The aims of physical education in Ghana include developing personal qualities such as competence in students and generating interest in physical education and sports (Ghana Education Service, [GES], 1987). The GES has also reiterated the need to have competent teachers in the implementation of the school physical education syllabus; therefore few primary schools in Ghana have physical education specialists (detached teachers). There is the need to assess the impact these specialist teachers have on students in relation to classroom teachers and the extent to which the aims of physical education are being achieved. The primary purpose of this study was to determine if differences existed between students taught by physical education specialists and those taught by classroom teachers in their perceptions of competence, affect, and persistence in sports. It was hypothesized that students who were taught by physical education specialists would be significantly different from those taught by non-specialist teachers in their perceptions of competence, affect, and persistence.
A sample of 483 class six boys and girls from four regions in Ghana completed items measuring perceptions of competence, affect, and persistence in sports. A multivariate analysis of variance (MANOVA) revealed significant main effects for category (p < .001) and gender (p < .05) in each of the four regions examined. Students taught by specialist teachers differed significantly from those taught by classroom teachers in their perceptions of affect and persistence in sports. Findings also showed that students in specialist teacher and non-specialist teacher categories did not differ significantly in their perceptions of competence. Furthermore, results indicated that the significant gender effect was minimal and not meaningful.

Overall, the present study provided further evidence of the influence of physical education specialists on amount of enjoyment students derive from sports. Findings also suggest the need for Ghanaian physical education teachers to improve upon their modes of teaching in order to enhance their students’ competence perceptions. Attempts should also be made to validate Harter’s (1985) Self-Perception Profile for Children for use within the Ghanaian culture and to find those specific areas on which students base their competence judgments.
Perceptions of Competence, Affect, and Persistence of Ghanaian Elementary School Students: Specialist versus Non-Specialist Physical Education Teachers

by

Beatrice A. D. Feddy

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Dean of Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

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Beatrice A. D. Feddy, Author
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# Table of Contents

<table>
<thead>
<tr>
<th>Page</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction ................................................................. 1</td>
</tr>
<tr>
<td></td>
<td>Statement of the Problem .................................................. 11</td>
</tr>
<tr>
<td></td>
<td>Hypotheses ........................................................................... 12</td>
</tr>
<tr>
<td></td>
<td>Assumptions ......................................................................... 12</td>
</tr>
<tr>
<td></td>
<td>Delimitations ....................................................................... 13</td>
</tr>
<tr>
<td></td>
<td>Definitions .......................................................................... 13</td>
</tr>
<tr>
<td>2</td>
<td>Review of Related Literature ............................................... 15</td>
</tr>
<tr>
<td></td>
<td>Benefits of Physical Activity and Sport .................................. 15</td>
</tr>
<tr>
<td></td>
<td>Competence Motivation Theory ............................................... 19</td>
</tr>
<tr>
<td></td>
<td>Global Self-Worth Model ..................................................... 25</td>
</tr>
<tr>
<td></td>
<td>Physical Education Teacher Effectiveness ................................ 27</td>
</tr>
<tr>
<td></td>
<td>The Development of Education and Physical Education in Ghana ... 32</td>
</tr>
<tr>
<td></td>
<td>Summary ............................................................................... 37</td>
</tr>
<tr>
<td>3</td>
<td>Methods .............................................................................. 39</td>
</tr>
<tr>
<td></td>
<td>Participants .......................................................................... 39</td>
</tr>
<tr>
<td></td>
<td>Instruments ......................................................................... 41</td>
</tr>
<tr>
<td></td>
<td>Self-Perception Profile for Children .................................... 41</td>
</tr>
<tr>
<td></td>
<td>Interest/Enjoyment in Sport Scale ......................................... 43</td>
</tr>
<tr>
<td></td>
<td>Perceived Persistence in Sport Scale ..................................... 44</td>
</tr>
<tr>
<td></td>
<td>Complete Set of Items ......................................................... 44</td>
</tr>
</tbody>
</table>
Table of Contents (Continued)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures</td>
<td>45</td>
</tr>
<tr>
<td>Approval</td>
<td>45</td>
</tr>
<tr>
<td>Pilot Studies</td>
<td>45</td>
</tr>
<tr>
<td>Selection of Participants</td>
<td>46</td>
</tr>
<tr>
<td>Test Administration</td>
<td>47</td>
</tr>
<tr>
<td>Data Analyses</td>
<td>48</td>
</tr>
<tr>
<td>Results</td>
<td>50</td>
</tr>
<tr>
<td>Subscale Reliability</td>
<td>50</td>
</tr>
<tr>
<td>Descriptive Statistics</td>
<td>51</td>
</tr>
<tr>
<td>Demographics</td>
<td>51</td>
</tr>
<tr>
<td>Means and Standard Deviations of Dependent Variables</td>
<td>52</td>
</tr>
<tr>
<td>Preliminary Tests</td>
<td>57</td>
</tr>
<tr>
<td>Tests for MANOVA Assumptions</td>
<td>57</td>
</tr>
<tr>
<td>Gender Differences</td>
<td>60</td>
</tr>
<tr>
<td>Differences by Region</td>
<td>60</td>
</tr>
<tr>
<td>Differences by Category</td>
<td>61</td>
</tr>
<tr>
<td>Discussion and Conclusions</td>
<td>65</td>
</tr>
<tr>
<td>Summary</td>
<td>65</td>
</tr>
<tr>
<td>Theoretical Implications</td>
<td>66</td>
</tr>
<tr>
<td>Instruments</td>
<td>66</td>
</tr>
<tr>
<td>Specialist Versus Non-Specialist Physical Education Teachers</td>
<td>69</td>
</tr>
</tbody>
</table>
Table of Contents (Continued)

Perceptions of Competence of Ghanaian Students............ 74
Gender Differences.................................................. 76
Practical Implications............................................... 78
Future Directions.................................................... 81
Conclusions............................................................ 84
References.............................................................. 86
APPENDICES............................................................ 99
### List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Number of Participants by Region, Category, and Gender</td>
<td>40</td>
</tr>
<tr>
<td>4.1</td>
<td>Reliability Coefficients of Self-Perception Subscales</td>
<td>51</td>
</tr>
<tr>
<td>4.2</td>
<td>Means and Standard Deviations of all Variables</td>
<td>52</td>
</tr>
<tr>
<td>4.3</td>
<td>Means and Standard Deviations of Variables by Region</td>
<td>53</td>
</tr>
<tr>
<td>4.4</td>
<td>Means and Standard Deviations of Variables by Category</td>
<td>54</td>
</tr>
<tr>
<td>4.5</td>
<td>Means of Variables by Region and Category</td>
<td>55</td>
</tr>
<tr>
<td>4.6</td>
<td>Means and Standard Deviations of Variables by Gender</td>
<td>56</td>
</tr>
<tr>
<td>4.7</td>
<td>Correlations among Perception Subscales</td>
<td>58</td>
</tr>
<tr>
<td>4.8</td>
<td>Correlations among Perception Subscales by Region</td>
<td>59</td>
</tr>
<tr>
<td>4.9</td>
<td>Standardized Discriminant Function Coefficients for Variables by Region</td>
<td>63</td>
</tr>
<tr>
<td>4.10</td>
<td>Means of Variables Differentiating between Specialist and Non-specialist</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>Teacher Categories</td>
<td></td>
</tr>
</tbody>
</table>
List of Appendices

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Letter of Consent to Regional Directors of Physical Education</td>
<td>100</td>
</tr>
<tr>
<td>B</td>
<td>Informed Consent Form for Headteachers</td>
<td>102</td>
</tr>
<tr>
<td>C</td>
<td>Informed Consent Form for Parents/Guardians</td>
<td>104</td>
</tr>
<tr>
<td>D</td>
<td>Informed Assent Form for Students</td>
<td>107</td>
</tr>
<tr>
<td>E</td>
<td>Instructions to Self-Perception Profile for Children</td>
<td>110</td>
</tr>
<tr>
<td>F</td>
<td>Set of Items Completed by Students</td>
<td>112</td>
</tr>
<tr>
<td>G</td>
<td>Subscale Items for the Self-Perception Profile for Children</td>
<td>122</td>
</tr>
<tr>
<td>H</td>
<td>Items Measuring Interest/Enjoyment in Sports</td>
<td>126</td>
</tr>
<tr>
<td>I</td>
<td>Items for Perceived Persistence in Sports</td>
<td>128</td>
</tr>
</tbody>
</table>
This thesis is dedicated to Fafa and Sefakor, my children, for their love and support, and to the loving memory of my father.

Chapter 1
Introduction

The impact of physical activity on the physical, mental, and social well-being of individuals has been well documented. Evidence (Haywood, 1991) suggested that exercise, whether recreational, competitive, or school physical education, could enhance the health status of individuals. Physical activity was shown to increase longevity (Paffenbarger, Hyde, Wing, & Hsieh, 1986), reduce body fat (Powell, Thompson, Caspersen, & Kendrik, 1987; Ready et al., 1996), and reduce the risk of heart disease (Harrel et al., 1996). Youth participants from similar studies gained positive outcomes in weight control and reductions in blood pressure from exercise participation (Armstrong & Simons-Morton, 1994; Alpert & Wilmore 1994; Bar-Or & Baranowski 1994).

Benefits in the socio-psychological domain such as improved self-concept (Politino & Smith, 1989; Sonstroem, Harlow, & Josephs 1994) and positive affect (Patterson & Faucette, 1990) have been found for exercise participation. Socially, physical activity gave children appropriate methods to learn and develop leadership behaviors, social status, and character building qualities such as positive interaction with others (Chase & Dummer, 1992; Croce & Lavay, 1985; Fejgin, 1994; Thirer & Wright, 1985). Specific psychological correlates of physical activity for youth included intrinsic
motivation, reduced stress and anxiety, feelings of high physical self-worth, improvements in self-concept, and self-esteem (Biddle & Armstrong 1992; Dyer & Crouch, 1987; ISSP, 1992). Enhancement of social status (Martindale, Devline, & Vyse, 1990), has been reported as a benefit derived from participation in physical activity.

Despite these benefits, physical education faces many trials and struggles for acceptance within the school system. The importance of physical education and sport in the primary school years has suffered, and its survival in the schools is in jeopardy (Lumpkin, 1990; Ghana Education Service, 1987). Academically minded administrators and classroom teachers with lukewarm attitudes towards physical education exhibit little interest in facilitating a sound program of physical education. Physical education must be seen as an integral part of the educational system because it has an ultimate goal of developing self-motivated and self-directed individuals as purported for other subjects (Keogh, 1962; Patterson & Faucette, 1990).

If physical education is to be accepted as a worthwhile subject matter, it must demonstrate concrete outcomes that result from participation in physical education (Tannehill, Romar, O'Sullivan, England, & Rosenberg, 1994). In addition, the innate interest which children are assumed to have for physical activity (DeMarco & Sidney, 1989; Sallis & McKenzie, 1991) should be nurtured and maintained into adulthood. There is the need for constant evaluation to demonstrate what outcomes result from children’s participation in physical education and to determine their level of interest in physical activity.
Various studies (Luke & Sinclair, 1991; Mathes & Battista, 1985; Martindale, Devline, & Vyse, 1990; Mooode & Finkenberg, 1994; Tannehill & Zakrajsek, 1993; Theodorakis, Doganis, & Bogiatis, 1992) have looked at attitudes toward physical education as a way of justifying the importance of school physical education. Findings by Tannehill and Zakrajsek on children’s attitudes toward physical education showed that students believed physical education was important to their overall education. Fitness was rated as unimportant by these children, indicating that there were important reasons other than fitness for which children participated in physical education. Others (Biddle & Armstrong, 1992; Gould, Feltz, & Weiss, 1985; Klint & Weiss, 1987) have looked at participation motives in physical education or physical activity as a way of predicting behavior outcomes.

Support might be found for the importance of physical education and physical activity through these studies, but most of them (Mooode & Finkenberg, 1994; Tannehill & Zakrajsek, 1993) are descriptive studies with no theoretical bases. Descriptive studies help to provide “solid knowledge base from which to gain initial understanding” (Weiss & Chaumeton, 1992, p. 65), but theory-based studies will facilitate the explanation of athletic behaviors (Black & Weiss, 1992) and possibly enhance the status of physical education in schools (Van Wersch, Trew, & Turner, 1992). There is a need for theory-based studies to determine learning outcomes from physical education.

Competence motivation theory (Harter, 1978, 1981) is one theory widely used to explain participation behavior in the sports domain (Biddle & Armstrong, 1992). Competence motivation is a multidimensional construct that influences characteristic
achievement behaviors which, in turn, serve to maintain, increase, or decrease competence motivation and the development of an intrinsically or extrinsically-oriented person.

According to Harter, successful mastery attempts with optimal challenges and positive reactions from significant others will enhance intrinsic motivational orientations. Similarly, positive reactions from significant others increase perceptions of competence and positive affect which will also increase an individual’s motivation to continue with the particular activity. Conversely, lack of reinforcement and disapproval from significant others for mastery attempts will result in perceived lack of competence, which in turn results in anxiety and failure.

Perceived competence and affect are key constructs in competence motivation theory. High levels of enjoyment and perceived competence contribute strongly to effort and persistence (Klint & Weiss, 1987; Smith, Smoll, & Curtis, 1979; Williams & Gill, 1995). Smith et al. found that youth baseball players who indicated higher levels of enjoyment persisted in the activity (that is, they returned to play again the following season). High levels of perceived competence in specific achievement domains have been associated with enjoyment (Boyd & Yin, 1996).

Closely related to competence motivation is the model of global self-worth (Harter, 1987). Global self-worth is judgment of an individual’s satisfaction with him or herself as a person, that is, the extent to which one likes one’s self and is generally happy the way one is as a person. According to Harter, perceptions of competence and support from significant others are the main determinants of self-worth. Harter also purported (supported by Douthitt, 1994; Granleese & Joseph, 1994) that high or low perception of
one’s physical appearance was the highest contributor to self-worth. In terms of significant others’ support, Harter asserted that parents and peers contribute to self-worth perceptions more than teachers. Most studies (Granleese & Joseph, 1993; Van Dongen-Melman, Koot, & Verhulst, 1993) which looked at determinants of global self-worth failed to report on specific significant others’ contributions. Rhee (1993), however, looked at the effects of parents, teachers and peers on competence perceptions and found teacher support to be the strongest contributor to perceived physical appearance with girls being more influenced than boys by teacher support.

A major tenet of competence motivation theory is the effect of significant others. Parents, coaches, teachers, and peers are salient sources of information (Brustad, 1988, 1996; Harter, 1978, 1981) and future participatory behaviors. Positive reactions from significant others toward successful mastery attempts will foster intrinsic motivation and high perceptions of competence. Horn (1985), Black and Weiss (1992), and Brustad (1988) supported this contention when they looked at coaches as the significant other. Horn found that informational feedback from coaches contributed to changes in perceptions of competence of female softball players.

Research findings (Brustad, 1992; Granleese & Joseph, 1993; Granleese, Trew, & Turner, 1988; Roberts, Kleiber, & Duda, 1981; Trent, Cooney, Russel, & Warton, 1996; Van Dongen-Melman, Koot, & Verhulst, 1993) on gender differences in competence perceptions have been equivocal. Van Dongen-Melman, et al found boys scoring significantly higher than girls in perceptions of scholastic competence, athletic ability, physical appearance and general self-worth. Roberts et al on the other hand, found boys
and girls to be similar in perceptions of scholastic competence and athletic ability. Harter (1983) found differences in both directions: girls tended to score higher on behavioral conduct than boys but lower on athletic and scholastic competence. In terms of perceived competence and significant others, Brustad (1993) reported that boys received more encouragement from parents to be physically active than girls. Rhee (1993) also reported that girls' perceptions of their physical appearance were more highly influenced by perceptions of teacher support than were boys' perceptions.

