Stucky-Ropp & DiLorenzo, 1993; Weiner, 1986; Welk, 1999). Attributions are the perceived causes or rationalizations children use to explain their performance outcomes. Enjoyment is an affective factor related to valuing the activity and having fun (Welk, 1999). Understanding children's attributions for their performance outcomes and their enjoyment of specific physical activities might enable teachers and other individuals to create environments that motivate students to participate and achieve.

Elementary physical education (PE) should emphasize the development of children's perceptions of competence and enjoyment of activity (Whitehead & Corbin, 1997). A wide range of activities are presented in good elementary programs to prepare children for activity choices in secondary school (Rink, 2006). Although many curricula are based on movement themes or concepts, instruction is frequently presented through specific content such as games, gymnastics, and dance. Different content types are complementary through their varied approaches to children's development of body awareness and control, spatial and temporal awareness, manipulative skills, relationships to other people, and physical fitness. Unfortunately, no studies have been found that have simultaneously examined children's attributions and enjoyment of varied content types in elementary school programs. To contribute to our understanding of motivational aspects of different activities presented in elementary school settings, this study investigated children's attributions for success and enjoyment in games, gymnastics, and dance in that environment.

### *Attribution Theory*

Weiner's attribution theory (1986) has been used widely to explain achievement-related behaviour. Research has shown that the attributions (causes) individuals use to explain their success or failure in a task are critical to future motivation (Chase, 2001; Nicholls, 1984; Weiss, McAuley, Ebbeck, & Wiese, 1990; Xiang, Lee, & Williamson, 2001; Weiner, 1986). Individuals attribute their performance outcomes to three causal dimensions. Locus of causality indicates whether they perceive the cause of the performance as being within themselves (internal) or from the environment (external). Stability refers to whether the reason for the performance is perceived to be variable (unstable) or consistent (stable) over time. The stability dimension is related to the future, that is, potential for success. Controllability refers to the perception of the reason for performance as being controllable or uncontrollable, either by the individual or by others.

Following a task, the individual assesses the performance outcome, with successful outcomes producing more positive emotions than unsuccessful outcomes (Rink, 2006). The individual then attributes that outcome to factors classified along the three causal dimensions. Individuals who make functional attributions for their performances are most positively motivated to pursue the activity (Weiner, 1986; Weiss et al., 1990). Functional attributions are made by individuals who ascribe their perceived success to internal, stable, and personally controllable factors and their perceived failure to factors that are internal, unstable, and personally controllable. Internal and stable attributions (e.g., ability) for perceived successes lead to feelings of competence and satisfaction (Weiner, 1986; Weiss et al., 1990). In contrast, internal and stable attributions for perceived failures may result in hopelessness and low self-esteem. However, failure attributed to lack of effort (internal, unstable) may be motivating since success may be possible if the individual tries harder. Attributing both successes and failures to factors that are personally controllable has been shown to be critical for motivated behaviour (Duda, 1996; Weiner, 1986). Research has found that individuals who adopt functional attributions after perceived successes show increased performance levels, task satisfaction, persistence, positive affect, and pride (e.g., Kurtz-Costes & Schneider, 1994; Nicholls, 1984; Weiner, 1986).

The positive motivational impact of adopting appropriate attributions is clear. Furthermore, since attitudes toward physical activity are often formed in elementary school (Daley, 2002), it is important to study attributions in this setting. Children need to learn to adopt functional attributions if they are to be motivated to pursue physical activity. However, they must also consider the physical activity experience to be enjoyable (Fox, 1991).

### *Enjoyment*

Children's motivation to participate in physical activity is influenced by their perception of the activity as being fun and worthwhile or boring or unpleasant (Fox, 1991; Martens, 1996). Enjoyment has been linked to perceived competence and mastery (Wallhead & Buckworth, 2004); children find physical activity fun when they can succeed at experiences they find challenging (Mandigo & Couture, 1996; Martens, 1996; Whitehead & Corbin, 1997).

Physical education at the elementary school level is generally greeted with great excitement by inherently active young children, but this enthusiastic response has been shown to wane as students move into middle and secondary school programs (Carlson, 1995). Consequently, research investigating correlates of students' physical activity involvement has focussed primarily on older children and adolescents (Welk, 1999). Since lifelong attitudes and habits are often formed in elementary school (Daley, 2002), PE teachers who want to motivate their young students need to understand children's enjoyment of physical activity. In addition, it is important to recognize that rather than being a global concept, motivation in PE varies with the activity in question (Goudas, Biddle, & Fox, 1994).

### *Content in Elementary School PE*

Games form the foundation of many elementary school programs. Through games, children develop individual motor skills (e.g., travelling, throwing and catching, striking with an implement, kicking) and singular concepts (e.g., force production, balance). As skills grow, games-like activities are introduced that require children to use more complex motor skills, combine movements, learn rules, and focus on game playing strategies (e.g., offence, defence). Modified games eventually lead to recognized sports. Games may focus primarily on individual performances (e.g., tag, archery, bowling) or on more complex dual (e.g., tennis) or team sports (e.g., soccer, basketball) where interrelationships with others are critical to success. Games may also be chosen for their fitness benefits (e.g., soccer for cardiovascular benefits).

Gymnastics also contributes to fitness goals by developing strength, flexibility, and balance. Good form and smooth transitions between movements are critical for both safety and aesthetics, regardless of movement complexity. Educational and Olympic gymnastics are both used in elementary school programs (Rink, 2006). In educational gymnastics, the child is expected to apply concepts (e.g., body awareness, stability) to a student-selected response. For example, the instruction to "balance on three body parts" may result in one child creating a unique body shape using two feet and a hand and another executing a traditional headstand. In contrast, Olympic gymnastics focuses on specific skills or stunts with predetermined form, often demonstrated by the teacher, another student, or a video reproduction. Direct instruction is the primary method of teaching Olympic gymnastics, whereas both direct and indirect instruction are common in educational gymnastics.

Dance is similar to gymnastics in that both creative (educational) dance and structured dance (e.g., folk dance, square dance) are common in elementary programs. Creative dance is based on the child's personal movement patterns, focussing on four fundamental movement elements: body, space, dynamics, and relationships. It is taught through movement exploration that is guided by the teacher. In contrast, structured dance forms comprise prescribed steps, patterns, and movement sequences with preferred or standardized techniques. Through direct instruction, children are asked to reproduce these movements, often with music and specific partner and/or group patterns. Through dance, children are expected to expand their movement repertoire, improve physical skills, develop expressive movement qualities, and increase their physical self-esteem (Cholod & Downey, 1997).

Games, gymnastics, and dance in elementary PE are complementary ways of enhancing children's development. However, these activities may influence children's attributions for success and their enjoyment of the activity in different ways. For example, children may perceive their performance in a game of tag to be more under their personal control than their performance in a folk dance, where external controls (e.g., set pattern, music) may be perceived to affect performance success. Furthermore, some children may enjoy activities requiring speed and strength, whereas others may prefer activities calling for creativity. Understanding children's perspective of these content areas is important for developing a motivating physical activity environment in elementary programs.

### *Attributions for Success and Enjoyment in Different Activities*

Perceived competence and assessment of the value of physical activity are two factors that have been found to influence children's decisions to be physically active (Welk, 1999). Perceived competence is an individual's perception of control over his or her personal behaviour, which may be reflected by perceptions of performance success and the attributions the individual makes for a given outcome. Assessment of the value of participating in physical activity considers the costs and benefits of participation, including enjoyment of the process. Children who have positive perceptions of success, have control over their performances, and enjoy physical activity are most likely to adopt a physically active lifestyle (Welk). Therefore, examining these two concepts concurrently seems important. However, only a few studies (e.g., Ferguson, Yesalis, Pomrehn, & Kirkpatrick, 1989; Pate, Trost, Felton, Ward, Dowda, & Saunders, 1997; Trost, Pate, Saunders, Ward, Dowda, & Felton, 1997) have been found that have investigated both perceptions of competence (success and control) and enjoyment in elementary-aged children. Furthermore, these studies did not directly examine children's attributions for their performances and tended to assess only appreciation.