Significant others extend beyond coaches, and the effects vary for different situations (Brown, Frankel, & Fennel, 1989). Harter (1978) and Brustad (1992) suggested that consideration be given as to how different socialization histories will affect the relative strength of one's intrinsic motivation as well as perceived competence. Teachers within the school system form part of the child's socialization history. Teachers are a source of information within the school system for making ability judgments (Cole, 1991; Rhee, 1993; Weiss & Knoppers, 1982); as such, they are likely to impact perceptions of competence which in turn would impact intrinsic motivation.

Rhee (1993) examined the effects of social support from parents, teachers, and peers on various dimensions of children's self-perceptions. Teacher support was very strong for perceptions of scholastic competence and physical appearance. Teachers in this study were seen as significantly contributing to competence perceptions of students. No studies exist (to the knowledge of the present researcher) that have looked specifically at perceptions of competence in relation to the influence of physical education teachers as
significant others. Rhee's study looked at teachers in general but not physical education teachers specifically.

It is important to examine student motivation and outcomes for participation in physical education; yet this context remains understudied (Goudas, Biddle, & Fox, 1994). Hargreaves (1986) observed that within school physical education pupils can become emotionally and socially adjusted and build personal qualities such as competence and confidence. Weiss and Chaumeton (1992) also reiterated the importance of identifying the factors which maximize participation and performance in the physical domain. In an attempt to satisfy this demand, researchers have focused mainly on physical activity situations outside the school system (Black & Weiss, 1992; Klint & Weiss, 1987).

School physical education is an arena where sport and physical activity are presented to all children and youth in Ghana. A rationale for the inclusion of physical education in the school curriculum, according to the Ghana Education Service (GES), is that "Physical Education has a broad ranging influence on, and contributes significantly to major goals of education - thinking ability, self realization, desirable human relationships, and learning to learn" (GES, 1987, p. 2). In addition, personal characteristics such as confidence, competence, and competitiveness are developed in students.

The GES (1987) purports that self realization is enhanced as students gain control of their bodies through their own physical efforts. Desirable human relationships are also established through the give and take in individual sports and through interdependence that are integral parts of team activities. The importance of enjoyment has also been acknowledged by the GES by including as an aim of physical education the
“development and maintenance of interest in physical activities, developing interest in undertaking new activities and developing new skills” (p. 3). Despite these proclamations, no attempts have been made to examine the extent to which the aims are being achieved.

Ideally, the instruction of physical education at the elementary level should be provided by a physical education specialist (Coulon & Reif, 1994). The GES (1992) confirmed this ideal by stating that “the first and most important factor essential in the implementation of the primary school physical education syllabus is a competent and imaginative teacher” (p. 5). Unfortunately, in Ghana, this is not always possible; and instruction of physical education in most schools is the sole responsibility of classroom teachers. Classroom teachers who believe that physical education, as compared to other subjects, is of little value to learners do not teach effectively (Faucette & Hillidge, 1989). As a result, physical education is frequently excluded from the regular weekly schedule or approached with a lukewarm attitude. Activities taught by these classroom teachers are mainly running (relay races), which, according to Faucette, McKenzie, & Patterson (1990), provide limited opportunities for skill practice.

Few districts in Ghana have specialist teachers (or detached physical education teachers as they are commonly called). The duties of these teachers are spread across several schools; each specialist physical education teacher has a number of schools assigned to him/her at the beginning of the academic year. It is the sole responsibility of these detached teachers to teach physical education in all classes in their respective assigned schools.
Gabbard, McBride, and Matejowsky (1989) argued that physical education specialists have done much to dispel the belief that physical education for children is merely an extension of recess. Dedicated, professionally trained physical educators are providing curricular programs that are developmentally sound and which show that children are deriving positive results from physical education. The fundamental question is whether we can make generalizations to other countries, specifically to Ghana. To answer this question, it is important for researchers to set themselves loose from collecting information from the same cultural milieu.

Duda and Allison (1990) described the absence of cross-cultural research in sport psychology as a “void in the field” (p. 114). The typical populations used in most of the literature reviewed are whites (Klint & Weiss, 1987; Rhee, 1993; Roberts, Kleiber, & Duda, 1981). Brustad’s (1988) study had ethnicity as a variable, but the African-American subjects formed only 2% of the total population studied. Similarly, Onifade (1985) did a study on the attitudes of Nigerians towards physical education; but the participants were Nigerian students living in the U.S. There is the need to conduct cross-cultural studies or cross-sectional studies that involves participants from different cultural settings for more effective generalizations.

Much research has focused on determining whether there are differences in the skill performances of children taught by specialist versus non-specialist physical education teachers (Faucette & Patterson, 1989; Patterson & Faucette, 1990; Walkwitz & Lee, 1992). While assessments in these areas are important, there are other dimensions of the child that deserve equal attention. Examination of psychosocial factors such as
competence perceptions, persistence, and enjoyment would help provide an
understanding of the effects of physical education teachers within the school system. For
those studies which assessed different dimensions of the child, there is the need to look
beyond the realm of competitive sports (Weiss & Chaumeton, 1992) and leisure
activities.

Given that and perceptions of competence are impacted by feedback from
significant others, then teachers as significant others within the school system are likely
to impact perceptions of competence, affect, and level of motivation of students. If
specialist and non-specialist physical education teachers differ in their attitudes towards
the physical education classes they teach (Faucette & Patterson, 1989; Patterson &
Faucette, 1990; Van Wersch, Trew, & Turner, 1992), then their impact on perceptions of
competence, affect and motivation are likely to differ too. The present study examined
perceptions of competence, affect, and persistence of students from participation in
physical education classes taught by physical education specialists or by classroom
teachers.

Since socialization practices and experiences differ for boys and girls (Brustad,
1992) and since findings from other researchers (Granleese, Trew, & Turner, 1988; Van
Dongen-Melman, Koot, & Verhulst, 1993) indicated that scores of boys’ and girls’
competence perceptions differ, it is imperative to assess patterns of self-perceptions
separately for boys and girls. Therefore, this study included assessment of gender
differences in perceptions of competence of the Ghanaian elementary school students.
Statement of the Problem

The purpose of this study was to explore perceived psychosocial outcomes derived from participation in physical education classes taught by classroom teachers and by specialist physical education teachers. Specifically, the study was designed to assess differences in perceptions of competence, affect and persistence in sports. The following questions were investigated:

(1) Generally, how do Ghanaian elementary school students perceive themselves in the domains of athletic ability, physical appearance, global self-worth, scholastic competence, social acceptance, affect, and persistence in sports?

(2) Are there any differences in perceptions of athletic ability, global self-worth, physical appearance, scholastic competence, and social acceptance of Ghanaian primary school students who are taught physical education by specialist teachers and those taught by classroom teachers?

(3) Are there any differences in levels of positive affect (interest and enjoyment) in sports between students who are taught physical education by specialist teachers and those taught by classroom teachers?

(4) Do students who are taught by physical education specialists differ from those taught by classroom teachers differ in their perceptions of perceived persistence in sports?

(5) Are there any gender differences in perceptions of competence, affect, and persistence in sports between the two categories of students?
Hypotheses

It was hypothesized that students taught by specialist teachers would differ significantly from those taught by classroom teachers in their perceptions of athletic ability, physical appearance, global self-worth, scholastic competence, and social acceptance. In addition, it was predicted that there would be significant differences between students who are taught by physical education specialists and those taught by non-specialists in perceptions of affect and persistence in sports. For both specialist and non-specialist teacher categories it was hypothesized that boys and girls would be significantly different in their perceptions of competence, affect, and persistence in sports.

Assumptions

It was assumed that participants had a good understanding of the set of items they completed for the study and that students were honest in their responses to items. It was also assumed that each primary school student belonged to either the category of students taught by specialist physical education (P. E.) teachers or those taught by classroom teachers. Apart from the difference of participating in physical education classes taught by specialist or non-specialist teachers, there was no basis for other differences between participants in the study.
Delimitations

The study was delimited to Ghanaian primary school students (boys and girls) from four regions in the southern sector of the country: Volta, Greater Accra, Central and Western regions. Therefore, generalization of the findings was limited. Participants did not have much experience in providing information for research purposes.

Definitions

Ampe: a Ghanaian game popular among girls.

Athletics: track and field (Ghanaian context).

Categories: categories in this paper will be used to mean students in specialist or non-specialist groups.

Class: grade levels in the primary schools: class one to class six.

Detached Teachers: specialist teachers in the elementary school system whose duties are spread across several school; there are detached teachers in almost all subject areas.

Districts: regions are sub-divided into administrative zones headed by District Education Officers for supervisory roles. There are 110 districts in Ghana.

Effort: how hard one tries in an activity (physical activity).

Elementary School: the Ghana Education Service classifies all schools from kindergarten to junior secondary as elementary schools; the equivalent of these in the American system is kindergarten to grade 9.
**Full-Stream Schools**: schools that have all classes necessary for the level in full; classes 1 to 6 for primary schools, JSS 1 to 3 for junior secondary schools, etc.

**Gold Coast**: Ghana used to be called the Gold Coast before independence in 1957.

**Headteachers**: heads of primary schools; depending on the size and location of the school, headteachers do not teach but only perform administrative duties.

**Headmaster/mistress**: administrative heads of junior secondary schools.

**Junior Secondary School**: the terminal point of the elementary school program; it is a three year program following primary school (JSS one to JSS three).

**Persistence**: how long one persists in an activity.

**Physical Activity**: all forms of physical movement including organized school activities and out of school or leisure time play.

**Physical Education**: the structured movement experiences of children within the school system.

**Primary School**: a six year school program after kindergarten (class one to class six) in the Ghanaian school system.

**Regions**: Ghana is divided into 10 political regions, each region headed by a Minister. (The education sector is headed by Regional Directors of Education.)

**Senior Secondary School**: the Ghanaian version of high school or secondary school.

**Two/three-stream Schools**: elementary schools where there is more than one class for each grade level; classes are usually given letter names e.g., 1A, 1B, 5C, etc.

**Upper Primary**: the Ghanaian equivalent of the U.S. grades 4-6.
The literature reviewed was categorized under the following subheadings: (a) Benefits of Physical Activity and Sport, (b) Competence Motivation Theory, (c) Global Self-Worth Model, (d) Physical Education Teacher Effectiveness, and (e) The Development of Education and Physical Education in Ghana.

Benefits of Physical Activity and Sport

Increasing evidence suggests that exercise, competitive sport, or recreational activities can significantly enhance health status in adults (Lange, Hintermeister, Schlegel, Dillman, & Steadman, 1996; Paffenbarger, Hyde, Wing, & Hsieh, 1986; Ready, et al., 1996). Similar results have been found for children (Harrel, et al., 1996; Ratakari, Porkka, Taimela, Telama, & Rasanen, 1994; Sasaki, Shindo, Tanaka, Ando, & Arakawa, 1987).

Paffenbarger et al. (1986) studied the exercise habits and general lifestyle of college students during college and post college days. Effects of physical exercise were independent factors in counteracting adverse health effects. Even when other procedures of health maintenance for disease prevention were developed to increase longevity, the relevance of exercise still remained. Adequate physical exercise was found to be necessary to preserve life and its desirable qualities in old age.
Lange et al. (1996) studied a healthy group of male subjects (mean age 28.5 years) to establish an understanding of the lower extremity joint range of motion and cardiovascular requirements of graded treadmill walking. Participants performed a graded treadmill workout and isometric maximum voluntary muscular contractions. Results indicated statistically significant increment in EMG activity as well as in the range of motion at the knee, hip, and ankle. Increased knee flexion was also observed at the end of the intervention period. Flexibility is one of the components of physical fitness.

In a related study, Ready et al. (1996) looked at the volume of exercise as a better predictor of health benefits. Participants in the 24-week study were 56 women (mean age = 61.3 years). The results showed that walking at a moderate intensity 3-5 days a week was sufficient to improve aerobic fitness. A decrease in body fat composition was also realized. MacAuley et al. (1996) did a study with participants aged 16 years to explore the relationship between physical activity and certain physiological components such as lipids and apolipoproteins. They reported lower cholesterol, LDL cholesterol, and triglyceride levels with increased physical activity.

Even though studies concerning the health benefits of physical activity have been conducted on adult participants more than on youth (Meyers, Strikmiller, Webber, & Berenson, 1996), increasing evidence attests to the positive outcomes of physical activity in children and adolescents as well. Harrel et al. (1996) conducted an intervention study to reduce cardiovascular disease risk factors in elementary school children. Classroom and physical education teachers provided an 8-week exercise program for 1274 third and fourth graders. Results indicated that the experimental group had a significant increment in
aerobic power. The experimental group also had more reduction in body fat than the control group. The researchers did not examine potential differences in changes between children taught by classroom teachers and those taught by physical education teachers.

Raitakari et al. (1994) did a cross-sectional study with subjects ranging from 3-18 years in age and concluded that physically active children had lower coronary risk profile than those who were constantly inactive. This was similar to findings by Powell, Thompson, Caspersen, and Kendrik (1987) that exercise participation reduced the risk for coronary heart diseases in children. In different but related studies Raitakari et al. (1994) and Rochini et al. (1988) found support for the fact that training (physical activity) induced a reduction in multiple coronary risks among adolescents. Rochini et al. reported that a weight reduction program with an exercise component had the most beneficial effects on blood pressure reduction and weight loss.

Various studies indicate improvements in the control of adiposity and show that exercise is an important compliment to obesity treatment (Bar-Or & Baranowski, 1994). Sasaki et al. (1987) studied a school based activity program in which obese children performed running exercises on a regular basis. They found a significant decrease in the percent fat and changes in HDL cholesterol levels. Other physiological benefits of physical activity include aerobic fitness (Morrow & Freedson, 1994), reduced risk of osteoporosis and increased bone mass (Bailey & Martin, 1994), and prevention of hypertension (Alpert & Wilmore, 1994).

Exercise and other forms of physical activity have been linked with psychological health (Caruso & Gill, 1992; Sonstroem, Harlow, & Josephs, 1994; Tucker, Cole, &
Friedman, 1986). Sonstroem, et al. indicated that participation in exercise programs was associated with improved self-esteem and high self-perceptions of physical condition.

Following up on earlier studies, Caruso and Gill (1992) examined the effects of physical activity on physical self-perceptions, self-efficacy, and other related variables in females participating in a 10-week exercise program. The results revealed an increase in physical self-perceptions. Caruso and Gill reported that their results were similar to Gruber’s (1986, in Caruso and Gill, 1992) findings in a meta-analysis of 27 related studies. Gruber concluded that participation in directed play and physical education programs contributed to the development of self-esteem in elementary school age children.

Tucker, Cole, and Friedman (1986) tested the hypothesis that physical fitness fortifies the body against stress and affords the body increases in strength and hardiness with which to confront the problems of life. Differences existed in results between single exercise sessions and long exercise programs, but both were found to be effective means of reducing depression. Exercise was most effective as an antidepressant for subjects who were the most physically and psychologically unhealthy at the outset of exercise program.

Sherrill, Holguin, and Caywood (1989), examined differences in self-concept and attitudes toward physical education in children in grades 4 and 5 who were high or low in physical fitness. Results showed that boys and girls who were better fit had better self-concepts than students in the low fit group.
According to Black and Weiss (1992), studies that attempt to explain exercise behavior and outcomes need to be theory-based. Competence motivation theory (Harter, 1978, 1981) is one theory used to explain exercise behaviors.

**Competence Motivation Theory**

Competence motivation theory (Harter, 1978, 1981) is an extension of White’s (1959) conceptual model of effectance theory. According to White, intrinsic motivation is based on an innate human need for competence. An individual’s need to deal effectively within the environment results in feelings of efficacy and inherent pleasure which, in turn, enhances one’s intrinsic motivation. The need to achieve and experience inherent pleasure in the development of skills was referred to as “effectance motivation” by White. When individuals master the environment, they gain satisfaction, which enhances feelings of competence - a major source of motivation. Harter (1978) conceptualized White’s idea to incorporate domain specific attempts, social factors, performance outcomes relative to task difficulty, and affective outcomes.

Competence motivation theory postulates that individuals have an inherent desire to feel and express competence in the social, cognitive, and physical domains of achievement. However, the actual expression of this competence is mediated by perceptions of competence (ability and control). That is, individuals who feel they are competent and in control in a particular achievement domain are more likely to be highly motivated and will choose more challenging tasks; those low in perceptions of
competence will feel more anxious resulting in failure and less motivation (Bakker, De Koning, Van Ingen, Schenau, & De Groot, 1993; Brustad, 1988; Goudas, Biddle, & Fox, 1994; Klint & Weiss, 1987; Theeboom, De Knop, & Weiss, 1995).

Klint and Weiss (1987) tested Harter's (1978, 1981) theory that perceptions of competence are intimately tied to motivation. They tested 67 children (8-16 years) who were involved in a non-school gymnastics program in motives for participation and perceived competence. Support was found for competence motivation theory in that children who were high in perceived competence rated skill development as the most important reason for participation. Athletes who had high perceived social competence were more motivated by friendship reasons. Participants in the high competence perception group were motivated more by intrinsic reasons. Findings from this study further demonstrated the domain specificity of competence perceptions.

Brustad’s (1988) study found further support for competence motivation theory when he found that youth basketball players (boys and girls) who were high on intrinsic motivation were also high on levels of enjoyment. Wankel (1993) reported similar findings from a review of literature related to competence perceptions and enjoyment.

According to Harter (1978), competence motivation is a multidimensional construct which influences both the initiation of mastery attempts and the development of particular achievement behaviors (Biddle & Armstrong, 1992; Williams & Gill, 1995). Self-evaluative judgments provoke affective reactions, which, in turn, mediate behavior (Harter, 1983); that is, one’s affective reactions to cognitive self-appraisals also trigger behavioral responses.
In their study with fourth- and fifth-grade students, Roberts, Kleiber, and Duda (1981) found high perceptions of competence contributed to the initiation of physical activity. Non-significant correlations were found between duration of involvement and perceived competence. These results suggest that the entry level of competence is very important for involvement in physical activity. Perceived competence in physical skill, therefore, has an important influence on participation and motivation of children in sports contexts.

The Self-Perception Profile for Children (SPPC) was developed by Harter (1985) to measure competence perceptions of students from third through sixth grades. The instrument has five subscales measuring athletic competence, behavioral conduct, physical appearance, scholastic competence, and social acceptance. The global self-worth subscale measures the general self-concept of the individual.

Worth Gavin and Herry (1996) conducted a study to validate Harter’s (1985) Self-Perception Profile for Children (SPPC) with French subjects in Canada. Results from LISREL procedures confirmed the five-factor structure of the SPPC among elementary school children. More importantly, the SPPC was found to be a useful tool for researchers within various cultural and linguistic milieus for studying self-concept and perceived competence.

One addition to White’s (1959) model is the effect of social factors, specifically, significant others. Parents, peers, teachers, and coaches form salient sources of information about competence. This extension emphasizes the role of the reinforcing environment. The influence of specific others in reinforcing intrinsic and extrinsic
motivational orientations is critical during childhood and adolescence (Black & Weiss, 1992; Horn, 1985). Values that socializing agents have, in large part, go to influence what children internalize in terms of perceptions of competence and motivational orientation.

Attempts at testing Harter’s model of the influence of significant others have been limited in large part to coaches (Black & Weiss, 1992; Brustad, 1988; Horn, 1985; Ommundsen & Vaglum, 1991; Rhee, 1993; Weiss & Knoppers, 1982). Black and Weiss looked at the relationships among coaching behaviors, perceptions of ability, and motivation in competitive swimmers. They found support for competence motivation theory in that perceived coaching behaviors, which were contingent and appropriate to performance, were related to perceptions of ability, enjoyment, and effort. In addition, there was higher preference for optimally challenging activities. Athletes who were higher in perceived success, competence, and enjoyment were identified as having received positive feedback from their successful performances.

Horn (1985) tested the theoretical relation of coaches’ behavior and self-perceptions of their young athletes (female softball players). Her study examined how coaches’ reinforcement patterns influenced perceptions of competence. The study revealed that coaches’ behaviors contributed to perceptions of competence. Behaviors during practice positively impacted self-perception more than game behaviors. During practice, more informative and positive feedback was given than during game situations. Criticisms during practice were characterized by informational feedback which then impacted perceptions of competence, as purported by Harter (1978).
Some studies (Brustad, 1988, 1996; Ommundsen & Vaglum, 1991; Rhee, 1993; Weiss & Knoppers, 1982) looked at the influences of parents, teachers, and peers as significant others within sport settings. Brustad (1988) investigated the hypothesis that higher levels of enjoyment would correlate with fewer worries about negative evaluations from parents, coaches, and peers. Youth basketball players were studied, and those who perceived low parental pressure had higher season-long enjoyment levels.

In an extension of previous research, Brustad (1996) examined the nature and strength of parental socialization influences on the physical characteristics of children’s physical activity involvement. Perceived physical competence, fun, and liking of games and sport for boys were related to parental encouragement. Perceived parental enjoyment and encouragement were associated with girls’ greater attraction to physical activity. Ethnicity in this study was not a significant contributor to differences among children in patterns of parental influence. The subjects were Latino (66%), Caucasian (32%), and African American (2%).

Studies on perceptions of competence were extended to cultures other than the one in which the theory was tested. Rhee (1993) studied Korean children to assess the effects of social support from parents, teachers, and peers. It was found that teacher support was a strong contributing factor to children’s perceived physical appearance, athletic, and scholastic competence. Subjects were in third-, fourth, fifth- and sixth-grade students in a private elementary school.

Cole (1991) assessed the degree to which peers’ and teachers’ evaluations predicted changes in perceptions of competence. Results of the study with elementary
school children supported the notion that peers' as well as teachers' evaluations predicted self-perceived competence. Teachers' appraisals were found to be more important than peers' evaluations in the domain of athletic competence.

Ommundsen and Vaglum (1991) tested a group of Norwegian youth soccer players to determine the relationships among enjoyment, perceived soccer competence, and adult emotional involvement. They found that high levels of perceived competence were more related to soccer enjoyment, which was also strongly related to adult emotional involvement in soccer. Soccer enjoyment was found to be related to the children's perceptions of coach and parental behavior as well as to adult emotional involvement. The researchers failed to give specific coach or parental behaviors to which the children's enjoyment was related.

Even though not specifically testing competence motivation theory, Weiss and Knoppers (1982), in a study on the influence of significant others on female collegiate volleyball players, found teachers, coaches, parents, and peers as significant influences on sport participation in childhood. Based on Weiss and Knoppers' (1982) research, Wong and Bridges (1995) developed a model of motivational orientation for youth sport. The model purported that coaching behaviors (powerful others) influenced perceptions of control, which, in turn, determined perceived competence and motivational orientation.

Brown, Frankel, and Fennel (1989) examined the role of mothers and fathers in the process of sports socialization. Despite the fact that they did not assess the role of each socializing agent, their results supported other findings. Those who received more encouragement and relative support from significant others for their sport involvement
had stronger patterns of continuity than their counterparts who received less positive influences. Significant others’ support was strongest for interschool level sport, according to Brown et al. These results demonstrated that the influence of significant others varied by source and participation context. The researchers suggested that the role of each socializing agent (coaches, teachers, peers) be studied in relationship with level of skill, perceived competence, or type of environment.

Trent, Cooney, Russell, and Warton (1996) investigated the importance of mothers, fathers, teachers, and peers on perceptions of athletic and cognitive competence. Perceived competence for boys was impacted by fathers and teachers; teachers were the only sources which affected athletic competence. Soccer enjoyment was related to children’s perceptions of coach and parental support. The study did not specify behaviors of coaches and parents; neither did it report whether differences existed between specialist and non-specialist teachers.

Harter (1983) contended that issues involving the self should examine the interaction of various psychological domains such as cognition, affect, self-perceptions, and behavior. The global self-worth model is based on this contention.

Global Self-Worth Model

The model of global self-worth is an integration of perceptions of one’s sense of self over different domains (Harter, 1987). Specifically, global self-worth is judgment of one’s satisfaction of the self as a person. The model is based on earlier work by Harter
(1983) which suggested that global self-worth is not a broader index of competence perceptions.

Harter (1983) also purported that self-judgments elicit an affective reaction which, in turn, motivates an individual to engage in a particular behavior. Two determinants were identified for self-worth: (1) social support or positive regard and (2) competence perceptions. These two variables work together in the sense that both interact to produce a child's level of self-worth. For example, a child who is doing well in domains that are deemed important will suffer if social support from significant others is low. The reverse is also true.

Physical appearance was identified as the best predictor of global self-worth by Harter (1987). Douthitt (1994), in a study of 9th to 11th grade males and females, found physical appearance to be the strongest contributor to global self-worth. These findings were supported by Granleese and Joseph (1994). Granleese and Joseph's study assessed 24 children to determine whether "certain domains contributed more than others as predictors of global self-worth" (p. 488). They found that physical appearance, social acceptability, and scholastic competence were the best predictors of global self-worth.

Harter (1987) contended that, in addition to differences in specific sources of social support and self-worth, differences also followed a developmental pattern. Parents, peers, and teachers have been identified as having strong effects on perceptions of global self-worth. While adolescents had parents as the strongest contributor, children were influenced more by classmates and friends. Teacher effects were stronger for younger children than for adolescents.
Social factors in the form of acceptance by significant others were found to be related to the level of happiness and interest. Harter (1987) asserted that social support is an important factor in determining self-worth. In a study to assess the degree to which peers’ and teachers’ evaluations predicted changes in perceptions of competence, Cole (1991) found teachers’ evaluations had a moderate impact on perceptions of self-worth.

Granleese and Joseph (1993) found differences between predictors of global self-worth for girls in a mixed-sex school and those in a single-sex school. The study did not specifically test the effects of teachers’ support, but the researchers suggested differences in the types of social support given to students by teachers in the two schools as possible reasons. This finding supported Harter’s (1983) contention that development of the self should also be considered a social process. The effects of significant others need to be examined in all behavior contexts including the school system.

Physical Education Teacher Effectiveness

Within the school system, teachers form the adult authority and are likely to have some influence on children’s perceptions of competence and self-worth. Horn (1985) suggested that contextual factors, such as competition or practice situations, physical education classes, or recess periods be incorporated into research design for more accurate assessments. Researchers (Curtner-Smith, 1995; Faucette & Patterson, 1989; 1990; Figley, 1985; Patterson & Faucette, 1990) have been interested in determining physical
education teachers’ effectiveness and whether different kinds of teachers have better success in achieving educational objectives.

Faucette and Patterson (1989) studied classroom elementary teachers (non-specialist physical education teachers) to determine the number of effective teaching techniques used when teaching physical education. Fourth and fifth grade classroom teachers in a Californian public school participated in the study. Teaching experiences of teachers ranged from 6-25 years. Teacher behaviors were assessed using the Teacher Observation Schedule (Rushall, 1977, in Faucette & Patterson, 1989). Results indicated that the classroom teachers lacked interest in teaching physical education. These teachers interacted as little as possible with students during physical education classes and expressed negative attitudes towards teaching physical education.

In a subsequent study, Patterson and Faucette (1990) examined elementary student’s attitudes towards physical education in relationship to teacher type. Specifically, the study was designed to determine whether there were differences in attitudes toward physical activity between children in classes taught by specialist versus non-specialist teachers. Results were statistically significant but not meaningful, suggesting that there might not be any differences between the two groups of teachers, contrary to findings by Figley (1985).

Through a critical incident report, Figley (1985) assessed the determinants of college student’s attitudes towards their K-12 physical education classes. The researcher found that 41.6% of the students interviewed cited the teacher as a significant determinant for positive attitudes. Teachers ranked first among a group of determinants of positive or
negative attitudes toward physical education. Teacher incompetence was reported by the college students in the study as a major contributor to negative attitudes. Since the subjects had to reflect back 12 or more years on their K-12 experiences in physical education, some doubt as to reliability of findings might be raised. Teachers in the study were not specified as to whether they were specialist or classroom teachers.

Faucette and Patterson (1990) compared teaching behaviors and student activity levels in several elementary school classes taught by specialist and non-specialist physical education teachers. Four specialist teachers and seven non-specialist teachers with class sizes ranging from 27-32 students served as subjects. The specialist teachers in the study exhibited significantly higher levels of effective teaching behaviors such as feedback, reward, questioning, and explaining. These behaviors correlated with higher activity levels in their students.

The lukewarm attitude towards physical education by classroom teachers was analyzed in terms of role conflict and effects of socialization by Buschner (1985). Buschner argued that classroom teachers in elementary schools mostly satisfy the administrative requirements of teaching physical education, which presupposed that they didn’t put in as much effort as they should have. In addition, new classroom teachers often modeled negative behaviors that were exhibited by other teachers and refused to teach physical education or taught it without much enthusiasm.

Curtner-Smith (1995) addressed the issue of whether or not teachers use behaviors likely to promote pupils’ positive psychosocial development. Specifically, the study sought to determine the extent to which a sample of physical education teachers used
behaviors found to be positively and negatively related with children’s psychosocial development. Results indicated that the number of behaviors of physical education teachers did not differ. The instrument used was the Coaching Behavior Assessment System (CBAS) developed by Smith, Smoll, and Hunt (1977). The CBAS was designed to assess the effects of organized sport outside the school setting.

Rice (1988) examined high school students’ attitudes toward their physical education program and physical education teachers. Results indicated that students enjoyed physical education classes and that they looked to the physical education teachers as role models. The quality which the students disliked the most was that teachers did not participate in the activities they taught. Rice did not specify whether students were taught by specialist physical education teachers or classroom teachers.

DeVoe and Gustafson (1989) examined teacher behaviors directed toward students in elementary school physical education classes. Findings were that individualized teaching by most of the teachers was in response to particular behaviors of students, thus some students received more support than others. They speculated that students receiving more supportive teacher behaviors would achieve greater gains in skill acquisition and attitude development than those receiving less teacher support. This study did not compare issues related to specialist and non-specialist teachers.

Students’ perceptions serve as the framework from which they interpret cognitive processes and consequently affect how they learn. Solomon and Carter (1995) tested this hypothesis by exploring the meanings children assigned to physical education. They
found that physical education teacher’s feedback was a key factor affecting children’s competence perceptions.

Harrison (1987) reviewed the literature on teacher effectiveness in physical education classes. Qualities such as teaching to mastery, giving students opportunity to learn, active teaching, and curriculum pacing were among teaching behaviors associated with significant student achievement. The review suggested that the skills of effective teachers differed from those of non-effective teachers.

The characteristics associated with significant student achievement were confirmed as differentiating between experienced and non-experienced physical education teachers in Griffey and Housner’s 1991 study. Elementary physical education teachers were compared to teachers in training. They found significant differences in patterns of planning, interaction, and student engagement between the two groups. The experienced teachers focused on feedback on student performance rather than behavior.

The level of knowledge a teacher has influences teacher’s observation and feedback skills. Walkwitz and Lee (1992) tested this hypothesis with eight elementary classroom teachers. Teachers who had very limited throwing experience were randomly assigned to experimental and control groups. The experimental group was exposed to current developmental procedures related to the overhand (baseball) throw. Emphasis was placed on getting teachers to think about how mechanical aspects of throwing were influenced by developmental characteristics.

Results showed that the teachers in the experimental group were better able to structure learning activities so that their pupils practiced higher quality throws. The level
of teacher knowledge also had a positive influence on student achievement in throwing. The researchers alluded to the fact that a content knowledge base is an important factor that distinguished novice and experienced teachers. Technical training received by physical education specialists appeared to provide them with a broader knowledge base in physical education than classroom teachers. Findings from the above studies, although inconclusive, point to the fact that specialist physical education teachers are more familiar with the complexities involved in teaching physical education and might be more effective than classroom teachers.

The Development of Education and Physical Education in Ghana

Since physical education and sport form major parts of the general educational system, it is necessary to examine the development of one in relationship to the other. Until the arrival of the merchants, missionaries, and colonialists in the Gold Coast, traditional education was the only means of handing down experiences from generation to generation. Skills such as farming, wrestling, hunting, swimming, and acrobatic displays were taught by parents or elders in the community (McWilliam, 1962). Girls learned to count when mothers gave them money (cowries) to count after sale. Life in the precolonial era was mostly a preparation for survival (Efa, 1960).