Activities in PE (e.g., games, gymnastics, dance) differ considerably in the settings in which they are performed and in the demands placed on the participants (Goudas et al., 1994). As a result, children's attributions for their performance success and their enjoyment of different physical activities may differ. Unfortunately, few researchers have specifically addressed this issue in the elementary school context. In a study by Cholod and Downey (1997), children in Grades 5 and 6 identified differences between creative and folk dance, such as the use of imagination in creative dance and the need to remember specific steps in folk dance. However, those differences did not affect their perceptions of success or the types of attributions they made. Moreover, this study did not consider other activities and did not examine enjoyment of dance. In another study, McKenzie, Alcaraz, and Sallis (1994) assessed fourth and fifth grade students' "liking" of a variety of activity units, convincingly showing that some were preferred over others; their findings, however, were not examined in relation to performance attributions. To develop activities that will result in positive learning experiences, teachers must first know the types of tasks that children find meaningful (Lee, 1997), that is, activities they can do well and enjoy.

Competency beliefs and enjoyment have been shown to vary as a function of age (Lee, 1997). Developmental studies indicate that, in general, younger children tend to have higher expectancies for success than older children, but those expectancies may not always be realistic due to younger children's limited cognitive capabilities. Nicholls (1984) suggested that children under seven years of age do not have a differentiated conception of ability; they do not understand that ability is based on a normative or social comparison of how one performs in relation to others in the class. Nicholls also notes that young children are unable to differentiate between ability and effort, tending to equate effort with performance success. These age-related differences in understanding ability and effort probably affect both perceptions of success and outcome attributions. Moreover, children as young as kindergarten age have been shown to enjoy some physical activities over others (Sanders & Graham, 1995). Similar results were found by McKenzie et al. (1994) with older elementary school children, but in neither case were connections made to competency beliefs such as attributions. Welk (1999) indicates that demographics such as age influence feelings of competence and enjoyment, but that additional data were needed to fully understand these connections.

Gender differences in children's beliefs about their competence and their enjoyment of physical activity have been found to vary by task (Lee, 1997). In general, boys consistently report higher perceived competence than girls and are particularly more confident in their abilities in traditional sport activities. Research has indicated that gender differences are often related to sex-linked movement tasks. Boys tend to exhibit more confidence on male-typed tasks and girls on female-typed tasks (Lee, 1997). For example, sports such as football, basketball, and soccer are often viewed as more appropriate for boys, while cheerleading, dance, and gymnastics are perceived as more suited to girls. Other activities such as jogging, tennis, volleyball, and softball may be considered gender neutral, and therefore appropriate for both boys and girls. Similarly, boys and girls appear to value activities that they consider appropriate for their gender. For example, girls are likely to perceive dance, gymnastics, and similar activities as more important and enjoyable than sports such as basketball, which tend to appeal more strongly to boys (Lee). Teachers must recognize gender differences in implementing curriculum because boys and girls may be constructing different meanings from these experiences (Pissanos & Allison, 1993). As a result, their motivation to participate may differ.

Perceived success, attributions for that success, and enjoyment of physical activity are critical factors in motivating children to be physically active (Welk, 1999). These factors may be affected by the type of activity (Cholod & Downey, 1997; McKenzie et al., 1994) and the age or gender of the child (Lee, 1997). By concurrently investigating these attributions and feelings of enjoyment, a better understanding of motivation in elementary PE may be gained. Hence, one purpose of this study was to examine the attributions elementary school boys and girls make for their perceived performance outcomes (success or failure) in games, gymnastics, and dance in their PE program. A second purpose was to investigate their enjoyment of these activities.

Specifically, the following research questions guided the study: (a) How do elementary school children perceive their performance success in games, gymnastics, and dance activities? (b) What attributions do elementary children make for their performance success in games, gymnastics, and dance? (c) Do children similarly enjoy these different types of activities? and (d) How do age and gender affect attributions and enjoyment?

## METHOD

### *Participants and Setting*

Participants were 69 children (35 boys, 34 girls) in three intact classes (Grades 2, 4, 6) in a suburban Montreal elementary school (kindergarten to Grade 6). Grade 2 children (10 boys, 10 girls;  $M\ age = 7.5$ ,  $SD = 0.29$ ) participated in two 30-minute classes each week, while children in Grade 4 (8 boys, 13 girls;  $M\ age = 9.4$ ,  $SD = 0.28$ ) and Grade 6 (17 boys, 11 girls;  $M\ age = 11.5$ ,  $SD = 0.30$ ) attended one 60-minute class a week.

The male specialist PE teacher (age = 43 years), who worked at the target school and functioned as a cooperating teacher for McGill University's teacher training program in PE, was regarded by school and university personnel as an enthusiastic teacher whose program involved all students in purposeful learning experiences. He had taught elementary PE for 23 years, 12 of them at the school where the research took place, and was active in local and provincial professional associations.

The school's curriculum for the youngest children (kindergarten to Grade 2) consisted of a randomly mixed block program featuring games, educational gymnastics, and rhythmic, with games receiving the most time and emphasis. Similarly, the major portion of the curriculum for the older children (grades 3 to 6) was dedicated to games (activities related to traditional sports such as soccer, volleyball, and floor hockey, five to six weeks per unit). Gymnastics (pyramids, simple tumbling, rolls and balances) was offered for four to six weeks (Grades 5/6 and 3/4, respectively), and "square dance is taught for about three lessons" (teacher interview, November 15, 2001). The teacher stated that he personally was no longer able to do Olympic gymnastics, which he claimed limited the content he could use for the older grades. He also noted that "dance is not my forte," which restricted him to a few simple, structured dances. Nevertheless, because games (Ga), gymnastics (Gym), and rhythmic/dance (D) were all included regularly in the curriculum, they were selected as the instructional content to be studied in this project.

### *Instrumentation*

When collected carefully, self-report data is viewed as a source of important information for researchers and educators (Lee, 1997). Even children have been found to report their thoughts with sufficient accuracy for researchers to consider the information valid in interpreting children's behaviour. The questionnaires used in this study to measure attributions and enjoyment were completed at the end of each activity block.

*Attributions.* The Modified Causal Dimension Scale (M-CDS) (Weiss et al., 1990) was used to assess children's perceptions of success and their attributions for that success in games, gymnastics, and dance. Designed for use with children 8 to 13 years of age, the M-CDS reflects Weiner's (1986) attribution theory, which states that performance outcomes can be attributed to factors that are internal or external, stable or unstable, and controllable or uncontrollable. To enhance validity and reliability when assessing these classifications, Russell, McAuley and Tarico (1987) separated the controllability dimension into personal control and external control. The four items on the M-CDS represent these four causal dimensions (i.e., locus of causality, stability, personal control, external control), and the wording and format are designed for children's understanding.

Using the M-CDS, the children in this study rated their performance success in an activity type (i.e., games, gymnastics, or dance) on a 5-point Likert scale (1 = not good at all, 5 = very good). They then completed the open-ended attribution statement "The most important reason for why I rated myself this way is ..." to indicate their perception of the cause of their performance. This was deemed important because the researcher might not always perceive achievement or attributions in the same way as the child (Russell, 1982). Finally, they classified their attribution statement with respect to each of the four causal dimensions, using the structured alternative format (Harter, 1982). For example, for the locus of causality dimension, they decided whether the reason they gave for their performance success was "something I can control" (internal) or "something I cannot control" (external). They then selected whether that was "sort of true of me" or "really true of me." Similarly, for the other dimensions, they decided if the reason "can/cannot be changed" (stability), "is/is not because of me" (personal control), or "is/is not under the control of other people" (external control), and rated it as "really" or "sort of" true. To assist the Grade 2 children, the questions were read aloud, a series of five faces (sad = not good at all, happy = very good) were substituted for the numerical scale, and writing help was provided.