The earliest schools for which there are definite records were the castle schools in the Gold Coast. European merchants built huge castles along the coasts for their trade transactions. In 1644 the Dutch established the first school in Elmina, and in 1722 the
Danes started theirs in Christianborg, while the English began at Cape Coast in 1752 (McWilliam, 1962). From the beginning, the few students were trained to be bodyguards for the colonial masters. Later the need arose for interpreters when trade on the Gold Coast looked promising (Graham, 1971). Only mulattos were students; pure natives were not allowed in the schools. The type of language studied in these castle schools depended on where the school was and which merchants lived in the castles.

Even though these castle schools were started as isolated ventures rather than attempts to establish a widespread educational system, they influenced later developments in education and provided a framework for the British colonial administrators of the Gold Coast. George (1976) purported that in 1821 the colonial administration extended invitations to the various missions to send missionaries in order to strengthen their educational programs.

The missionaries (Anglican, Basel, Bremen, Presbyterian, Wesleyan) extended education to different parts of the country through varying forms of curriculum and administration. However, even with this advancement, there were major set backs, especially in the area of curriculum. All forms of traditional practices were regarded as “bulwarks of Satan” (Reindorf, 1955; in McWilliam, 1962, pp. 25). School children were thus trained to be citizens of minority Christian communities rather than of the community as a whole. African dancing and music were, for the same reason, banned from the curriculum.

A more centralized system of education came with the appointment of a full-time governor for the Gold Coast in 1850. Between 1850 and 1920, ordinances and educational
rules were passed in an attempt to improve education and increase the number of schools. Many of the improvements did not take place until Sir Gordon Guggisberg was appointed governor in 1919. With the assistance of education committees, Guggisberg formulated his 16 principles of Education in 1925. Among them were that equal opportunities given to boys should be provided for the education of girls and organized games should form part of school life (McIntosh, 1952; McWilliam, 1962).

World War II brought a slump in education, but more schools were opened throughout the country. In the early 1950s, when preparations were afoot for political changes, Ghanaian leaders emphasized the need for education. In 1951 the Minister of Education, Mr. Kodjo Botsio, declared that “Education is the keystone of a peoples’ life and happiness” (McWilliams, 1962, p. 83). The most popular demand for that time was a measure of education for every child of school going age. In 1944 the Educational Act was passed in Britain (Van Dalen, Debold, & Bennet, 1971), and one of the provisions was the inclusion of physical education in the school curriculum. For the first time in the educational history of Ghana, physical education as a subject appeared on all school time tables. One would have expected interested Ghanaian teachers to take advantage of this official backing in promoting the subject; instead, the time allotted was often used for weeding and sweeping of the school compound.

In the late 1940s an overseas training program for physical education teachers was approved by the colonial government, and a one year training course was introduced at Achimota College (Wusu, 1972). The Ministry of Education then started showing positive attitudes towards the organization of physical education programs by appointing
physical education specialists as teachers. From the group of early British trained physical education specialists, the aims and objectives of physical education were formulated. Two of these were: “to develop physical fitness through participation in physical activities that promote optimum growth and through the accumulation of experiences which lead to further opportunities for self-expression, emotional control, and living according to acceptable social standards” and “to give the youth as favorable an introduction as possible to a variety of activities” (Ayi-Bonte, 1965, p. 42).

Physical education in the elementary schools after independence, in 1957, was at the mercy of the teachers. Since teaching physical education was the responsibility of the classroom teachers, what was taught depended on the individual teacher’s interest. Most schools used their games periods to prepare the school soccer, volleyball, track and field, and netball teams towards interschool competitions. Pupils who did not fall into the above categories were either sent to the school farms or made to clean the school compound.

From independence in 1957 to 1966, the administration of school and college sport was directly under the control of the Ministry of Education. After 1966 when the first president was overthrown in a military coup, the power was shifted to the Director of Education of the Ghana Education Service. In 1966 the Elementary school sports federation was formed, and one of the main aims was to help raise the health standards of the youth (Elementary Schools, 1966)

As a way of encouraging young children to participate in games and athletics, a three-star award system was introduced into the elementary school system. The scheme
required all pupils to attain a set standard in performance (height, distance and time) in either two track and one field or one field and two track events (Nelson, 1973). A pupil qualifying for an award was given a certificate, a cloth badge, and a twelve-month free pass to any stadium in Ghana. Should a pupil's standard continue to improve, he/she was given a training kit in the particular event, an approach aimed at helping pupils to develop interest in their schools' athletic programs.

The aims and objectives of physical education have not changed despite changes in the educational structure and administration since pre-independence. The aim of physical education in Ghana is to foster optimum development of the human being through the medium of physical activity (Kodzi, 1995) with a prime objective of providing young children with a stimulating environment in which they will be encouraged to increase their experiences through movement. According to Kodzi, the objectives of physical education in Ghana include the "contribution to the development of understanding, knowledge, insight, attitudes and ideals and helps to give the individual the necessary tools and experience for the enjoyment of leisure while in school and after school, as an active or passive participant and to give the individual a sense of well being" (p 95). An overall objective is to keep the nation fit for the purpose of higher productivity and the prolongation of health and life.

The government follows the UNESCO Charter on physical education that states "Every human being has a fundamental right of access to physical education and sports which are essential for the full development of his personality. The freedom to develop physical, intellectual, and moral powers through sports must be guaranteed both within
the educational system and in other aspects of social life” (UNESCO, in Ministry of Education, 1990, p. 2).

In 1987 the People’s National Democratic Council (PNDC) government took a bold step in implementing what is generally referred to as the “Education Reform” (Ministry of Education, 1990), a restructuring of education in Ghana. The whole of the educational system, from kindergarten to senior secondary school, was structured to “tap the potential in each individual child of school-going age” (Ministry of Education, p. 2). Currently, the NDC government, in collaboration with the United States Agency for International Development (USAID) and the World Bank, is in the process of establishing a program for Free, Compulsory, Universal Basic Education (FCUBE) by the year 2005 (Atta-Quayson, 1996). The Government’s policy document outlines a master plan to provide Ghanaian youth with the fundamental knowledge, attitudes, and skills that will enable them to contribute to and benefit from national development.

As part of the program, teacher effectiveness is to be improved. Effective learning assessment systems would be developed and implemented to accurately measure students' performance and instructional effectiveness. It is assumed that changes would be effected in the area of physical education as well, even though not specifically mentioned.

Summary

Contributions of physical activity to the well being of the individual cannot be overestimated. Physical activity enhances physical, psychological, and social well being
of individuals. Benefits of physical activity participation include reduced fat levels (Ready et al., 1996), reduction in cardiovascular risk factors (Harrel et al., 1996), enhanced self-concept (Sonstroem et al., 1994), reduction in stress and depression, and development of character building qualities (Fejgin, 1994).

Results from the literature reviewed show that motivation to participate is impacted by feelings of competence, control, and significant others' reinforcement. Self-evaluative judgments impact affective reactions which in turn mediate behavior. These studies also attest to the multidimensionality of competence motivation. Most of the literature examining the effects of significant others has been limited to the examination of coaches' or parental influences, neglecting, to a large extent, teacher influence within the school system. It is necessary to extend significant others' influence beyond coaches and parents.

Virtually no studies exist with a Ghanaian population looking at relationships between physical activity participation and perceptions of competence. There are no studies looking at the effects of teacher reinforcements on psychosocial variables of students in Ghana. The need for studies from different cultural settings is important not only for validation of existing theories and concepts, but also as a means of making meaningful generalizations.

A study of physical education teachers' influence on perceptions of competence of Ghanaian children in various achievement domains will help not only physical education professionals in Ghana but will also contribute to the understanding of the multidimensional concept of motivation.
Specific methods employed in the present research are described in this chapter under the following subdivisions: (a) Participants, (b) Instruments, (c) Procedures, and (d) Data Analyses.

Participants

Participants in the present study were Ghanaian elementary school boys and girls in primary class six. Their ages ranged between 11 and 14 years ($M = 12.1$ years; $SD = .67$). One specialist category school and one non-specialist school were selected from each of four regions in the southern sector of Ghana: Central, Greater Accra, Volta, and Western regions. These four regions together have about 40% of the total population of Ghana (Ghana Tourist Board, 1996).

There were two categories of students: those who took physical education lessons from physical education specialists and students who were taught by non-specialist teachers. The specialist physical education teachers teach only physical education in a number of schools assigned to them at the beginning of the academic year. Non-specialist physical education teachers, on the other hand, are regular classroom teachers who teach all subjects including physical education. Primary schools were also preferred over junior secondary schools (JSS) because all teachers in the JSS are specialists. Thus, in order to
have categories of specialist and non-specialist teachers and fulfill the pertinent purpose of this study, participants were selected from primary schools.

A total of 523 (boys $n = 263$; girls $n = 260$) students were initially contacted using parents/guardians consent forms (Appendix C) and students assent forms (Appendix D). Forty students did not return parental consent forms; therefore, final analyses were based on data from 483 students, (boys $n = 241$; girls $n = 242$). The non-specialist category (NSP) had a total of 244 students, and the specialist category (SP) had 239 students as shown in Table 3.1.

Table 3.1. Number of Participants by Region, Category, and Gender.

<table>
<thead>
<tr>
<th>Regions</th>
<th>SP</th>
<th>NSP</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>Central</td>
<td>34</td>
<td>37</td>
<td>31</td>
<td>65</td>
<td>141</td>
</tr>
<tr>
<td>G. Accra</td>
<td>23</td>
<td>27</td>
<td>26</td>
<td>27</td>
<td>103</td>
</tr>
<tr>
<td>Volta</td>
<td>32</td>
<td>26</td>
<td>37</td>
<td>29</td>
<td>124</td>
</tr>
<tr>
<td>Western</td>
<td>30</td>
<td>30</td>
<td>28</td>
<td>27</td>
<td>115</td>
</tr>
<tr>
<td>TOTAL</td>
<td>119</td>
<td>120</td>
<td>122</td>
<td>122</td>
<td>483</td>
</tr>
</tbody>
</table>

Note. G. Accra = Greater Accra; SP = specialist category; NSP = non-specialist category.
Instruments

The complete set of items to which students responded were: (a) Self-Perception Profile for Children, (b) Interest/Enjoyment in Sport Scale, and (c) Perceived Persistence in Sports Scale.

Self-Perception Profile for Children

Perceptions of scholastic competence, social acceptance, athletic competence, physical appearance, and global self-worth were measured using the Self-Perception Profile for Children (SPPC, Harter, 1985). This is a widely used instrument for measuring the self-concept of children and has been used in different countries (Granleese & Joseph, 1993; Rhee, 1993; Van Dongen-Melman, Koot, & Verhulst, 1993; Worth Gavin & Herry, 1996).

The scale was specifically designed for use by children ages 8-13, that is, third through sixth grades (Harter, 1985) and is a revised version of Harter’s (1982) Perceived Competence Scale for Children. The SPPC has six subscales tapping five competence domains: scholastic, social acceptance, athletic performance, physical appearance, and behavioral conduct. The sixth subscale, global self-worth, measures the global judgment of the self of a person. All subscales of the SPPC, except the behavioral conduct subscale, were used in the present study. According to Harter the behavioral conduct subscale was added “given our increasing interest in clinical or special populations where conduct is
sometimes an issue” (pg. 6). Participants in the present study were not identified as special or clinical populations. Items for each subscale are provided in Appendix G.

Problems with the instrumentation of self-concept by other researchers, such as lack of theoretical basis, little construct validity, and a substantial influence of social desirability, have been greatly minimized by Harter (1979, 1985) in the construction of the SPPC (Van Dongen-Melman, Koot, & Verhulst, 1993). Internal consistency reliabilities (Cronbach’s alpha) have been reported for each subscale as being between .71 and .86 by Harter. These have been confirmed by numerous studies (Granleese & Joseph, 1993, 1994; Van Dongen-Melman, Koot, & Verhulst, 1993; Worth Gavin & Herry, 1996). Validation of SPPC with participants in different cultural settings also yielded satisfactory results. Worth Gavin and Herry conducted a validity and reliability study for a French version of SPPC with fourth-, fifth-, and sixth-grade students. Cronbach’s alpha coefficients for the subscales ranged from .69 to .84. Granleese and Joseph had similar results with Irish students.

Each of the five subscales has six items presented in a structured alternative format. Two statements reflecting opposing views of oneself were presented to children, and they had to go through a two-step process in responding to the items. First, children were asked whether they are similar to some children who are good at a particular activity or similar to others who are not. For example, “Some children are really good at playing sports, BUT, other children are not very good at playing sports”. After that, participants determined if that statement was “sort of true” or “really true” for them.
Depending on how the child responded to the item, a value ranging from one to four (lowest to highest) was assigned. Thus, the range of scores for participants on each subscale was from a low of 6 to a high of 24. The domain scores were then computed for each subscale, using the scoring key provided in the SPPC Manual (Harter, 1985).

**Interest/Enjoyment in Sport Scale**

The enjoyment/interest subscale of the revised version of the Intrinsic Motivation Inventory (IMI; McAuley, Duncan, & Tammen, 1989) was used to assess the affect of participants in their physical education classes. The IMI had been used in various achievement settings including physical education (McAuley & Tammen, 1989; McAuley, Wraith, & Duncan, 1991; Williams & Gill, 1995) and has been proven to be psychometrically sound.

The IMI is a flexible instrument that determines subjects’ levels of motivation as a composite of five dimensions: interest/enjoyment, perceived competence, effort, pressure-tension, and perceived choice. Individual subscales of the IMI have been employed in various studies with little effect on internal consistency (McAuley, Wraith, & Duncan, 1991; Williams & Gill, 1995).

The enjoyment/interest subscale (Appendix H) has four items on a 5-point Likert scale (strongly disagree to strongly agree). Reliability coefficients reported for this subscale ranged from .73 to .93 (Duda, Chi, Newton, Walling, & Catley, 1995; McAuley & Tammen, 1987; McAuley, Wraith, & Duncan, 1991; Williams & Gill, 1995).
Perceived Persistence in Sports Scale

Based on Harter’s (1985) Self Perception Profile for Children and Perceived Competence Scale for Children, Williams and Gill (1995) designed a self-report scale which measures how hard children try (behavioral intensity) and how long they persist in physical activity (persistence). There are six items (three items for each subscale) which are presented in a structured alternative format similar to SPPC. The persistence subscale with three items was used to assess level of effort of participants (Appendix I). Williams and Gill reported an alpha coefficient of .70 for this subscale.

Complete Set of Items

Overall, participants responded to 41 items: 4 were related to demographics perceived affect and persistence in sport had 4 and 3 items respectively. Perceived athletic competence, physical appearance, scholastic competence, social acceptance and global self-worth had 6 items each. The original order of items for the SPPC subscales was maintained in this study (Appendix F).
Procedures

Approval

Approval was sought and obtained from the Oregon State University Institutional Review Board to conduct the study with the targeted participants. Letters with information concerning the nature and purpose of the study were then mailed to Regional Directors of Physical Education in each of the four regions (Central, Greater Accra, Volta, and Western) for their consent (Appendix A). The letters also requested lists of schools in the selected regions with specialist physical education teachers.

Pilot Studies

In order to ascertain the level of students’ understanding of test items, a pilot study was conducted. A total of 63 upper primary (grade 6) school boys (n = 33), and girls (n = 30) in the Central Region of Ghana took part in the pilot test for feedback about the wording and comprehension of items.

In Harter’s (1985) original format, the response categories - “sort of true for me”, and “really true for me”, were listed only once at the top of each page. To better guide children’s process of deciding where they belonged, the response categories were written above the boxes for each item (Appendix, F). The word “kid” from the original SPPC inventory was also replaced with “children”, which is more popular with Ghanaian children. The individual items of the Intrinsic Motivation Inventory, due to their generic
quality, could be easily modified to suit a wide variety of activities (McAuley & Tammen, 1987; McAuley, Wraith, & Duncan, 1991). Thus, the items were modified to suit the sport setting (Appendix H). No other changes were made.

Participants for the pilot study were asked to leave items blank that they did not understand even though the researcher was present to answer questions. Questions were read by the Principal Investigator and answered one at a time by students to make allowances for differences in reading rates.

After a critical examination of tests completed for the pilot study by the students, it was revealed that students did not have any problems completing the items. Only one student (1.5%) checked two boxes for two items. There was no need, therefore, for further modification of the instrument or test procedures.

Selection of Participants

Schools were randomly selected from the pool of schools provided by the Regional Directors of Physical Education and which satisfied the following criteria: (a) all students in the upper primary classes took physical education classes from either a specialist physical education teacher or from a non-specialist teacher, (b) specialist category schools were within 30 miles radius from non-specialist category schools, and (c) schools were co-educational. The number of participants for the present study was considered to be large enough to maintain high power and to provide robustness against
deviations in multivariate analysis of variance assumptions as suggested by Tabachnick and Fidell (1989).

Consent forms were then sent to headteachers in the selected schools for permission to conduct the study; in their schools (Appendix B). On the Principal Investigator’s first visit to each selected school, participants were informed about the purpose of the study; and parents’ consent forms were distributed (Appendix C) to students. Assent forms (Appendix D) were also given to students and completed on that same day. In one school (specialist teacher category) in the Western region, students were preparing for the end of term examination; so assent forms could not be signed on that day. For that school, the assent forms were collected by the headteacher and delivered to the researcher on a subsequent visit when items for the Self-Perception Profile for Children (SPPC) were completed.

**Test Administration**

Testing was done at all schools during the months of July and August by the Principal Investigator. Completion of the test items by students took place not less than a week after the first visit when consent forms were distributed. This was to give time for parents to review the consent forms and to provide for a high return rate. On the day of the test, students were again informed about the purpose of the study, explaining the fact that it was not an examination, in line with instructions (Appendix E) by Harter (1985) in the SPPC manual. In addition, participants were informed that information they provided
would be confidential, that participation was voluntary, and that they could withdraw at any time.

Questionnaires were then administered only to students who had returned their parents/guardians' informed consent forms. The sample item from the SPPC was written on the chalkboard, which served as an additional aid in delivering instructions. Questions were read aloud, thereby requiring all students to proceed at the same rate regardless of their reading ability; and students' questions were answered whenever they arose. In all schools, testing was done in the students' own classrooms. Participants took approximately 45 minutes to complete the set of items.

The researcher also had informal interviews and discussions with teachers in the selected schools. Teachers (four specialists and ten non-specialists) were asked questions related to their teaching methods and content. Questions asked were related to teachers' attitudes toward physical education, level of knowledge in physical education, and perceptions about methods of evaluation.

Data Analyses

The study employed a multivariate analysis of variance (MANOVA) to assess differences in self-perceptions between Ghanaian primary school students who were taught by physical education specialist teachers and those taught by classroom teachers. The independent variable (IV) was category; and the dependent variables (DVs) were perceptions of affect in sports, athletic competence, global self-worth, persistence in
sports, physical appearance, and scholastic competence. Social acceptance was not used in the major analyses because cronbach reliability check revealed a low alpha level.

Participants’ responses were scored and sorted into the appropriate subscales for the dependent variables. Data analyses were based on the information provided by students who returned parents/guardians’ informed consent forms and who completed all items.

Descriptive statistics were computed for the demographic information provided by participants (i.e., number of participants, mean age, and percentage of participants by gender and region). Data were then analyzed by region to answer important questions using an SPSS computer program for MANOVA generated through the General Linear Method. Data snooping was the first step to ascertain the extent to which assumptions for MANOVA were met or violated. These assumptions included normality, outliers, linearity, and singularity among DVs.

Significant main effects were determined using Wilks’ lambda test (i.e., to test if differences existed between the two categories of students and the extent of variation). Discriminant function analyses using the Wilk’s lambda were employed to determine which variables best discriminated between students in specialist and non-specialist categories. Descriptive discriminant analysis is widely used in place of univariate F-tests. It takes into account the interrelationships among dependent variables unlike univariate F-tests which consider contributions of one DV at a time (Tabachnick & Fidell, 1989). Means of variables and standardized discriminant coefficients were then examined to explain the statistical findings, i.e., to determine how categories differed on those variables which contributed significantly to the differences.
Chapter 4
Results

The purpose of this study was to assess whether differences existed in perceptions of competence, affect, and persistence in sports of students taught by specialist physical education teachers and those taught by classroom teachers in Ghana. Results are reported in this chapter.

Subscale Reliability

Alpha reliability of each subscale was evaluated by calculating Cronbach’s internal consistency. Individual variables ranged from a low of .33 to a high of .77 (Table 4.1). Social acceptance subscale had an alpha coefficient of .33 which was considered very low.

Even though an apriori acceptable reliability was not established, all measures with alpha coefficients above .60 were considered adequate by the present researcher. Measures with such a range have been used in previous studies (Feltz & Brown, 1984; Klint & Weiss, 1987) without problem. The social acceptance subscale was deleted from the list of dependent variables in line with suggestions by Tabachnick & Fidell (1989) that a few reliable variables give a more meaningful solution than a large number of unreliable variables.
Table 4.1 Reliability Coefficients of Self-Perception Subscales

<table>
<thead>
<tr>
<th></th>
<th>AS</th>
<th>AA</th>
<th>GSW</th>
<th>PA</th>
<th>PS</th>
<th>SC</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.77</td>
<td>.61</td>
<td>.63</td>
<td>.70</td>
<td>.76</td>
<td>.68</td>
<td>.33</td>
</tr>
</tbody>
</table>

Note. AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-worth; PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence; SA = Social Acceptance.

Descriptive Statistics

Demographics

Overall, data showed a 92% return rate of parental consent forms. Students from the Central Region formed 29.2%, Greater Accra 21.8%, Volta 25.7% and Western 23.8% of the total number of participants who completed the items for the study. The number of girls who participated in the study was 50.1% and for boys the number was 49.9%. By category, students in the specialist teacher category were 49.5% (boys = 24.7%; girls = 24.8%); and those in the non-specialist category were 50.5% (boys = 25.3%; girls = 25.3%) participants. Students’ ages were between 11 and 14 years ($M = 12.1$ years). Mean ages for boys and girls were similar at 12.1 years.
Means and Standard Deviations of Dependent Variables

Means and standard deviations were computed for all the dependent variables (DVs) as a group, by region, category, region by category, and by gender. Results are described in the following subsections. The possible range of mean score on each of the Self-Perception Profile for Children subscales was 1 to 4 (low to high), on the persistence in sports subscale it was 1 to 3 (low to high), and on the interest subscale it was from 1 to 5 (low to high).

Overall means showed generally that Ghanaian elementary students in this study had competence perception scores above the mid-point of the subscales. Means of all variables ranged from 2.69 on perceptions of persistence in sports to 3.73 on perceived affect in sports. Perceptions of physical appearance were also high (M = 3.37) for the sample of students assessed (Table 4.2).

Table 4.2. Means and Standard Deviations of all Variables.

<table>
<thead>
<tr>
<th></th>
<th>AS</th>
<th>AA</th>
<th>GSW</th>
<th>PS</th>
<th>PA</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means</td>
<td>3.73</td>
<td>2.72</td>
<td>3.35</td>
<td>2.69</td>
<td>3.37</td>
<td>3.02</td>
</tr>
<tr>
<td>SD</td>
<td>1.14</td>
<td>.68</td>
<td>.51</td>
<td>.94</td>
<td>.54</td>
<td>.68</td>
</tr>
</tbody>
</table>

Note. AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-worth; PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence.
Means of variables by region

Means of variables were also computed for each region (Table 4.3); and results indicated that students were high in their perceptions of competence, affect, and persistence in sport. Scores were above the midpoints of individual subscales. Students in the Volta region scored higher in their perceptions of affect in sports than the other regions. Participants from Greater Accra ($M = 3.38$) and Volta ($M = 3.13$) regions also had higher scores on their perceptions of scholastic competence than participants in the Central ($M = 2.87$) and Western ($M = 2.75$) regions.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Central</th>
<th>Greater Accra</th>
<th>Volta</th>
<th>Western</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>3.85 (1.09)</td>
<td>3.62 (1.21)</td>
<td>4.26 (.61)</td>
<td>3.10 (1.24)</td>
</tr>
<tr>
<td>AA</td>
<td>2.74 (.55)</td>
<td>2.79 (.82)</td>
<td>2.78 (.60)</td>
<td>2.57 (.74)</td>
</tr>
<tr>
<td>GSW</td>
<td>3.32 (.57)</td>
<td>3.51 (.49)</td>
<td>3.24 (.48)</td>
<td>3.36 (.42)</td>
</tr>
<tr>
<td>PS</td>
<td>2.67 (96)</td>
<td>2.51 (1.01)</td>
<td>2.92 (.85)</td>
<td>2.60 (.90)</td>
</tr>
<tr>
<td>PA</td>
<td>3.31 (.65)</td>
<td>3.59 (.49)</td>
<td>3.27 (.46)</td>
<td>3.34 (44)</td>
</tr>
<tr>
<td>SC</td>
<td>2.87 (.67)</td>
<td>3.38 (.49)</td>
<td>3.13 (.60)</td>
<td>2.75 (.71)</td>
</tr>
</tbody>
</table>

Note. Means outside parentheses and standard deviations within parentheses. AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-Worth; PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence.
Means of variables by category

Students in the specialist teacher category (SP) had higher perceptions of their competencies than students in the non-specialist (NSP) category, as indicated by the mean scores. All the scores for the students taught by specialist physical education teachers were above the value of 3.0 (Table 4.4). Whereas students in the specialist teacher category were highest on affect (enjoyment) in sport, students in the non-specialist teacher category perceived themselves most competent in the domain of global self-worth. For the SP category athletic ability and scholastic competence were the least rated and both had similar score. Persistence in sports was rated lowest (M = 2.08) by the students in the NSP category.

Table 4.4. Means and Standard Deviations of Variables by Category.

<table>
<thead>
<tr>
<th></th>
<th>AS</th>
<th>AA</th>
<th>GSW</th>
<th>PS</th>
<th>PA</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>Mean</td>
<td>4.41</td>
<td>3.01</td>
<td>3.47</td>
<td>3.31</td>
<td>3.37</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.60</td>
<td>.58</td>
<td>.42</td>
<td>.61</td>
<td>.54</td>
</tr>
<tr>
<td>NSP</td>
<td>Mean</td>
<td>3.06</td>
<td>2.45</td>
<td>3.24</td>
<td>2.08</td>
<td>3.22</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.15</td>
<td>.66</td>
<td>.56</td>
<td>.80</td>
<td>.60</td>
</tr>
</tbody>
</table>

Note. AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-worth; PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence. SP = Specialist teacher category; NSP = Non-specialist teacher category.
Means of variables by region and category

Examination of the means of variables by region and category indicated differences between SP and NSP categories in all the regions. In the four regions, the SP category scored higher in their perceptions of competence, affect and persistence in sports than the NSP category. Among the competence perception subscales, students in the SP category scored lowest in perceptions of athletic ability and highest in perceptions of physical appearance in the four regions as shown in Table 4.5.

Table 4.5. Means of Variables by Region and Category.

<table>
<thead>
<tr>
<th></th>
<th>Central</th>
<th>Greater Accra</th>
<th>Volta</th>
<th>Western</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SP</td>
<td>NSP</td>
<td>SP</td>
<td>NSP</td>
</tr>
<tr>
<td>AS</td>
<td>4.75</td>
<td>2.96</td>
<td>4.52</td>
<td>2.77</td>
</tr>
<tr>
<td>AA</td>
<td>2.98</td>
<td>2.52</td>
<td>3.35</td>
<td>2.28</td>
</tr>
<tr>
<td>GSW</td>
<td>3.56</td>
<td>3.07</td>
<td>3.56</td>
<td>3.46</td>
</tr>
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<td>PS</td>
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<tr>
<td>SC</td>
<td>3.10</td>
<td>2.64</td>
<td>3.56</td>
<td>3.22</td>
</tr>
</tbody>
</table>

Note. SP = Specialist teacher category; NSP = Non-specialist teacher category; AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-worth; PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence.
Means of variables by gender

Means and standard deviations for each variable by gender are presented in Table 4.6. Boys’ scores in all the self-perception domain areas except global self-worth were minimally higher than the girls’ scores. The Ghanaian boys and girls in this study had similar ratings (M = 3.35) for their perceptions of global self-worth. Boys perceived their physical appearance competencies (M = 3.41) to be higher than global self-worth (M = 3.35). Girls, on the other hand, had higher scores on their perceptions of global self-worth (M = 3.35) than physical appearance perceptions (M = 3.32); but this difference was very minimal.

Table 4.6. Means and Standard Deviations of Variables by Gender.

<table>
<thead>
<tr>
<th></th>
<th>AS</th>
<th>AA</th>
<th>GSW</th>
<th>PS</th>
<th>PA</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td>Mean</td>
<td>3.69</td>
<td>2.65</td>
<td>3.35</td>
<td>2.62</td>
<td>3.32</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.46</td>
<td>.51</td>
<td>1.22</td>
<td>.97</td>
<td>.29</td>
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<tr>
<td>Boys</td>
<td>Mean</td>
<td>3.77</td>
<td>2.80</td>
<td>3.35</td>
<td>2.76</td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.69</td>
<td>.52</td>
<td>1.17</td>
<td>.91</td>
<td>.54</td>
</tr>
</tbody>
</table>

Note. AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-worth; PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence.
Preliminary Tests

Tests for MANOVA Assumptions

Multivariate analysis of variance (MANOVA) is very sensitive to violations in assumptions (Tabachnick & Fidell, 1989); therefore, major assumptions were tested before continuing data analysis. The data were tested for normality, outliers, homogeneity of variance/covariance matrices, and multicolinearity among the dependent variables in accordance with established standards for MANOVA (Barker & Barker, 1984; Tabachnick & Fidell). The test for normality gave z-scores between -.12 and -.77 for skewness and from .10 to -1.06 for kurtosis. According to Tabachnick & Fidell, z scores for kurtosis and skewness above 1.5 should be cause for concern, but values close to or above ±3.00 would have problems of non-normality or outliers.

Box’s M for homogeneity of variance/covariance matrix was significant (p < .001), indicating that the observed variance/covariance matrices of the variables were not equal across groups suggesting that the error matrices were heterogeneous. This finding was not a threat because the cell sizes were equal. Examination of scatter plots of subscales by item and normal probability plots showed fairly linear relationships and normal distributions. Intercorrelations among the variables were low to moderate (from $r = .12$ to $r = .59$) thus safeguarding against multicolinearity and singularity (Table 4.7). The large sample size in this study ($N = 483$) also ensured robustness of MANOVA tests against violations of major assumptions. In addition, the SPSS program uses major test analyses
such as Wilks’ Lambda and Pillai’s Trace to protect against distortion of results (SPSS, 1997; Tabachnick & Fidell, 1989). Wilks’ lambda was used in this study as the test for main effects.

Data for each region were also examined for multicolinearity and singularity. Intercorrelations among the variables ranged from $r = .18$ to $.60$ for the Central region, $r = .14$ to $.71$ for Greater Accra, $r = .10$ to $.53$ for Volta, and from $r = .14$ to $.68$ for Western region (Table 4.8). These values suggest that multicolinearity and singularity were not threats.

Table 4.7. Correlations among Perception Subscales.

<table>
<thead>
<tr>
<th></th>
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<th>PS</th>
<th>PA</th>
</tr>
</thead>
<tbody>
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<td>AA</td>
<td>.43*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSW</td>
<td>.17*</td>
<td>.18*</td>
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<tr>
<td>PS</td>
<td>.56*</td>
<td>.49*</td>
<td>.25*</td>
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<tr>
<td>PA</td>
<td>.20*</td>
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<td>.58*</td>
<td>.24*</td>
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<tr>
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<td>.40*</td>
<td>.31*</td>
<td>.33*</td>
<td>.35*</td>
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<td>SC</td>
<td>.35*</td>
<td>.40*</td>
<td>.31*</td>
<td>.33*</td>
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</tbody>
</table>

Note. AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-Worth PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence. ** p < .001
Table 4.8. Correlations among Perception Subscales by Region.