*Enjoyment.* The children rated their overall enjoyment of an activity type on a 5-point Likert scale (1 = not at all, 5 = a lot), with sad to happy faces used for the Grade 2 class. They then responded in writing to two questions about the relevant activity: "What do you like **best** about games?" and "Is there anything that you do **not** like about games?" Finally, after each activity block, the children ranked games, gymnastics, and dance on a 3-point scale (1 = enjoyed the most, 3 = enjoyed the least).

### *Procedure*

Parental consent was received for all participants, and data were collected early in the school year (October to December). All lessons were taught as regularly scheduled PE classes, with the only requirement being that all grades were to have a minimum of three hours each of games, gymnastics, and dance.<sup>1</sup> Because the primary goal of the study was to compare children's responses to the three activity types, not to promote change, the short protocol simply ensured that the children had had a recent experience with each type of activity.

Field notes were taken for each class to record the types of activities included and general teaching behaviours observed. The PE teacher selected and taught all activities,<sup>2</sup> presenting each activity type in its entirety in the same order (games, gymnastics, dance) to all grades in three-week blocks. Teacher-directed strategies predominated, although some opportunities for student decision-making were provided. Modifications to games were often solicited from the children, and self-pacing and choice among skills occurred in gymnastics, especially in the younger two grades. In contrast, direct instruction was used exclusively for dances with set formations and step patterns; all children participated with their partners and groups at the same time, accompanied by music. Groups were self-selected in games and gymnastics, but the teacher assigned the boy/girl partners and groups for dance. During games and gymnastics, the teacher circulated through the gym, speaking privately to individuals and small groups as they worked. He participated as a dancer in all dances, giving verbal directions and feedback to all children publicly.

### *Data Analysis*

Significance levels for all tests were set at  $p < .05$  with necessary adjustments in post hoc tests. The data reflected the number of students who were present to complete the relevant questionnaire(s), so the number of participants varied slightly in different analyses.

*Perceived success.* To investigate the children's perceived success ratings for the three activities, a  $2 \times 3 \times 3$  ANOVA (Gender  $\times$  Grade  $\times$  Activity) with repeated measures on the last factor was conducted.

*Attribution statements.* To determine whether the children's attribution statements differed for the three activity types, content analyses were performed on the transcribed statements. Initially, the researchers individually coded the statements for similarities in wording or content. Using consensus coding, the original codes were reduced further to the following nine categories: ability, effort, enjoyment, cooperation, content, emotions, experience, other, or no answer.

*Causal dimensions.* Initially, four  $2 \times 3 \times 3$  ANOVAs (Gender  $\times$  Grade  $\times$  Activity) with repeated measures on the last factor were performed to examine the children's perspective of the importance of each causal dimension on performance success in the three activity types. Responses to the causal attribution questions were also investigated for each activity separately with two-way ANOVAs (Grade  $\times$  Gender).

*Relationships between perceived success and the causal dimensions, gender, and grade.* For each activity, perceived success was correlated with each of the four causal dimensions (personal control, stability, locus of causality, external control). Then separate, standard multiple regression analyses were performed for each activity to investigate the relationship between perceived success and the four causal dimensions when grade and gender were also considered (Tabachnick & Fidell, 1989).

*Functional attributions.* The children's perceived success ratings (1 to 5) were compared to their scores on the four causal dimension items to determine the extent to which the children made functional

attributions for their performances. Functional attributions occurred when the children (a) attributed their successful performance (scores = 3, 4, or 5) to factors that were internal, personally controllable, not under the control of others, and stable; and (b) attributed their unsuccessful performance (scores = 1 or 2) to factors that were internal, personally controllable, not under the control of others, and unstable (Weiner, 1986).

*Enjoyment.* Enjoyment scores were correlated with perceived success (M-CDS) scores for each activity. To examine the children's enjoyment of each activity type, a  $2 \times 3 \times 3$  ANOVA (Gender  $\times$  Grade  $\times$  Activity) with repeated measures on the last factor was employed. Responses to "what I like" and "what I don't like" were coded similarly to the attribution statements, with the resultant major categories labelled fun, activity-related, social, nothing, boring, and other. Due to small cell sizes, enjoyment rankings of the three activity types were examined via descriptive statistics.

## RESULTS

### *Perceived Success*

Most children felt they were quite successful in all types of activity. In games, 100% perceived their performance as being at least "OK" ( $\geq 3$ ), as compared to 97% in gymnastics and 83% in dance. "Good" (4) or "very good" (5) ratings were expressed by 89% of the children for games and 76% for gymnastics. Only 48% considered their performance in dance to be "good" or "very good," and none of the Grade 6 children felt they were "very good" (5) in dance. Significant correlations between the children's perceptions of success were found in two comparisons: gymnastics and dance [ $r(57) = .32, p < .05$ ], and games and gymnastics [ $r(58) = .29, p < .05$ ]. Mean scores for perceptions of success are shown in Table 1.

Mauchly's test indicated that the assumption of sphericity had been violated in the repeated measures ANOVA [ $X^2(2) = 6.92, p < .05$ ], so degrees of freedom were corrected using Huynh-Feldt estimates of sphericity ( $\epsilon = 1.00$ ). The results indicated three significant interactions and two main effects; however, the three-way interaction lost significance in Scheffé post-hoc tests. Grade 2 girls rated their performance success higher than did the boys in Grades 2 and 4 [ $F(2,47) = 3.3, p < .05, ES = .8$  and  $.9$ , respectively]. The gender by activity interaction [ $F(2,94) = 12.1, p < .001$ ] showed that boys' perceptions of success were significantly lower than those of girls for gymnastics [ $F(1,47) = 4.92, p < .05, ES = .8$ ], and dance [ $F(1,47) = 18.89, p < .001, ES = .9$ ]. Overall, girls rated their performance success higher than boys [ $F(1,47) = 9.81, p < .01, ES = .3$ ], and perceptions of success in games and gymnastics were both higher than those for dance [ $F(2,46) = 17.74, p < .001, ES = .9$  and  $.7$ , respectively].

**Table 1**

*Mean Perceived Success Scores for Each Content Area by Grade and Gender (max. = 5).*

Content Areas				
Grade (n)	Games	Gymnastics	Dance	Overall
	M (SD)	M (SD)	M (SD)	M (SD)
2 (20)	4.7 (0.6)	4.3 (1.1)	3.1(1.7)	4.0 (1.3)
Boys (10)	4.6 (0.7)	3.9 (1.3)	2.2 (1.5)	3.5 (1.7)
Girls (10)	4.6 (0.5)	4.6 (0.5)	4.3 (0.8)	4.6 (0.7)
4 (21)	4.2 (0.6)	4.0 (0.9)	3.6 (1.2)	3.9 (0.9)
Boys (8)	4.5 (0.5)	3.9 (1.1)	2.6 (1.0)	3.7 (1.2)
Girls (13)	4.0 (0.6)	4.2 (0.7)	4.2 (0.8)	4.1 (0.7)
6 (28)	4.3 (0.7)	4.0 (0.7)	3.4 (0.8)	3.9 (1.0)
Boys (17)	4.4 (0.6)	3.9 (0.6)	3.5 (0.7)	3.9 (0.8)
Girls (11)	4.0 (0.8)	4.2 (0.8)	3.4 (0.9)	3.8 (0.9)
TOTAL (69)	4.3 (0.7)	4.1 (0.8)	3.4 (1.2)	3.9 (1.0)
Boys (35)	4.5 (0.6)	3.7 (1.0)	2.8 (1.2)	3.8 (1.1)
Girls (34)	4.2 (0.7)	4.3 (0.7)	3.9 (1.0)	4.1 (0.8)

Girls Grade 2 > boys Grade 2 and boys Grade 4, overall,  $p < .05$ ,  $ES = .8$  and  $.9$ , respectively

Girls > boys for gymnastics,  $p < .05$ ,  $ES = .8$

Girls > boys for dance,  $p < .001$ ,  $ES = .9$

Girls > boys, overall,  $p < .01$ ,  $ES = .3$

Games and gymnastics > dance,  $p < .001$ ,  $ES = .9$  and  $.7$ , respectively.