<table>
<thead>
<tr>
<th>Variables</th>
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<th>GSW</th>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td>.18</td>
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<tr>
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<td>.28**</td>
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<td>.73**</td>
<td>.29**</td>
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<td></td>
</tr>
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<td>.59**</td>
<td>.37**</td>
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<td></td>
</tr>
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<td>G. Accra</td>
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<td>.55**</td>
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<td>Volta</td>
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<td>.27**</td>
<td>.53**</td>
<td>.35**</td>
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<td>.32**</td>
<td>.39**</td>
<td>.26**</td>
<td>.40**</td>
<td></td>
</tr>
<tr>
<td>G. Accra</td>
<td>.13**</td>
<td>.25*</td>
<td>.24*</td>
<td>.26**</td>
<td>.14</td>
<td></td>
</tr>
<tr>
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<td>Volta</td>
<td>.26**</td>
<td>.34**</td>
<td>.32**</td>
<td>.23**</td>
<td>.43**</td>
</tr>
<tr>
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<td>.57**</td>
<td>.64**</td>
<td>.22*</td>
<td>.66**</td>
<td>.26**</td>
<td></td>
</tr>
</tbody>
</table>

Note. AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-Worth; PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence; G. Accra = Greater Accra. ** p < .01; * p < .05.
Gender Differences

Previous researchers (Harter, 1985; Granleese, Trew, & Turner, 1989) reported gender differences in perceptions of competence and suggested that data for boys and girls be analyzed separately. In line with this suggestion a preliminary MANOVA was conducted for gender and all the competence perception subscales to determine if boys and girls in the present study differed in their perceptions of competence. Results indicated a significant main effect for gender: Wilk’s lambda = .97, F(6, 474) = 2.32, p < .05. Subsequent examination showed that the amount of variance explained by this difference was a low of 3%. Results for boys and girls groups were therefore collapsed and analyzed together.

Differences by Region

Even though the study assumed that the only basis for differences between participants was whether they were taught by specialist or non-specialist physical education teachers, data were also analyzed separately by region to establish or refute this assumption. Affect in sports, athletic ability, global self-worth, persistence in sports, physical appearance and scholastic competence served as dependent variables. Because of the low reliability level of the social acceptability subscale, it was not included in the major analyses.
Results revealed a significant main effect by region: Wilk's lambda = .70, (18, 1341) = 10.94, p < .001. The test for practical significance showed that the amount of variance explained by the significant main effect (30%) was meaningful. Separate MANOVA analyses were therefore conducted for each region to find differences between students taught by specialist physical education teachers and those taught by non-specialist teachers.

Differences by Category

The MANOVA results for the four regions showed that there were differences between the SP and NSP categories in all regions. The significant main effect for the Central region was: Wilk's lambda = .24, F(6, 134) = 69.86, p < .001; for the Greater Accra region it was: Wilk's lambda = .26, F(6, 96) = 45.95, p < .001; for Volta region it was Wilk's lambda = .70, F(6, 117) = 8.51, p < .001; and for Western region Wilk's lambda was .37, F(6, 108) = 30.32, p < .001. Subsequent examination of the strengths of associations for each region revealed that for Central region $\eta^2 = .76$, Greater Accra $\eta^2 = .74$, Volta $\eta^2 = .30$, and Western $\eta^2 = .62$. Follow up tests were therefore conducted to detect those variables which were contributing most to the significant main effects.

Because discriminant function analysis represents a multivariate procedure that accounts for the interrelationships among variables and is also the most widely used (Tabachnick & Fidell, 1989), it was chosen over univariate F tests as follow up test. In
cases of significant functions, standardized discriminant coefficients were examined to determine which perceptions differentiated students by category.

Examination of the discriminant function analysis revealed that only two perception domains significantly (p < .001) differentiated between the specialist and non-specialist categories in all four regions. Perceptions of affect and persistence differentiated students in the SP category and those in the NSP category. Standardized discriminant function coefficients (Table 4.9) for these variables showed variations by region in the magnitude of contributions made by affect and persistence. For perceptions of affect in sports the discriminant function coefficient was highest for Central region (.82). Greater Accra, Volta and Western regions had magnitudes ranging between .50 and .55. Results also showed that Volta (.83) and Greater Accra (.73) regions had higher magnitudes for the discriminant function coefficients for perceptions of persistence than Western (.52) and Central (.51) regions.

Mean scores for perceptions of affect and persistence in sports were further examined for both categories to determine the trend of the significant differences. Students in the specialist teacher category scored higher on the perceptions of affect and persistence in sports subscales than their counterparts in the non-specialist teacher category in all the regions. Table 4.10 shows the mean scores for both categories on perceptions of affect and persistence in sports.
Table 4.9. Standardized Discriminant Function Coefficients for Variables by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>AS</th>
<th>AA</th>
<th>GSW</th>
<th>PA</th>
<th>PS</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>.82*</td>
<td>.18</td>
<td>-.02</td>
<td>.18</td>
<td>.51*</td>
<td>.26</td>
</tr>
<tr>
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<td>.13</td>
<td>-.22</td>
<td>.29</td>
<td>.73*</td>
<td>.20</td>
</tr>
<tr>
<td>Volta</td>
<td>.55*</td>
<td>.30</td>
<td>-.04</td>
<td>.03</td>
<td>.83*</td>
<td>.23</td>
</tr>
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<td>.50*</td>
<td>.24</td>
<td>-.18</td>
<td>-.11</td>
<td>.52*</td>
<td>.27</td>
</tr>
</tbody>
</table>

Note. AS = Affect in Sports; AA = Athletic Ability; GSW = Global Self-Worth; PS = Persistence in Sports; PA = Physical Appearance; SC = Scholastic Competence; G. Accra = Greater Accra.
* Variables differentiating significantly (p < .001) between specialist and non-specialist categories.

Table 4.10. Means of Variables Differentiating between Specialist and Non-specialist Teacher Categories.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Central</th>
<th>Greater Accra</th>
<th>Volta</th>
<th>Western</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>SP 4.75</td>
<td>NSP 2.96</td>
<td>SP 4.52</td>
<td>NSP 2.77</td>
</tr>
<tr>
<td>PS</td>
<td>3.32</td>
<td>2.02</td>
<td>3.33</td>
<td>1.74</td>
</tr>
</tbody>
</table>

Note. AS = Affect in Sports; PS = Persistence in Sports; SP = Specialist teacher category; NSP = Non-specialist teacher category.
Overall, results showed that there were no significant differences between students in the specialist and non-specialist categories in perceptions of athletic ability, global self-worth, physical appearance and scholastic competence. In the four regions examined, significant differences between the two categories were shown in perceptions of affect and persistence in sports. Findings also indicated that even though boys and girls differed significantly \((p < .05)\) in perceptions of competence, affect, and persistence, this significant difference was minimal and not suggestive of practical meaningfulness.
A summary of the present study and a discussion of findings related to the research questions are presented in this chapter. Discussions are presented in terms of theoretical and practical issues. The chapter also includes directions for future research and ends with a conclusions section.

Summary

The purpose of this study was to investigate whether perceptions of competence, affect, and persistence in sports differ for students who were taught by physical education specialists and those taught by non-specialists. Two categories of participants were selected from primary schools in four regions in Ghana: students who took physical education classes from specialist teachers and students who were taught by classroom teachers.

Harter’s (1985) Self-Perception Profile for Children (SPPC) was used to assess perceptions of competence, and the interest/enjoyment subscale of the Intrinsic Motivation Inventory (McAuley, Duncan, & Tammen, 1989) was the tool for affect in sports. Persistence in sports was measured using Williams and Gill’s (1995) Persistence in Physical Activity Scale which has a similar format as Harter’s SPPC. Reliabilities for all these instruments had been established and were considered to be adequate (Harter,
1985; Williams & Gill, 1995); however, separate reliabilities were computed for each subscale used in this study.

Multivariate analyses of variance (MANOVA) were conducted to generate answers to pertinent questions, and follow up discriminant analyses further helped to draw out those variables that were contributing greatly to differences. Results showed that students who took P. E. classes from specialist teachers were significantly higher in their perceptions of affect and persistence in sports than students taught by classroom teachers. There were no significant differences between the two categories in perceptions of athletic ability, global self-worth, physical appearance and scholastic competence. Even though results indicated a significant gender main effect, this difference was minimal and not meaningful.

**Theoretical Implications**

**Instruments**

The persistence in sport subscale emerged with a similar alpha coefficient (.70) as the original in William and Gill’s (1995) study. Reliability scores for affect in sports were also consistent with other studies (McAuley & Tammen, 1989; McAuley, Wraith, & Duncan, 1991; Williams & Gill, 1995). McAuley and Tammen, for example, reported alpha coefficient of .85 from their study; and Williams & Gill reported .73 alpha. The
reliability level of affect subscale from the present study was .77 which was within the range (.73 - .93) reported from the other studies.

There was a low reliability coefficient for the social acceptance subscale which poses questions as to whether it was due to methodological flaws or other extraneous factors beyond the control of the present researcher. Previous studies (Harter, 1985; Van Dongen-Melman, Koot, & Verhulst, 1993) which used the social acceptance subscale reported high reliability scores. Harter reported an alpha coefficient of .75 and Van Dongen-Melman et al. reported .77 reliability coefficient for American and Dutch samples respectively. Cultural difference is the only possible explanation that the present researcher could ascribe to this finding.

The social acceptance subscale was formulated to assess the degree to which the child is socially accepted by peers or feels popular. From a cultural perspective, it is likely that more specificity of the social acceptance items might raise the reliability level. The items seemed to be too general for the Ghanaian students in the present study. For example, the item “Some kids are popular with others their age BUT other kids are not very popular” does not offer children a specific situation for which popularity should be reported. Ghanaian children find themselves interacting a lot with friends and peers in different situations within and outside the school. It is possible that some children would perceive themselves as popular within the school environment but not outside, or vice versa. The above item leaves them (the students) in doubt as to whether they qualify to be classified as popular or not. Items for the other subdomains seem to be more specific, e. g., “Some kids wished they were a lot better at sports BUT other kids think they are
good enough at sports” (for athletic ability) or “Some kids finish their school work quickly BUT other kids take a long time to finish their school work” (scholastic competence). In these two examples, children immediately take their minds to the sports or classroom circles, respectively.

Findings concerning the low reliability scores reiterate the statements by some researchers (Gill, 1997; Van Dongen-Melman, Koot, & Verhulst, 1993) that cultural influences on the instruments have to be considered when using measures in cross-cultural settings. It is possible that the social acceptance items, to Ghanaians, have different meanings than those of the original study population.

Considering the fact that all items were completed at the same time by groups of students, it is hard to ascribe methodological reasons for the low reliability scores for the social acceptance scale. If this were so, then all the other subscales would likely have had very low reliabilities too. Previous studies (Cole, 1991; Granleese & Joseph, 1993; Harter, 1985; Roberts, Kleiber, & Duda, 1981; Williams and Gill, 1995) that used the SPPC subscales reported adequate reliability levels for the subscales. Some of these, for example, Cole (1991), Granleese and Joseph (1993), and Roberts, Kleiber, and Duda (1981), failed to report actual reliability scores generated from their particular studies, but relied, instead, on Harter’s (1985) reported scores. Therefore, it is difficult to determine whether some studies from different cultural settings had low reliability levels.
Specialist Versus Non-Specialist Physical Education Teachers

This study assessed whether differences in perceptions of competence, affect and persistence in sports existed between students taught by specialist physical education teachers and those taught by classroom teachers. Results from the present study supported the hypotheses that students would differ significantly in their perceptions of affect and persistence in sports on the basis of being taught by a specialist physical education teacher rather than a classroom teacher. The hypothesis that students taught by specialist teachers would differ significantly from those taught by non-specialists in perceptions of athletic ability, physical appearance, global self-worth, and scholastic competence was not supported.

The variances explaining significant differences in the four regions ranged from 30% to 76%, an indication that the results were less by chance than by belonging to different teacher categories. The significant differences found for perceptions of affect and persistence in sports in the present study support findings by Cole (1991), Figley (1985), and Rhee (1995) that type of teachers’ evaluations and support predicted changes in children’s attitudes.

That all four regions had the same variables differentiating students in the specialist category from students in the non-specialist category supports the assumption made by this study that the only basis for difference between participants was by belonging to a specialist or non-specialist category. Nevertheless, variations existed in the amount of contributions of the variables in each region. Contributions of perceptions of
persistence in sports was greatest for the Volta region and perceptions of affect in sports was greatest in the Central region.

The type of attention, encouragement, and reward given by the specialist teachers differed from those given by the non-specialist teachers. Informal interviews with both specialist and non-specialist teachers in the four regions attested to this difference. Some of the non-specialist teachers organized physical education classes as a matter of obligation to satisfy administrative procedures and did not “care” about what went on in them. This practice was similar to what was reported by Buschner (1985). Those classroom teachers who had some interest had other limitations, such as non-availability of facilities, equipment or instructional guides. One classroom teacher indicated that she was interested in teaching physical education but did not like the idea of changing into different attire for P. E. lessons, especially when there were no special facilities for changing. The best she could do, in order not to sweat, was to stand and watch the children. Unlike most other classroom P. E. teachers, however, she did not give corporal punishments during P. E. lessons.

Specialist teachers did not have to worry about changing their clothes because they came to school already dressed for teaching physical education. They taught P. E. lessons differently, actually teaching activity skills that ended with small team or large group games. These teachers did not always follow the assigned curriculum. They taught activities that schools competed in for the particular term. The specialist teachers taught track and field, netball, basketball, volleyball, and soccer most of the time. They also indicated that their effectiveness in the schools was judged by the performance of the
particular schools at interschool competitions or by the number of students from their schools selected to join district or regional teams. For this reason they endeavored to give positive reinforcements to children, “sort of coaxing children to perform activities” (as one teacher said). They wanted to be “nice” to children in order for them (the children) to enjoy the activities, but more particularly, for the students to improve upon their skills so they could get selected to regional teams. No doubt that children from such schools perceived themselves as persisting longer in sports.

Type of teacher reinforcement was a key determinant of children’s negative or positive attitudes towards physical education in Figley’s (1985) study. Students’ positive attitudes increased with increased positive teacher reinforcements. The non-specialist teachers in this study only played passive roles in their physical education classes by providing little or no direction to students, resulting in low affect perceptions of their students.

Faucette and Patterson (1989) reported that classroom teachers interacted as little as possible with students during physical education classes and had no interest in teaching. P.E. Specialist teachers in their study were found to be more effective than the non-specialist teachers. Behaviors by the Ghanaian non-specialist teachers seemed to be in congruence with those described by Faucette and Patterson. The non-specialist teachers taught the P. E. classes to meet administrative requirements, so they did not interact much with the students.

The Ghanaian specialist physical education teachers were evaluated based on the number of students presented for competitions from their respective schools. For this
reason, they tried to encourage students to strive hard in their sport behavior. One specialist teacher reported (from informal personal interviews) that a technique he adopted as a way of encouraging the children was to tell students that persistence in these classes would lead to becoming Olympic athletes. Students showed their interest in sports by adopting nicknames like Carl Lewis, Abedi Pele (a great Ghanaian soccer player in France) or “Abetifi Mustang” (a female Ghanaian sprinter).

Non-specialist teachers rated P. E. as the lowest priority subject, and these negative attitudes might have extended to the P. E. classes they taught. In class, they did not give directions or performance feedback to students. Some of them went to the P. E. field with canes, thus scaring children. Questions were either not answered or answers were followed with warnings against further questions. Such behaviors would not enhance students’ feelings of satisfaction which, according to Harter (1978) and others (Frederick & Ryan, 1993; McAuley, Wraith & Duncan, 1991), played a significant role in maintaining and enhancing one’s motivation. Thus, the students in the non-specialist teacher category did not perceive themselves motivated to persist in sports as long as those in the specialist teacher category.

When specialist teachers scolded their students, the students were likely to perceive it as a way of encouragement because the reprimands were in the form of directions for better performance; and they were allowed to continue performing the activities. In contrast, the non-specialists used cessation of activity as a form of punishment. Horn (1985) demonstrated that the type of feedback given by significant others was salient in explaining levels of affect. Harter’s (1978) competence motivation
theory postulated that the values of socializing agents and the nature and strength of reinforcement go to impact perceptions of competence and intrinsic pleasure.

Physical appearance and scholastic competence did not contribute significantly to the difference between specialist and non-specialist teachers. Religious beliefs and practices in Ghana and a minimum of emphasis on issues related to body size (Cogan et al., 1996) might be possible explanations. The health and fitness benefits from physical education are only implied in these physical education classes. Specialist teachers did not verbalize aspects such as “looking good” or “losing weight” in classes they taught; thus, the students they taught would not differ from those in the non-specialist category.

Low perceptions in scholastic competence could be explained by the fact that similar attention was given to all students in learning situations which took place in the classrooms. Afternoon classes were for all students, and they were taught by regular classroom teachers. Competence Motivation Theory (Harter, 1978) purported that positive regard, reinforcements, and encouragement from significant others impact competence perceptions in specific domain areas. In this regard, finding a non-significant effect for scholastic competence would be justified. Besides, Marsh and Jackson (1986) indicated that high perceptions of athletic competence could impact perceptions of competence in other domain areas. The specialist teachers in this study failed to impact students’ athletic ability significantly; therefore, the other domain areas suffered too.
Perceptions of Competence of Ghanaian Students

Based on the mean scores, Ghanaian children in the present study perceived themselves to be moderately to highly competent in the scholastic, athletic, and physical appearance domains. They also had high levels of affect and exhibited similarly high amounts of persistence in their sports situations. These findings were seen for both categories of students. Levels of competence reported in the present study tended to be slightly higher than those reported by Harter (1985) and Granleese and Joseph (1995) but were similar to Cole’s (1991) findings. Merrel, Cedeno, & Johnson, (1993) suggested that even though the SPPC is not a norm referenced instrument in the traditional sense, tables of means and standard deviations may be referenced to determine how a given child’s score compare with those from a different study.

Harter (1978) contended that the socializing environment affects one’s self-esteem and perceived competence. Since Ghanaian children usually spend significant parts of every day in large group settings (school) as well as in small groups (free play situations within or outside school), they have lots of opportunities for interaction and communication. Self perceptions of competence generated from these school and free play situations could add to their competence perceptions irrespective of teacher type, that is, specialist versus non-specialist.

In cultures where free play situations are structured, opportunities for interaction and communication follow structured patterns and do not augur well for full enjoyment of free play especially if children feel they are being controlled, according to Sarkin,
McKenzie, and Sallis (1997). The not-so-structured free play contexts in Ghanaian schools, and society in general, might be a possible explanation to the finding of high competence perceptions on all the domain areas. While speculative, the high scores found for perceptions of competence may also be due to the children’s inexperience in completing surveys for research purposes.

The domain with the highest competence perception is affect in sports. This is not surprising considering that sports permeate the lives of Ghanaian children. Weiss, Smith, and Theeboom (1996) and Scalan and Simmons (1992) found that friendship opportunities, or making new friends, are salient factors in sport involvement and enjoyment. The varied and numerous opportunities that Ghanaian children have interacting with friends in sport situations might contribute to enjoyment in sports being rated highest. Interest in sports is seen in the way children organize small group games on their own without adult supervision. Ghanaian school children are unsupervised during break periods (recess), but a casual visitor might not notice this. This is because children keep themselves busy with physical activities and have no problems forming small teams on their own. They engage in activities like soccer, “ampe”, high jumping, long jumping, or track events. The smiles and shouts from these children are indications of how much enjoyment they are deriving from the games. Facial expressions, according to Harter (1978), are indicative of the extent of enjoyment of an activity.

Results also indicated that perceptions of physical appearance and global self-worth were high. The issue of body size is not as much a concern for these Ghanaian students as it is in some other cultures (Cogan, Bhallan, Sefah-Dedere, & Rholbhum, 1996);
therefore, it is hard for children to mock their friends based on body size. Cole (1991) suggested that the effects of physical attractiveness or appearance are more noticeable to others or are important to the individual when children first enter school. In this regard, students in the present study were used to each other (in the sixth grade) and might have become immune to the impact of other’s evaluations of their physical appearance.

**Gender Differences**

Findings support the hypothesis that boys and girls would differ significantly in their perceptions of competence, affect, and persistence in sports. The amount of variance explained by this significant gender effect, however, was only 3% and not suggestive of meaningfulness. The non-meaningful significant difference reported in this study seems to be contrary to Granleese and Joseph (1990), Harter (1985), and Van Dongen-Melman, Koot, and Verhulst (1993) who reported significant and meaningful gender differences in perceptions of competence. These studies failed to report the amount of variances explained by the significant main effects. Patterson and Faucette (1990) had a 4% variance explained by gender differences and refuted its meaningfulness.

Ghanaians, and students especially, are now beginning to realize that sports could be pursued as a business venture or profession. Performances at the national and international competitions by Ghanaian sportsmen and women have generated new interest in students to take sports seriously. To some extent, the increase in the number of televisions in Ghanaian households could help explain why there were only minimal
gender differences. Even though socialization practices in Ghana emphasize boys’
participation in sports more than girls’ and boys are expected to outperform girls in
physical activities, sport is not seen as a “masculinity rite” as it is in some other cultures
(Leonard, 1993).

It is also possible that attempts by non-governmental organizations in Ghana
encouraging girls to go into male dominated areas are having positive results. Granleese,
Turner, and Trew’s (1991) position was that boys tend to overestimate their
competencies, especially athletic and cognitive, while girls underestimate theirs. Marsh
and Jackson (1986) also suggested that girls’ involvement in athletics results in higher
perceived physical competence which, in turn, has a positive effect on self-concept in
other areas. Did the girls in this study overestimate their competence perceptions,
contrary to previous findings, or their involvement in athletics raised their competence
perceptions in other domain areas?

To some extent findings are in congruence with results from studies by Roberts,
for example, did not find any significant gender differences between physical activity
participants and non-participants. Trent et al. also reported that boys and girls were
similar in their perceptions of scholastic competence and athletic ability.
Practical Implications

Results from this study generate several practical implications. First, even though competence motivation theory was not supported, findings point to the need to take another look at Harter’s (1978) model. Results point to the possibility of the existence of a direct path between significant others’ subjective evaluations and perceptions of affect. According to the original model of Competence Motivation Theory developed by Harter (1978), intrinsic pleasure and enjoyment derived from significant others’ reinforcements and feedback are mediated by perceptions of competence. Harter purported that positive evaluation, coupled with general informational feedback, enhances a child’s feelings of competence which then leads to increased feelings of pleasure or enjoyment. The present results show that positive regard from specialist teachers (as significant others) directly impacted students’ perceptions of affect and persistence in sports.

Secondly, the influence of teachers, irrespective of type, on students’ perceptions was demonstrated by findings from this study. Teachers need to be aware that they impact children, not only in the cognitive domain, but in the psychosocial domains too. Unfortunately, efforts to enhance competence perceptions of students are being challenged by the absence of staff who are knowledgeable about movement education. What is important is to provide teachers, non-specialists especially, with the necessary knowledge base and to generate interest in teaching physical education. The Ministry of Education is constantly changing the educational system with the view of improving
education in the country, but structural and administrative improvements need to be coupled with the recruitment of capable teachers.

Differences in perceptions of affect and persistence in sports between the two categories of students should have implications for the Ghana Education Service and Ministry of Education relevant to the importance of providing competent physical education teachers in the elementary schools. An aim of physical education in Ghanaian elementary schools is to develop and maintain interest in physical activities (GES, 1987). Findings that students in the specialist category were higher in their perceptions of affect in sports than those in the non-specialist category might suggest that specialist P. E. teachers are helping towards the achievement of the aims of physical education in Ghanaian elementary schools.

The notion that experiences gained by students from physical education classes taught by classroom teachers are similar to those gained by students who are taught by specialist teachers seem to be erroneous as indicated by the results of this study. If these assertions hold true in future research, then every effort should be made by the Ministry of Education and the Ghana Education Service to provide specialist teachers in all elementary schools or at least have in-service training programs to improve the caliber of classroom teachers. Specialist teachers also need to modify their methods of teaching in order to impact students in all domain areas of competence.

Harter (1978) noted that a player’s ability strongly impacts perceptions of competence (supported by Ebbeck, 1994; Horn, 1985; Klint & Weiss, 1987) and that skill development was an important reason for participating in physical activities. This
suggests that if the areas of skill development and ability are positively impacted then perceptions of competence would be increased. Since specialist teachers failed to impact their students’ perceptions of athletic ability, it could be speculated that they did not meet their students’ needs of skill development. Thus, the effectiveness of the specialist teachers leaves much to be desired. The specialist teachers might not be working hard enough in the aspect of skill development. Specialist teachers could increase their effectiveness if they modified their modes of teaching, especially in terms of type and number of activities they taught.

This need for an extended curricular approach also extends to District and Regional Directors of Physical Education who currently evaluate P. E teachers on the number of students produced for competitions. The rationale driving many schools today is rooted in the premise that P. E. classes are the places where Olympic athletes are born. So long as the evaluation process continues to be based on this premise, there is not going to be any major variations in the activities taught by the specialist teachers; and P. E. classes will remain tied to the coaching arena. Children’s interest need to be considered in the development of P. E programs. For far too long, Ghanaian children have been neglected in curricular decisions.

The Ghana Education Service has stressed the development and maintenance of interest in sports and physical activity as an aim of P. E. in Ghana (GES, 1987). Present findings indicate that physical education teachers, and classroom teachers to a lesser extent, are striving to achieve this aim. However, much needs to be done in order for positive effects to be seen in more domain areas of competence. In Ghana the
responsibility of teaching P. E. in schools often rests on the shoulders of classroom teachers. Since the number of specialist teachers is too small to meet the need in all schools, the most realistic way to achieve the goal of quality P. E. would be a combination of an effective specialist and a well trained classroom teacher. It behooves the Ghana Education Service and Ministry of Education to appropriately prepare both specialist and non-specialist physical education teachers. Frequent in-service training programs could be organized for these classroom teachers.

**Future Directions**

This study provides a basis for future investigations and directions. First the need for suitable instruments to generate specific information is very important. Results from the present study point to the need for a validation study to establish the appropriateness of the SPPC scale within the Ghanaian culture. The social acceptance subscale, especially, might have to be modified to suit the cultural environment or to more clearly specify the situational aspects of social acceptance in Ghana.

Results from this study also point significant others having a direct impact on perceptions of intrinsic pleasure and not mediated by perceptions of competence. Future studies should employ statistical designs such as path analysis to ascertain the validity of this finding and thus suggest a modification of the model of competence motivation.

An extended future study might seek to find if differences exist among students on their competence perceptions in other regions in Ghana. Even though the findings were
similar for the four regions assessed in this study, differences were shown in the amount of contributions of individual variables. These regions are all in the southern sector of Ghana. In order to establish meaningful curricular changes in schools throughout the country, it would be necessary to replicate the study using participants from the northern sector of the country. Future studies should employ different techniques and statistical designs from which results could be generalized with more confidence.

Responses to paper-and-pencil questionnaires do not necessarily indicate how a person will behave or feel in real world situations. The responses only indicate the individual’s attitude to hypothetical situations (Philips, 1993), unlike behavior which involves real reactions with real consequences. As such, future studies should try adopting methods that would capture children’s real behaviors in physical education classes. It might be necessary to incorporate more qualitative measures along with systematic observational techniques to examine children’s actual behaviors that are related to competence achievements.

Harter (1978, 1985) purported that children’s competence perception scores are directly influenced by the particular social reference group they are employing. One must therefore determine the social comparison group of children. That competence motivation theory was not supported could be due to differences in reference groups. Since this study was not able to identify the particular group of children students had in mind when they were responding to the items, it is not appropriate to do any realistic comparisons or inferences. The process for generating such information was beyond the scope of the
present study. It is suggested that further studies be conducted to look at the particular comparison group.

Furthermore it is important to establish whether Ghanaian boys and girls differ in their perceptions of competence, as shown by previous studies for students from other cultures (Harter, 1985; Granleese, Turner & Trew, 1989). If results from subsequent studies indicate minimally or non-significant differences then possible reasons for such a trend need to be examined. Are Ghanaian teachers’ subjective evaluations similar for both boys and girls? Are girls’ roles defined on equal terms as those of boys within the Ghanaian culture? A possible approach to derive answers to such questions would be to assess the relationships between students’ competence perceptions and significant others’ ratings of the students’ perceptions by gender. Within the school environment, for example, teachers could be asked to complete the Children’s Competence Scale for Teachers (Harter, 1985). This rating scale represents a teacher’s perceptions of the child on the same items for each domain of competence as the Self-Perception Profile for Children (Harter, 1985). Significant others could also be assessed on their perceived support and regard toward boys’ and girls’ participation in sports and physical activities.

This study has opened the doors to an area that has had little or no attention within the Ghanaian school system, i.e., the influence of physical education specialists on the students they teach. An important need exists to extend studies, especially in the realm of psychosocial factors in sports, to different cultural milieu. Further investigations need to be done in Ghanaian schools to determine ways of developing a strong basis for interest in sports, developing sports skills, and improving the status of P. E. Considering
the large proportion of children involved in P. E in the elementary schools, it is essential
to evaluate what the programs are offering to these children.

There is little evidence that children have participated in research studies related to
the P. E. curriculum or the teaching-learning process in Ghana. The few studies that have
been done focused on interviews with teachers regarding their knowledge and feelings
about the teaching-learning process. Ghanaians need to involve students’ views in their
decision-making processes that affect children.

Many factors influence the formation of perceptions of ability and continued
motivation in sports, according to Black and Weiss (1992). Additional research is thus
warranted to explore and generate information on other factors that influence students’
motivation.

Conclusions

This research was both self-report based and correlational. No direct cause-and-
effect relationships were intended for examination. Causal inferences are only speculative,
but results might be regarded as offering a basis for more refined hypotheses to be tested
in subsequent research. Within these limitations, the findings indicate that:

(1) There are no significant differences between students who are taught by
specialist physical education teachers and those taught by non-specialist teachers in
perceptions of athletic ability, global self-worth, physical appearance, and scholastic
competence.
(2) Students who are taught by specialist physical education teachers are significantly different in their perceptions of affect in sports than those taught by non-specialist teachers; the specialist teachers, therefore, seem to be contributing to the achievement of the aims (developing and maintaining interest) of physical education in the elementary schools.

(3) Generally, Ghanaian elementary school students have high perceptions of athletic ability, global self-worth, physical appearance, scholastic competence, affect and persistence in sports irrespective of whether they were taught by specialist or non-specialist physical education teachers.

(4) There is the need to take a look at the model of competence motivation to see if contributions of significant others impact perceptions of affect directly. The study also serves as the beginning for cross-cultural validation of the concepts underlying competence motivation theory.

(5) This study should serve as a springboard for Ghanaians to look deeper into the effectiveness of teachers and other socializing agents within the school system.

In conclusion, the wave of change sweeping across the world in the realm of attitudes toward sports and physical activity calls for an understanding of the dynamics of different societies. Sharing experiences in different countries and drawing together different views can help generate important information in the continuing debates about the future of P. E. not only in Ghana but also in other parts of the world.
References


Croce, R. & Lavay, B. (1985). Now more than ever: Physical education for the

Curtner-Smith, M. D. (1995). Teacher behaviors related with pupil psychosocial


APPENDICES
Appendix A

Letter of Consent to Regional Directors of Physical Education
Letter of Consent to Regional Directors of Physical Education

My name is Beatrice Feddy and I am a graduate student at Oregon State University in the United States. I am conducting a study for my Ph. D. dissertation on the perceptions of Ghanaian primary school students of their physical education classes. The study will involve students taught by specialist physical education teachers (detached P. E. teachers) and those taught by classroom teachers, and requires students to complete a set of questionnaires.