### Attributions

*Attribution statements.* The reasons the children gave for their ratings of their performances were similar for the three activities. For all content areas, they made ability statements such as “I’m fast,” “I’m flexible,” and “I’m good at everything” (Ga = 40% of responses, Gym = 45%, D = 23%) and effort statements such as “I try my best” and “I practice” (Ga = 31%, Gym = 26%, D = 23%). In some cases, attribution statements also reflected the children’s recognition of their ability limitations, (for example, “Compared to some children, I’m not as good” and “Sometimes I make mistakes”). Cooperation statements such as “because I play fair” and “teamwork” were made by 16% of the children for games performances. Attribution statements for dance were particularly varied. Fewer children made ability statements for dance than for the other activities, and six children (9%) gave negative reasons such as “It’s hard to do some moves”, even though only two of these rated themselves less than “OK” (<3). Nine boys (26%) indicated “I do not like to dance,” and 10 (29%) gave “no reason” for their perceived dance performance. Eight girls (24%) stated that “I don’t like this kind of dance”.

*Causal dimensions.* In the initial repeated measures ANOVAs, Mauchly’s test indicated that the assumption of sphericity had not been violated for personal control or stability ( $p > .05$ ). However, the assumption had been violated for locus of causality [ $X^2(2) = 16.50, p < .05$ ] and for external control [ $X^2(2) = 11.44, p < .05$ ], so degrees of freedom were corrected in these two analyses using Huynh-Feldt

estimates of sphericity ( $\epsilon = .94$  and  $.88$ , respectively). Overall, there were no significant interactions or main effects of activity, gender, or grade for any of the four causal dimensions.

When activities were considered separately, there was a significant effect of grade on locus of causality for games [ $F(2,56) = 8.07, p < .01$ ]. Grade 2 children were more likely to attribute their performance outcomes to internal factors than Grade 4 and Grade 6 children (ES = 0.7 and 1.2, respectively). A significant effect of gender was found for locus of causality for gymnastics [ $F(1,58) = 5.72, p < .05, ES = 0.6$ ], and for dance [ $F(1,57) = 5.8, p < .05, ES = 0.7$ ]. In both cases, girls were more likely to attribute their performance outcomes to internal factors than boys. For dance, there was also a significant effect of gender on attributions for personal control [ $F(1,57) = 7.2, p < .01, ES = 0.6$ ], with girls attributing their success to personally controllable factors more often than boys. Significant mean scores appear in Table 2.

**Table 2**

*Causal Dimension Scores: Means Corresponding to Significant Findings.*

Group	Causal Dimension	
	Locus of Causality	Personal Control
	M (SD)	M (SD)
Games		
Grade 2	4.0 (0.0)	(ns)
Grade 4	3.4 (0.8)	(ns)
Grade 6	3.0 (1.0)	(ns)
Gymnastics		
Girls	3.6 (0.6)	(ns)
Boys	3.0 (1.2)	(ns)
Dance		
Girls	3.6 (0.7)	3.7 (0.6)
Boys	3.0 (1.1)	3.2 (1.0)

Grade 2 > Grade 4 and Grade 6 to internal factors,  $p < .01$ , ES = .7 and 1.2, respectively

Girls > boys to internal factors,  $p < .05$ , for gymnastics, ES = .6, and for dance, ES = .7

Girls > boys to personal control for dance,  $p < .01$ , ES = .6

Note. NS indicates non-significant results.

*Relationships between perceived success and the causal dimensions, gender, and grade.* Perceived success was significantly correlated with personal control for all three activities [games:  $r(61) = .38, p < .01$ ; gymnastics:  $r(63) = .35, p < .01$ ; dance:  $r(63) = .28, p < .05$ ]. Perceived success was also significantly correlated with locus of causality for games [ $r(61) = .25, p < .05$ ] and with stability for dance [ $r(63) = -.28, p < .05$ ]. However, when gender, grade, and all causal dimensions were considered together in the regression analyses, the causal dimensions making significant contributions to explaining variance in perceived success scores differed. Gender was a significant contributor to the scores for all activities, but grade was not.

Personal control and gender contributed significantly to variance in the perceived success scores of games and gymnastics, explaining 29% and 22% of the variance, respectively. For dance, gender and stability together predicted 30% of the variance in the perceived success scores. The contribution of gender to the equations reflected the significantly higher perceived success scores for girls in gymnastics and dance and the higher (but non-significant,  $p < .06$ ) scores for boys in games. Perceived success scores in dance increased as stability scores decreased, indicating that children felt their performance outcomes (level of success) in dance were likely to change. Although exceeding the minimum required cases-to-IVs ratio of “at least 5 times more cases than IVs” (Tabachnick & Fidell, 1989, p. 129), the relatively small number of subjects in the regression analyses (10-to-1 ratio of subjects to IVs) suggests that caution should be exercised in interpreting these results. A summary of these analyses can be seen in Table 3.

**Table 3**

*Summary of Multiple Regression Analyses: Significant Effects of Gender, Personal Control, and Stability on Perceived Success for Games, Gymnastics, and Dance.*