Information provided by subjects will be strictly confidential. Responses will not be seen by or discussed with teachers nor other classmates. The set of questionnaires will take approximately 45 minutes to complete.

I am by this letter requesting (a) permission to conduct the study in selected schools in your region; and, (b) for a list of schools in your region where physical education is taught by specialist teachers.

It is envisaged that results of the study will provide information towards improvements in teaching (especially physical education) in Ghanaian primary schools. The Curriculum and Research Division of the Ghana Education Service will be furnished with results of the study.

If you have any questions about this research at any time, please contact Dr. Sandra Suttie (541-737-6794), or Dr. Vicki Ebbeck (541-737-6800), Langton Hall, Oregon State University, Corvallis, Oregon, 97331.

Your signature below indicates that you have read and understood the information provided and that you have given consent for students from selected schools in your region to serve as participants for the study.

Signature: ________________________________ Date: ____________________
Appendix B

Informed Consent Form for Headteachers
Informed Consent Form for
Headteachers

A study is being conducted to assess perceptions of Ghanaian elementary school children about their physical education classes, and your school has been selected as one of the participating schools. Approval has already been sought from the regional Director of Physical Education.

Students will be required to complete a set of questionnaires which takes approximately 45 minutes to complete. Participation of students, however, will be voluntary. Only the researcher conducting this study will see students’ responses; answers will not be seen by teachers nor other classmates.

It is envisioned that results from the study will provide useful information to the Ghana Education Service especially the Curriculum and Research Division as to ways of improving teaching (especially physical education) in the primary schools.

If you have any questions about this research at any time, please contact Dr. Sandra Suttie (541-737-6794), or Dr. Vicki Ebbeck (541-737-6800), Langton Hall, Oregon State University, Corvallis, Oregon, 97331.

Your signature below indicates that you have read and understood the information provided and that you have given permission for students in your school to serve as participants for the study.

Signature: ___________________________  Date: ___________________
Appendix C

Informed Consent Form for Parents/Guardians
Informed Consent Form for Parents/Guardians

Oregon State University
Department of Exercise & Sport Science
Corvallis, OR 97331-5802

1. Dr. Sandra Suttie, Associate Professor and Beatrice Feddy, Doctoral student at Oregon State University, U.S., have requested my minor child’s (ward’s) voluntary participation in a research study. The purpose of this study is to examine certain social and psychological outcomes derived from participation in physical education lessons.

2. My child’s (ward’s) participation will involve completion of a set of written questionnaires which takes approximately 45 minutes to complete.

3. There are no foreseeable risks associated with participating in the study. I have been informed that other children in similar age group as my child (ward) who completed the questionnaires did not report any negative side effects.

4. I understand that the possible benefits of my child’s (ward’s) participation in this research include the experience of completing surveys not related to school achievement tests, and the opportunity to think more about him/herself in terms of the type of person he/she is in specific achievement domains. I understand also that results will be given to the Ghana Education Service and the Ministry of Education for improvements in the teaching of physical education in the primary schools.

5. I understand that my child’s (ward’s) name or identity will not be revealed. Documents with my child’s (ward’s) name will be destroyed as soon as they are no longer needed. Only Dr. Sandra Suttie, and Beatrice Feddy will have access to this confidential information. Information that will be sent to the Ministry of Education will not have my child’s/ward’s name nor any information that will reveal his/her identity.

6. I have been informed that neither I nor my child (ward) will be compensated for my child’s (ward’s) participation in this study.

7. I have been informed that if I have any questions about my child’s (ward’s) rights as a participant in this research project, I can contact Dr. Sandra Suttie (541-737-6794) or Beatrice Feddy (541-737-6793).

8. I have read, with assistance from my child/ward, and understood the above informed consent - the nature, demands, and possible benefits of the project. I understand that my child’s (ward’s) participation is voluntary and that I may withdraw my consent and
discontinue my child’s (wards) participation at any time without penalty or loss of benefit to me. A copy of this consent form will be given to me.

9. I have been informed that consent has been given by the Regional Director of Physical Education and my child’s Headteacher for the study to be conducted in the school.

10. I understand that my signature below indicates I have given consent for my child to participate in the study.

Parent’s or Legal Guardian’s Signature

Printed Name

Date
Appendix D

Informed Assent Form for Students
Informed Assent Form for Students

Perceptions of competence, persistence and affect of Ghanaian primary school students: Specialist versus non-specialist physical education teachers.

1. Dr. Sandra Suttie, Associate professor and Beatrice Feddy, Doctoral student at Oregon State University, U.S., have requested my voluntary participation in a research study. The purpose of this study is to examine what Ghanaian elementary school children think about themselves in terms of how competent they are in doing their class work, in making friends, in athletics; how long they perform physical activities; and what their level of enjoyment is.

2. My participation will involve completion of a set of written questionnaires which takes about 45 minutes.

3. The researcher has explained to me that there are no injuries or risks associated with participation in the study and that other children my age who completed the survey did not report any negative side effects. I understand that results will be given to the Ghana Education Service and the Ministry of Education for improvements in the teaching of physical education in the primary schools.

4. I understand that participation in the research will give me the experience of completing surveys not related to classroom tests. I have also been informed that I will not be paid for participating.

5. The researcher has explained to me that my name will not be seen by anyone except Beatrice Feddy and Dr Suttie. Information that will be sent to the Ministry of Education will not have my name nor clues that will reveal my identity. I have been informed that if I have any questions I can ask the researcher or my parent/guardian.

6. I understand that my parent has given consent to my participation and that permission has also been sought from my headteacher. I also understand that my participation is voluntary and that I may withdraw my consent and discontinue my participation at any time without penalty. My parent/guardian can also withdraw my participation at any time without penalty.

7. Contents of my parent's/guardian's consent form have also been explained to me so that I can assist my parent/guardian if needed.
8. I understand that my signature below shows that I have given my consent to participate in the study voluntarily. A copy of this consent form will be given to me.

Signature: ____________________________________________

Printed Name: ________________________________________

Date: ________________________________________________
Appendix E

Instructions to Self-Perception Profile for Children
Instructions to Self Perception Profile for Children

We have some sentences here and, as you can see from the top of your sheet where it says “WHAT I AM LIKE”, we are interested in what each of you is like. This is a survey and NOT a test. There are no right or wrong answers. Since children are very different from one another, each of you will be putting down something different.

First let me explain how these questions work. There is an example question at the top, marked (a). I’ll read it aloud and you follow along with me. This question talks about two kinds of children, and we want to know which children are most like you.

(1) So, what I want you to decide first is whether you are more like the children on the left side who should rather play outdoors, or you are more like the kids on the right side who would rather watch T. V. Don’t mark anything yet, but first decide which kind of children is most like you, and go to that side of the sentence.

(2) Now, the second thing I want you to think about, now that you have decided which kind of children are most like you, is to decide whether that is only sort of true, or really true for you. If it is only sort of true, then put an √ in the box under sort of true; if it is really true, then put an √ in that box under really true.

(3) For each sentence you check only one box. Sometimes it will be on one side of the page, another time it will be on the other side of the page, but you can only check one box for each sentence. You don’t check both sides, just one side most like you.

(4) OK, that one was just for practice. Now we have some more sentences which I’m going to read out loud. For each one, just check one box, the one that goes with what is true for you, what you are most like.
Appendix F

Set of Items Completed by Students
Set of Items Completed by Students

**WHAT I AM LIKE**

Name: ____________________________  Age: _______ Years

Boy OR Girl (Circle One). Region: ______________ Class: ______

**EXAMPLE SENTENCE**

<table>
<thead>
<tr>
<th>Really True for me</th>
<th>Really True for me</th>
<th>Really True for me</th>
<th>Really True for me</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some children would rather play outdoors in their spare time</td>
<td>BUT Other children would rather watch TV.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REMEMBER TO CHECK ONLY ONE BOX FOR EACH ITEM**

1. Really True for me | Really True for me | Really True for me | Really True for me |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Some children feel that they are very good at their school work.</td>
<td>BUT Other children worry about whether they can do the school work assigned to them.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Really True for me | Really True for me | Really True for me | Really True for me |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Some children find it hard to make friends.</td>
<td>BUT Other children find it pretty easy to make friends.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.
Really True for me
Really True for me

Some children do very well at all kinds of sports BUT Other children don’t feel that they are very good when it comes to sports.

4.
Really True for me
Really True for me

Some children are happy with the way they look BUT Other children are not happy with the way they look.

5.
Really True for me
Really True for me

Some children are often unhappy with themselves BUT Other children are pretty pleased with themselves.

6.
Really True for me
Really True for me

Some children feel like they are just as smart as other children their age BUT Other children aren’t so sure and wonder if they are smart.

7.
Really True for me
Really True for me

Some children have a lot of friends BUT Other children don’t have very many friends.
8. Really True for me Really True for me Really True for me Really True for me
Some children wish they could be a lot better at sports BUT Other children feel they are good enough at sports.

9. Really True for me Really True for me Really True for me Really True for me
Some children are happy with their height and weight BUT Other children wish their height or weight were different.

10. Really True for me Really True for me Really True for me Really True for me
Some children don’t like the way they are leading their life BUT Other children do like the way they are leading their life.

11. Really True for me Really True for me Really True for me Really True for me
Some children are pretty slow in finishing their school work BUT Other children can do their school work quickly.

12. Really True for me Really True for me Really True for me Really True for me
Some children would like to have a lot of friends BUT Other children have as many friends as they want.
13. Really True for me

Some children think they could do well at just about any sports activity they haven't tried before

BUT Other children are afraid they might not do well at sports they haven't ever tried.

14. Really True for me

Some children wish their body was different

BUT Other children like their body the way it is.

15. Really True for me

Some children are happy with themselves as a person

BUT Other children are often not happy with themselves.

16. Really True for me

Some children often forget what they learn

BUT Other children can remember things easily.
17. Really True for me
Really True for me
Some children are always doing things with a lot of children but Other children usually do things by themselves.

18. Really True for me
Really True for me
Some children feel that they are better than others their age at sports but Other children don’t feel they can play as well.

19. Really True for me
Really True for me
Some children wish their physical appearance (how they look) was different but Other children like their physical appearance the way it is.

20. Really True for me
Really True for me
Some children like the kind of children they are but Other children wish they were someone else.

21. Really True for me
Really True for me
Some children do very well at their classwork but Other children don’t do very well at their classwork.
22. Really True for me
True for me
Some children wish that more people their age liked them
BUT Other children most people their age do like them.

23. Really True for me
True for me
In games and sports some children usually watch instead of play
BUT Other children usually play rather than watch.

24. Really True for me
True for me
Some children wish something about their face or hair looked different
BUT Other children like their face and hair the way they are.

25. Really True for me
True for me
Some children are very happy being the way they are
BUT Other children wish they were different.
26. Really True for me Really True for me
Some children have trouble figuring out the answers in school
BUT Other children always can figure out the answers.

27. Really True for me Really True for me
Some children are popular with others their age
BUT Other children are not very popular.

28. Really True for me Really True for me
Some children don’t do well at new outdoor games
BUT Other children are good at new games right away.

29. Really True for me Really True for me
Some children think that they are good looking
BUT Other children think that they are not good looking.
30. Really True for me Really True for me
Some children are not very happy the way they do a lot of things
BUT Other children think the way they do things is fine.

31. Really True for me Really True for me
Some children stop playing a sport or game when they find that they aren’t so good at it
BUT Other children will continue to play that sport or game even when they aren’t very good.

32. Really True for me Really True for me
Some children will practice skills and sport for a short time and then move on to a different skill or sport
BUT Other children keep practicing one skill or sport for a long time.

33. Really True for me Really True for me
When a game or sport is hard some children will continue to play that game or sport
BUT Other children try something else (like music, art, or dancing) when the game or sport is hard.
The following statements will give us an idea as to your interest in sports. Please CIRCLE the responses which describe how much you agree with each statement.

Circle only **ONE** response for each statement.

1. I enjoy participating in sports very much.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neither Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Disagree</td>
<td>Nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>

2. It is fun to engage in sports.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neither Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Disagree</td>
<td>Nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>

3. I think sports is boring.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neither Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Disagree</td>
<td>Nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>

4. I would describe sports as very interesting.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neither Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Disagree</td>
<td>Nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>
Appendix G

Subscale Items for the Self-Perception Profile for Children
Subscale Items for the Self-Perception Profile for Children

**Athletic Competence**

1. Some children do very well at all kinds of sports BUT Other children don’t feel that they are very good when it comes to sports.

2. Some children wish they could do a lot better at sports BUT Other children feel they are good enough at sports.

3. Some children think they could do well at just about any new sports activity they haven’t tried before BUT Other children are afraid they might not do well at sports they haven’t ever tried.

4. Some children feel that they are better than others their age at sports BUT Other children don’t feel that they can play as well.

5. In games and sports some children usually watch instead of play BUT Other children usually play rather than watch.

6. Some children don’t do well at new outdoor games BUT Other children are good at new games right away.

**Global Self-Worth**

1. Some children are often unhappy with themselves BUT Other children are pretty pleased with themselves.

2. Some children don’t like the way they are leading their life BUT Other children do like the way they are leading their life.

3. Some children are usually happy with themselves as a person BUT Other children are often not happy with themselves.

4. Some children like the kind of person they are BUT Other children wish they were someone else.
5. Some children are very happy being the way they are BUT Other children wish they were different.

6. Some children are not happy with the way they do a lot of things BUT Other children think the way they do things is fine.

Physical Appearance

1. Some children are happy with the way they look BUT Other children are not happy with the way they look.

2. Some children are happy with their height and weight BUT Other children wish their height or weight were different.

3. Some children wish their body was different BUT Other children like their body the way it is.

4. Some children wish their physical appearance (how they look) was different BUT Other children like their physical appearance the way it is.

5. Some children wish that something about their face or hair looked different BUT Other children like their face and hair the way it is.

6. Some children think that they are good looking BUT Other children think that they are not very good looking.

Scholastic Competence

1. Some children feel that they are very good at their schoolwork BUT Other children worry about whether they can do the schoolwork assigned to them.

2. Some children feel like they are just as smart as other kids their age BUT Other children aren’t so sure and wonder if they are smart.

3. Some children are pretty slow in finishing their schoolwork BUT Other children can do their school work quickly.
4. Some children forget what they learn BUT Other children remember things easily.

5. Some children do very well at their classwork BUT Other children don’t do well at their classwork.

6. Some children have trouble figuring out the answers in school BUT Other children can almost always figure out answers.

Social Acceptance

1. Some children find it hard to make friends BUT Other children find it pretty easy to make friends.

2. Some children have a lot of friends BUT Other children don’t have very many friends.

3. Some children would like to have a lot more friends BUT Other children have as many friends as they want.

4. Some children are always doing things with a lot of children BUT Other children usually do things by themselves.

5. Some children wish that more people their age liked them BUT Other children feel that most people their age do like them.

6. Some children are popular with others their age BUT Other children are not very popular.
Appendix H

Items Measuring Interest/Enjoyment in Sports
Items Measuring Interest/Enjoyment in Sports

1. I enjoy participating in sports very much.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree</th>
<th>Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

2. It is fun to engage in sports.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree</th>
<th>Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

3. I think sports is boring.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree</th>
<th>Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

4. I would describe sports as very interesting.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree</th>
<th>Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>
Appendix I

Items for Perceived Persistence
in Sports
Items for Perceived Persistence in Sports

1. Some children stop playing a sport or game when they find that they aren’t so good at it BUT Other children will continue to play that sport or game even when they aren’t very good.

2. Some children will practice skills and sport for a short time and then move on to a different skill or sport BUT Other children keep practicing one skill or sport for a long time.

3. When a game or sport is hard some children will continue to play that game or sport BUT Other children try something else (like music, art or dancing) when the game or sport is hard.