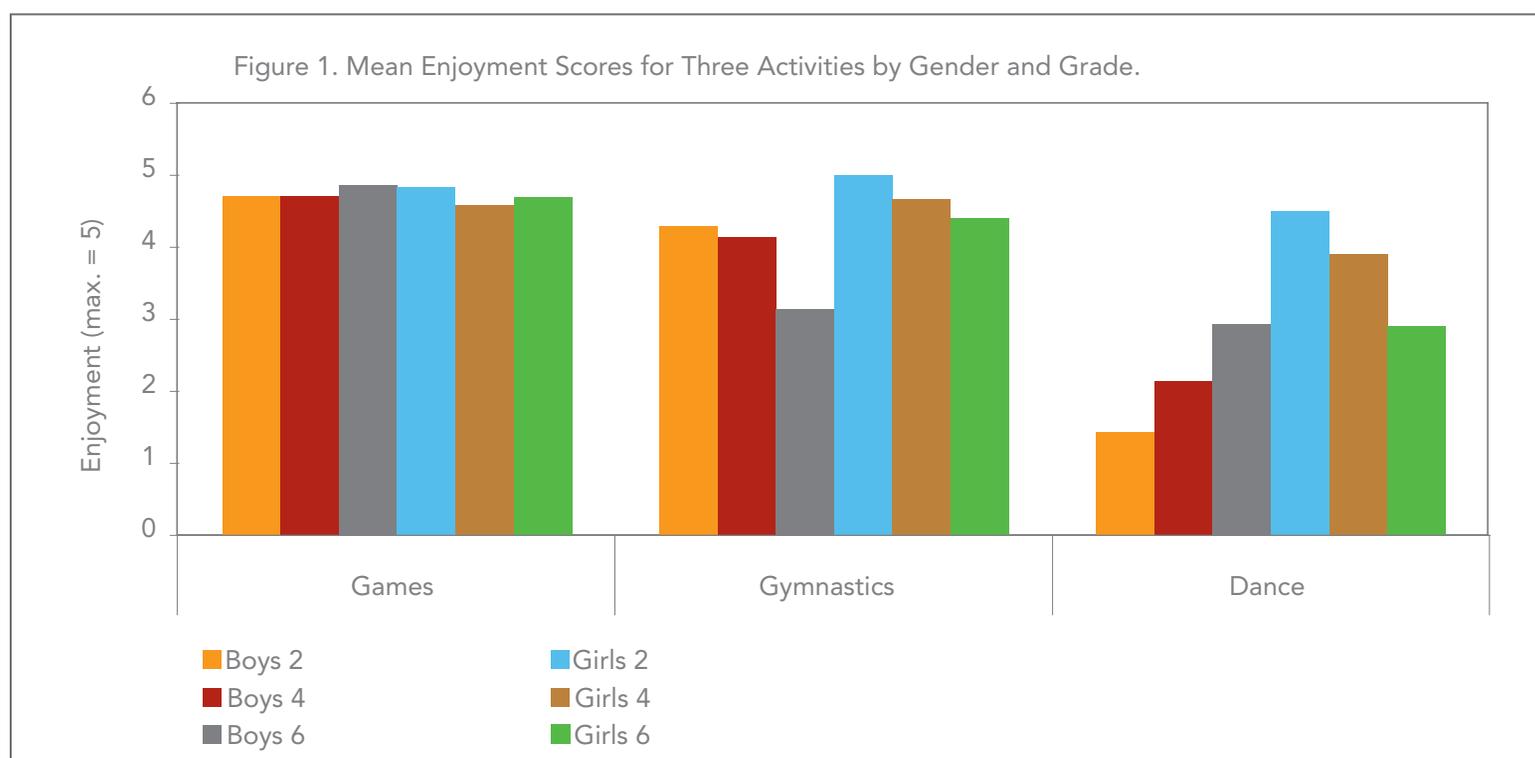
<b>GAMES</b>				
Multiple R	R Square	Adjusted R Square	Standard Error	
0.54	0.29	0.21	0.61	
Variable	B	SE B	B	P
Gender	-0.41	0.16	-0.30	0.015
Personal Control	0.31	0.11	0.36	0.006
<b>GYMNASTICS</b>				
Multiple R	R Square	Adjusted R Square	Standard Error	
0.47	0.22	0.13	0.82	
Variable	B	SE B	B	P
Gender	0.55	0.23	0.32	0.017
Personal Control	0.33	0.14	0.28	0.026
<b>DANCE</b>				
Multiple R	R Square	Adjusted R Square	Standard Error	
0.55	0.30	0.23	1.06	
Variable	B	SE B	B	P
Gender	1.00	0.29	0.42	0.001
Stability	-0.27	0.13	-0.27	0.046

*Functional attributions.* Generally, a high percentage of children made functional attributions for their performances in all three types of activity. Most children (Ga = 82%, Gym = 86%, D = 86%) stated that the reason for their performance success was under their personal control. They also thought that the reason for their performance was internal (locus of causality) (Ga = 79%, Gym = 80%, D = 76%). Slightly fewer felt that their performance outcomes were not under the external control of others (Ga = 61%, Gym = 53%, D = 73%). Very few children made functional attributions for the stability dimension. Only one-third attributed their successful performances to stable factors (Ga = 34%, Gym = 28%, D = 32%), and an unstable factor was cited by only one child of the 12 who felt unsuccessful (Ga = 0, Gym = 2, D = 10).

### *Enjoyment*

Enjoyment scores were found to be positively correlated with perceptions of success for all three activities [Ga:  $r(62) = .46, p < .001$ ; Gym:  $r(62) = .44, p < .001$ ; and D:  $r(63) = .81, p < .001$ . Mauchly's test indicated that the assumption of sphericity had been violated in the repeated measures ANOVA [ $X^2(2) = 7.78, p < .05$ ], so degrees of freedom were corrected using Huynh-Feldt estimates of sphericity ( $\epsilon = .99$ ). Results indicated three significant interactions and two main effects. Scheffé post-hoc tests were used to determine the location of specific differences.

The gender by grade by activity interaction [ $F(2.0, 99.1) = 9.13, p < .001$ ], indicated that boys and girls of different grades enjoyed the activities differently. Mean enjoyment scores for boys and girls in all grades across the three activities are illustrated in Figure 1. Individual activities were considered to help understand the findings.



Enjoyment of games did not vary as a function of grade or gender. However, girls rated their enjoyment of gymnastics significantly higher than did boys [ $F(1,50) = 9.77, p < .01, ES = .9$ ]. In addition, Grade 2 and Grade 4 students enjoyed gymnastics more than Grade 6 students [ $F(2,50) = 4.19, p < .05, ES = 1.4$  and  $1.0$ , respectively]. Girls also enjoyed dance more than boys [ $F(1,50) = 23.16, p < .001, ES = .9$ ]. Enjoyment scores [ $F(2,49) = 38.54, p < .001$ ], were higher for both games and gymnastics than for dance ( $ES = 1.5$  and  $1.1$ , respectively), and games scores were higher than gymnastics scores ( $ES = .4$ ). Overall, girls had higher enjoyment scores than boys [ $F(1,50) = 30.15, p < .001, ES = 1.1$ ].

When asked “What do you like **best** about. . . ?,” children frequently responded “fun” without further clarification (Ga = 53%, Gym = 17%, D = 23%). They also referred to activity specific factors such as physical skills (e.g., running, strategies, stunts, movements), team play, winning, and music (Ga = 40%, Gym = 41%, D = 27%). Twenty boys (33% of all respondents) stated that they liked “nothing” about dance. However, a similar number of children (35%) responded “nothing” when asked “What do you **dislike** about dance?” More students said “nothing” for things they disliked about games and gymnastics (48% and 53%, respectively). However, activity specific factors such as skills and content were disliked (Ga = 31%, Gym = 22%, D = 28%), and negative social aspects specific to the activity settings (e.g., dancing with a boy) were noted (Ga = 8%, Gym = 8%, D = 20%). Some children relied on “it’s boring” (Ga = 3%, Gym = 6%, D = 7%).

Consistently, games were preferred to gymnastics and dance by the majority of the children. However, the percentage who ranked games as most enjoyable gradually decreased as the other activities were presented, from 74% at the start of the study to 59% at its end. The percentage of children ranking gymnastics as most enjoyable varied from 13% to 22% over the study, peaking at 30% immediately

after the gymnastics classes. The percentage of children who enjoyed dance over games and gymnastics remained small, but it did increase from 4% at the start of the study to 10% following the dance classes. The data suggest that recent experience with an activity might have influenced children's perception of enjoyment of that activity. Although these findings were not examined further due to the small numbers in each cell, this observation suggests that additional investigation would be warranted in future work with larger samples.

## DISCUSSION

This study extended previous research by simultaneously investigating children's attributions for their perceived performance success and enjoyment of specific physical activities in their required elementary PE program. Caution should be exercised in interpreting these situation specific results. Weaknesses of the study include the use of a single setting and teacher and a short data collection protocol, especially for dance. Use of a single-item scale to assess enjoyment may have reduced reliability and weakened the results. The small sample size may also have affected the statistical analyses. In spite of these limitations, the results complement motivational research conducted in youth sport settings and that which considered PE as a global entity rather than varied activity types. Findings suggest that there are similarities as well as differences in children's perceived success, attributions, and enjoyment of games, gymnastics, and dance in PE. Gender and grade (age) appear to contribute to the observed variance.

### *Perceived Success*

An examination of children's perception of success in each of the activities produced some noteworthy findings. First, a high percentage of children felt successful in all three activities. Second, when the activities were compared, the children felt less successful in dance than in either games or gymnastics. Third, in general, girls were more likely to consider themselves successful than boys were. Finally, boys were less likely to consider themselves successful in gymnastics and dance than girls were.

To enhance children's development in varied ways, physical educators try to provide moderately challenging learning experiences in which the children can ultimately be successful. Perceiving their performance as successful can lead children to make functional attributions, which may then lead to increased motivation to continue participating (Weiner, 1986). The high percentage of children who felt successful suggests that games, gymnastics, and dance were all potentially motivating physical activities.

Varied types of activities are included in elementary PE programs because they emphasize different ways to be physically active. A broad repertoire of physical skills enhances children's likelihood of finding activities they can do well and enjoy (Welk, 1999). However, children who do not feel competent performing an activity may not persist in it (Welk, 1999). The children in this study may choose to participate in games or gymnastics over dance in the future because they felt more successful in those activities. They may not acquire skills and attitudes normally associated with dance unless efforts are made to enhance their feelings of competence in this movement form.

The specific types of content and the general teacher behaviours may help explain the activity differences in perceived success scores. According to Nicholls (1984), success that is evaluated through norm-referenced means (e.g., social comparison) is termed ego-oriented, while success evaluated through self-referenced means is referred to as task-oriented. The games and gymnastics classes appeared to have a task-involved goal orientation. The children worked independently and cooperatively on tasks with virtually no emphasis on competition. They made choices as to what their specific involvement would be, skill improvement was stressed, and performance feedback was mostly private. Most children appeared to be successful at what they selected to practice, and assessment of success would have been primarily self-referenced. Dance is basically non-competitive and children in dance classes might be assumed to be task-oriented. However, structured dance, as seen in this study, requires all students to work together at a similar level of performance difficulty, and everyone's performance can be seen by all. In addition, because he participated in the dances, this teacher's feedback, whether to individuals or groups, was delivered so that all could hear. It seems possible that at least some of the children would have compared themselves to their peers to assess success, which is more representative of an ego-oriented involvement, rather than considering their own skill mastery (Nicholls). In a task-oriented situation, children develop reward systems and goals based on internal criteria (Weiss & Chaumeton, 1992). One would therefore expect them to have high perceptions of competence and personal control. The higher perceived success scores for games and gymnastics over dance may therefore be a reflection of their higher perceived competence.

Overall, girls in this study had higher perceptions of success than boys. This finding appears to conflict with other research, which suggests that boys consistently report higher perceptions of their overall competence in physical activity (Lee, 1997). However, two of the three activities included in this study—gymnastics and dance—might be considered “female-oriented” and in such activities girls tend to rate their performances higher than boys do. When the activities were considered separately, this gender difference appeared for both gymnastics and dance. Hence, the overall result seems to have been influenced by a stereotypical perspective toward sex-related activities. The contribution of gender to the prediction of perceived success scores in the three activities gives further credence to this explanation.

### *Attributions*

A second concern of this study was the type of attributions children make for their perceived success in games, gymnastics, and dance. Although there were many similarities among attribution statements, certain differences appeared, especially in response to dance. The children appeared to be aware of differences between the activities, but they seemed to have varied levels of understanding of the factors important to success in those activities. The findings lend support to the belief that causal attributions are situation-specific and may be influenced by the nature of the task (Cholod & Downey, 1997; Weiss & Chaumeton, 1992).

Causal dimensions related to the open-ended attribution statements were quite similar for games, gymnastics, and dance, in spite of differences amongst the activities. In this study games activitie

required execution of a variety of individual and combined motor skills and strategies selected by each child within the confines of a set of rules and sometimes a group or team. Gymnastics focussed on body management development, with children working independently or in small groups. Dance lessons focussed on specific, required steps and sequences performed to music by everyone in the class at the same time. All activities were teacher-led, but games and gymnastics lessons allowed for many student choices, whereas the structured dances left no room for choice. These differences might have been expected to result in differing perspectives of the causal dimensions. However, the attribution statements of the majority of children for all three activities showed that they considered their success to be internal, personally controllable, and not under the control of others. Apparently, games, gymnastics, and dance all have the potential to stimulate these functional attributions.

Internal locus of causality factors were cited by the majority of children in all three activities. They believed that their performance outcomes depended on internal aspects of the experience (e.g., ability, effort). This is a positive finding since the predominantly teacher-directed instructional strategies might have lead to external attributions (e.g., task difficulty). The children apparently felt a sense of responsibility for their achievement in all activities. Motor performance research has shown that the adoption of internal and controllable attributions can increase task satisfaction, persistence, and performance (Grove & Pargman, 1986; Wraith & Biddle, 1989).

Over half of the children in each activity indicated that their performance outcomes were not under the control of other people (external control), another positive finding that complements their strong feelings of personal control. However, quite a number of children responded negatively, suggesting that control by other people affected their performance outcome. In particular, games and gymnastics elicited more negative responses than did the structured dance setting, which is surprising because dance seemed to have more direct teacher control and peer interactions that one would anticipate would affect individual performance. One possible interpretation of this seemingly counterintuitive finding is that games are typically performed under conditions of greater environmental uncertainty than dance due, among other things, to the unpredictable actions of teammates and, particularly, opponents. The results may also indicate a need to reexamine the validity of the M-CDS assessment of external control. Most convincingly, our findings suggest that our understanding of children's perceptions of external control in PE activities is not entirely clear.

A considerably smaller percentage of children made functional attributions for the stability dimension in each activity, which is cause for concern. Attributing successful performance to stable factors and unsuccessful performances to unstable factors is believed to have a positive influence on motivation (Weiner, 1986). Stability is related to the child's expectations for future success in the activity, so it is important for children to learn to assess the stability of their performances in a positive way (Cholod & Downey, 1997). However, the findings of this study may not be as negative as initially supposed.

Nicholls (1984) suggests that children's conceptions of ability, effort, and task difficulty as contributors to performance outcomes vary with maturity. Specifically, he states that young children do not have a clearly differentiated understanding of the distinction between ability (stable) and effort (unstable). Children between 7 and 9 years of age believe that their success or failure depends on effort. Those between 10 and 11 partially differentiate between the concepts, sometimes equating less effort with more ability; and after 11, children can generally differentiate the two concepts clearly. Older children understand that if an individual exerts less effort than another and performs as well as the second, or exerts the same effort but performs better, he or she has greater ability. However, Lee (1997) notes that even older children who understand the concept of ability frequently believe that ability in motor skills can be modified through effort. If children believe that success can be achieved through hard work, they may believe they have greater control over their achievement, which may actually be a motivating influence on their behaviour (Treasure & Roberts, 2001). The children who did not make functional attributions for the stability dimension, as defined in this study, may be illustrating this belief, which is a positive finding.

In sum, if adopting functional attributions for an activity increases motivation to participate, games, gymnastics, and dance all appear to be appropriate content choices for elementary PE. However, the children's enjoyment of the activities also needs to be considered in planning motivating PE programs.

### *Enjoyment*

For all three activities, enjoyment scores were positively correlated to perceived success scores, supporting previous findings. Enjoyment of an activity has been linked to perceived competence (Wallhead & Buckworth, 2004; Welk, 1999), and activities that are perceived as being fun and worthwhile tend to be motivating (Fox, 1991; Martens, 1996). Interestingly, the children felt similarly successful in games and gymnastics but clearly indicated their greater enjoyment of games over gymnastics as well as dance. Goudas et al. (1994) reported a similar finding. Although students in their study felt as competent in gymnastics as in football (boys) or netball (girls), they reported lower levels of perceived autonomy and intrinsic interest in gymnastics. Intrinsic motivation does not develop when students are under pressure to engage in an activity, no matter how competent they feel (Deci & Ryan, 1985). The environment surrounding the games portion of the curriculum may have provided more opportunities for children to develop a sense of autonomy, and thereby encouraged both perceptions of success and enjoyment.

Situational cues of the achievement environment can favor either a performance-oriented or mastery-oriented motivational climate (Treasure & Roberts, 2001). Individuals who perceive the climate as mastery-oriented are concerned with personal improvement (Theeboom, DeKnop, & Weiss, 1995), whereas performance-oriented individuals are concerned about being judged better than their peers. Perceptions of a mastery-oriented climate have been associated with enjoyment and intrinsic motivation (Seifriz, Duda, & Chi, 1992). Aspects of the learning environment that contribute to the motivational climate include the task (design of the learning activities), authority (location of decision-making),

recognition (the use of incentives), grouping (individual vs. co-operative work), evaluation (the use of feedback) and time (the pace of instruction) (Epstein, 1989). The environments of the three activities in this study varied in several of these factors; especially notable were differences in the authority, grouping, evaluation, and time conditions. These differences may have contributed to the varied enjoyment scores reported.

Enhancing children's perceptions of success in different physical activities may also enhance their feelings of enjoyment. It takes time and practice to develop new skills (Chase, 2001) before an activity becomes enjoyable. Although McKenzie et al. (1994) found that liking for different activities did not change over a year-long program, it seems possible that, over the course of an elementary school program, both competency and enjoyment of an activity might increase, given sufficient exposure to quality instruction. In this study, enjoyment and perceptions of success formed a continuum that paralleled the amount of curriculum time accorded to each type of activity. If elementary PE is to develop children's competencies and enjoyment in varied movement forms, as Rink (2006) advocates, the curriculum must provide opportunities for children to pursue activities long enough to accomplish those goals.

#### *Effects of Grade and Gender*

Age did not play a major role in the findings of this study. When all dimensions were considered together, grade (age) did not contribute significantly to the variance in perceived success scores for any of the activities. Significant effects of grade on the causal dimensions appear to be a result of younger children's inability to completely conceptualize ability and separate it from effort (Nicholls, 1984). As children mature, they begin to understand that the assessment of ability is based on social comparison—that is, how well they perform in comparison to others in the class—and they begin to separate the effects of effort from those of ability. These developments result in a changing perspective of the role of internal and external factors on performance success. In this study, the youngest children (Grade 2) were more apt to attribute their success in games to internal factors than children from either of the other grades, perhaps illustrating a less complete understanding of ability and effort.

Enjoyment scores were affected by age only for gymnastics, with the Grade 6 children enjoying this content less than the other children. The Grade 6 class was taught with less flexibility and more emphasis was placed on correctly performing specific stunts, which may have affected the children's overall enjoyment of the classes. In addition, the rapidly developing bodies of many children of this age may have affected their feelings of comfort with activities that require increasing strength and control, although this is strictly speculation.

Gender affected several findings in this study. When all dimensions were considered together, gender with personal control predicted perceived success in games and gymnastics, while gender with stability contributed to perceived success in dance. In other analyses, gender affected children's perceptions of success, attributions, and enjoyment for gymnastics and dance but not for games. Girls felt more

successful, were more likely to attribute their performance outcomes to internal causes and personal control, and enjoyed gymnastics and dance more than boys did. The results suggest stereotypical responses to activities traditionally considered to be female-oriented (Lee, 1997). Lee argued that parental, cultural, and media influences affect children's perceptions of physical activity even before they enter school. She states that interventions to reduce sex-typing of activities must be initiated before teaching practices can be effective.

Teachers have the potential to manipulate both perceptions of competence and attitudes toward PE by their choice of content and pedagogy (Wallhead & Buckworth, 2004). Generic teaching skills that transcend content areas must be complemented by content specific pedagogy, that is, techniques and strategies that are unique and essential to effective teaching in games, gymnastics, and dance (Rink, 2006). Given the teacher's own perception of his teaching skills in dance and, to a lesser extent, in gymnastics, overall and gender-related differences revealed by this study may have been at least partially due to the teacher's differing competencies.

The findings of this study could be strengthened through further research using more than one setting and a larger sample size. Other activities could be investigated, and a longer data collection protocol is recommended.

## CONCLUSION

This study has positive implications for elementary PE. Based on what real children in a real setting have indicated, games, gymnastics, and dance can all provide positive, successful, and enjoyable learning experiences. The majority of children perceived their performances to be successful in all three activities, and they made functional attributions for their performances in each case. Functional attributions lead to increased persistence, increased performance levels, enhanced self-esteem, and the motivation to continue in the activity. Games were enjoyed more than gymnastics and dance, and enjoyment of each activity was positively correlated with perception of success. Gender differences were uncovered that support other research indicating that girls and boys feel most competent in traditionally gender-appropriate activities and enjoy and value those activities most.

Children's perceptions of success, attributions, and enjoyment of specific physical activities depend at least partially on the learning environment. Both content and pedagogy can affect perceptions of competence and attitude toward PE (Wallhead & Buckworth, 2004). Children are motivated to pursue an activity if they have successful mastery experiences that are evaluated positively. Such experiences enhance perceived competence and heighten positive emotions associated with the activity (Harter, 1978). To motivate their students to participate actively, teachers need to ensure that all activities included in their programs are presented in a mastery-oriented climate with content specific expertise and sufficient time for competence and positive attitudes to develop.

### *Recommendations for Teachers*

The following suggestions may help PE teachers enhance children's perceptions of success, positive attributions, and enjoyment in physical activity. Recognize the value of different types of activities to (a) the overall development of motor skills, (b) an understanding of movement concepts, principles, and strategies, and (c) an appreciation of different activities for health, social, and enjoyment reasons. Set clear, attainable goals for the program time available. Allot sufficient time to each activity for competency and enjoyment to develop. Choose activities that both extend previously acquired competencies and provide new movement experiences. Consult current textbooks, the Internet, and other teachers for traditional and novel content ideas. Consider the variety of activities within a given type of content (e.g., creative, folk, hip hop, break dance), and select those that students might appreciate most. Include both "male" and "female" activities, and have positive expectations of all children at all times. Find alternatives to traditional PE content to create new interest and skills. Demonstrate enthusiasm for each activity. Develop effective, content-specific pedagogy for all types of activities. If teaching skills in a specific area are weak, try to trade activities with other teachers or include a "specialist" to provide quality learning experiences in the activity. Employ presentation styles that encourage student choices and decision-making. Vary types and methods of grouping. Provide general and individualized feedback that is positive, corrective, and credible. Carefully consider each situation when choosing to give public or private feedback. Ensure that the implicit curriculum is congruent with the explicit program and that neither reinforces the negative perceptions of physical activity that children may acquire outside of school (e.g., girls are not as good as boys at sports, dance is for girls). Emphasize personal goal setting and self-development. Downplay winning and losing and student comparisons. Use achievement-based evaluation emphasizing individual development in a variety of motor, cognitive, and social behaviours. Efforts such as these may enhance feelings of success and enjoyment from a young age and encourage children to participate in physical activity in the future.

### ..... Authors' notes .....

1. Due to illness, only two hours of dance per grade were presented during the nine weeks.
2. Activities for each content type: games / gymnastics / dance  
*Grade 2: Parachute games / individual work (choices: rolls, balances) on mats and climbing frame / La Raspa, Virginia Reel, follow-the-teacher/mime*  
*Grade 4: Low-organization games involving running, bowling for targets, soccer, baseball basketball / individual work (choices: pyramids, balances, rolls, climbing, jumps) on varied equipment / square dance basics, Red River Gal, Hot Time in the Old Town Tonight, La Raspa, Virginia Reel*  
*Grade 6: Same games as Grade 4 with modifications for development (rule complexity, skill expectations, strategy use) / pyramids, required tumbling stunts (e.g., specific types of rolls, cartwheels, headstands) / Red River Gal, Hot Time in the Old Town Tonight, La Raspa, Virginia Reel (emphasis: better precision and more expression than for Grade 4)*

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## About the authors

Lois J. Baron has taught at Concordia University for 31 years. Her initial area of interest, teaching and research was in the field of children and technology. More recently she has been involved in work related to active living, physical activity, health and well-being and children. She has recently published a book entitled *Contemporary Issues in Youth Sport* (Nova Science Publishers), and functions as a Sport Psychology Educator. Dr. Baron approaches her work through both developmental and ecological theories.

Peggy J. Downey's expertise has focussed on the theoretical and practical aspects of physical education pedagogy for both graduate and undergraduate students. Dr. Downey's research endeavours have included studies on competency-based education, teacher value orientations, observational learning, student attitudes, attributions for success, and motivation toward physical education as well as gender and wellness in varied physical education settings.

## References

- Carlson, T. B. (1995). We hate gym: Student alienation from physical education. *Journal of Teaching in Physical Education*, 14, 467-477.
- Chase, M. A. (2001). Children's self-efficacy, motivational intentions, and attributions in physical education and sport. *Research Quarterly for Exercise and Sport*, 72, 47-54.
- Cholod, K. L., & Downey, P. J. (1997). Children's causal attributions for performance in creative dance and folk dance. *Avante*, 3(3), 14-31.
- Daley, A. J. (2002). School based physical activity in the United Kingdom: Can it create physically active adults? *Quest*, 54, 21-33.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. London: Plenum.
- Duda, J. L. (1996). Maximizing motivation in sport and physical education among children and adolescents: The case for greater task involvement. *Quest*, 48, 290-302.
- Epstein, J. (1989). Family structures and student motivation: A developmental perspective. In C. Ames & R. Ames (Eds.), *Research on motivation in education*, Vol. 3 (pp. 259-295). New York: Academic Press.
- Ferguson, K. J., Yesalis, C. E., Pomrehn, P. R., & Kirkpatrick, M. B. (1989). Attitudes, knowledge, and beliefs as predictors of exercise intent and behavior in schoolchildren. *Journal of School Health*, 59(3), 112-115.
- Fox, K. (1991). Motivating children for physical activity: Towards a healthier future. *Journal of Physical Education, Recreation, and Dance*, 62(7), 34-38.
- Goudas, M., Biddle, S., & Fox, K. (1994). Perceived locus of causality, goal orientations, and perceived competence in school physical education classes. *British Journal of Educational Psychology*, 64, 453-463.
- Grove, J. R., & Pargman, D. (1986). Attributions and performance during competition. *Journal of Sport Psychology*, 8(2), 129-134.
- Harter, S. (1978). Effectance motivation reconsidered: Towards a developmental model. *Human Development*, 1, 34-64.
- Harter, S. (1982). The perceived competence scale for children. *Child Development*, 53, 87-97.
- Kurtz-Costes, B. E., & Schneider, W. (1994). Self-concept, attributional beliefs, and school achievement: A longitudinal analysis. *Contemporary Educational Psychology*, 19(2), 199-216.
- Lee, A. M. (1997). Contributions of research on student thinking in physical education. *Journal of Teaching in Physical Education*, 16, 262-277.

- Malina, R. M. (2001). Adherence to physical activity from childhood to adulthood: A perspective from tracking studies. *Quest*, 53, 346–355.
- Mandigo, J. L., & Couture, R. T. (1996). An overview of the components of fun in physical education, organized sport and physical activity programs. *Avante*, 2, 56–72.
- Martens, R. (1996). Turning kids on to physical activity for a lifetime. *Quest*, 48, 303–310.
- McKenzie, T. L., Alcaraz, J. E., & Sallis, J. F. (1994). Assessing children's liking for activity units in an elementary school physical education curriculum. *Journal of Teaching in Physical Education*, 13, 206–215.
- Nicholls, J. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, 91, 328–346.
- Pate, R. R., Baranowski, T., Dowda, M., & Trost, S. G. (1996). Tracking of physical activity in young children. *Medicine & Science in Sports & Exercise*, 28, 92–96.
- Pate, R. R., Trost, S. G., Felton, G. W., Ward, D. S., Dowda, M., & Saunders, R. (1997). Correlates of physical activity behavior in rural youth. *Research Quarterly for Exercise and Sport*, 68(3), 241–248.
- Pissanos, B. W., & Allison, P. C. (1993). Students' constructs of elementary school physical education. *Research Quarterly for Exercise and Sport*, 64, 425–435.
- Rink, J. E. (2006). *Teaching physical education for learning* (5<sup>th</sup> ed.). New York: McGraw-Hill.
- Russell, D. W. (1982). The Causal Dimension Scale: A measure of how individuals perceive causes. *Journal of Personality and Social Psychology*, 52(6), 1137–1145.
- Russell, D. W., McAuley, E., & Tarico, V. (1987). Measuring causal attributions for success and failure: A comparison of methodologies for assessing causal dimensions. *Journal of Personality and Social Psychology*, 52, 1248–1257.
- Sallis, J. F., & Patrick, K. (1994). Physical activity guidelines for adolescents: A consensus statement. *Pediatric Science*, 6, 302–314.
- Sallis, J. F., Prochaska, J. J., & Taylor, W. C. (2000). A review of correlates of physical activity of children and adolescents. *Medicine and Science in Sports and Exercise*, 32(5), 963–975.
- Sanders, S., & Graham, G. (1995). Kindergarten children's initial experiences in physical education: The relentless persistence for play clashes with the zone of acceptable responses. *Journal of Teaching in Physical Education*, 14, 372–383.
- Seifriz, J. J., Duda, J. L., & Chi, L. (1992). The relationship of perceived motivational climate to intrinsic motivation and beliefs about success in basketball. *Journal of Sport and Exercise Psychology*, 14, 375–391.
- Stucky-Ropp, R., & DiLorenzo, T. (1993). Determinants of exercise in children. *Preventative Medicine*, 22, 880–889.
- Tabachnick, B. G., & Fidell, L. S. (1989). *Using multivariate statistics* (2<sup>nd</sup> ed.). New York: Harper & Row.
- Theeboom, M., DeKnop, P., & Weiss, M. R. (1995). Motivational climate, psychological responses, and motor skill development in children's sport: A field-based intervention study. *Journal of Sport and Exercise Psychology*, 17, 294–311.
- Trost, S. G., Pate, R. R., Saunders, R., Ward, D. S., Dowda, M., & Felton, G. W. (1997). A prospective study of the determinants of physical activity in rural fifth-grade children. *Preventative Medicine*, 26, 257–263.
- Treasure, D. C., & Roberts, G. C. (2001). Students' perceptions of the motivational climate, achievement beliefs, and satisfaction in physical education. *Research Quarterly for Exercise and Sport*, 72, 165–175.
- Wallhead, T. L., & Buckworth, J. (2004). The role of physical education in the promotion of youth physical activity. *Quest*, 56, 285–301.
- Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.
- Weiss, M. R., & Chaumeton, N. (1992). Motivational orientations in sport. In T. S. Horn (Ed.), *Advances in sport psychology* (pp. 61–100). Champaign, IL: Human Kinetics.
- Weiss, M. R., McAuley, E., Ebbeck, V., & Wiese, D. M. (1990). Self-esteem and causal attributions for children's physical and social competence in sport. *Journal of Sport and Exercise Psychology*, 12, 21–36.
- Welk, G. J. (1999). The Youth Physical Activity Promotion Model: A conceptual bridge between theory and practice. *Quest*, 51, 5–23.
- Whitehead, J. R., & Corbin, C. B. (1997). Self-esteem in children and youth: The role of sport and physical education. In K. R. Fox (Ed.), *The physical self: From motivation to well-being* (pp. 175–203). Champaign, IL: Human Kinetics.

Wraith, S., & Biddle, S. (1989). Goal setting in children's sport: An exploratory analysis of goal participation, ability and effort instructions, and post event cognitions. *International Journal of Sport Psychology*, 20(2), 79-92.

Xiang, P., Lee, A., & Williamson, L. (2001). Conceptions of ability in physical education: Children and adolescents. *Journal of Teaching in Physical Education*, 20, 282-294.

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