1. Introduction

A number of national and international reports have highlighted the marginal position held by physical education (PE) in school curricula around the world (Hardman and Marshall, 2000; Macdonald and Brooker, 1997; Williams, 1997). This is despite mounting evidence of the contribution the subject can make in the promotion of physical activity and sporting participation in children, young people and, perhaps, adulthood (Sallis and Owen, 1999; Shephard and Trudeau, 2000), and of the serious societal and personal consequences of low levels of physical activity. This situation has led some to call for a reappraisal of the place and role of PE in schools (e.g., Talbot, 2001; UNESCO, 1999). Some have argued that any such reappraisal should be informed by the ways in which students perceive PE (Tannehill, et al, 1994).

This study, part of a multi-national, comparative project, examines students’ views of PE, based on a sample drawn from two countries, Japan and England. Working with boys and girls (aged 7-18 years), in different stages of schooling, it was intended to gather a range of data related to their feelings towards PE, self-perception of ability, views of its importance relative to other subjects, and understanding of the outcomes of participation. Reflecting earlier work, this study found most students enjoy and value PE; younger students of both countries are most likely to be positive about PE and more confident about their ability. Despite substantial agreement between the two groups, significant differences were found between responses relating to self-competence, and the importance attached to PE in relation to other subjects. Since PE is an integral feature of young people’s introduction to lifelong physical activity, evidence related to their views of the subject should be a matter of interest to policymakers and practitioners.

Keywords: attitudes, perceptions, international, participation, competence
activity out-of-school (Carlson, 1995; Ennis, 1996). Promoting positive attitudes toward PE seems to be an important component of the foundation of lifelong physical activity (Silverman and Subramaniam, 1999).

Empirical research suggests that the majority of students enjoy PE and associate it with positive outcomes (Butcher, 1982; Coe, 1984; Fairclough, 2003). Enjoyable PE experiences are believed to facilitate the development of positive attitudes toward physical activities, both during childhood and later in life (Sallis, et al, 1999). However, studies have found a marked age-related decline in positive attitudes towards PE; compared to younger children, high school students give lower rates to the perceived importance of PE compared to other subjects (Birtwistle and Brodie, 1991).

There is increasing evidence that attitudes to and perceptions of the subject are mediated by a host of factors, including age, gender and curriculum content (Carroll and Loumidis, 2001; Goudas and Biddle, 1993; Itani, et al., 2001). There are also indications that a growing group of students are disengaging from PE (Carlson, 1995). Whilst research into specific aspects of engagement in PE and physical activities, such as gender, activities, motivation, is quite plentiful (Silverman and Subramaniam, 1999), studies of students’ views on the subject are relatively limited. Studies of younger students’ perceptions are particularly rare (Birtwistle and Brodie, 1991; Shropshire, et al, 1997). Gender is a variable that has proved particularly popular for researchers in this area. Researchers have found that many girls are less willing to participate in PE activities, derive less enjoyment and are less tolerant of missing lessons than boys (Luke and Sinclair, 1991; Shropshire, et al, 1997). Studies have shown that boys and girls within similar learning situations often perceive the PE environment differently (Scraton and Flintoff, 1992; Shropshire, et al, 1997), and that the PE experience is significantly different for boys and girls (Dickenson and Sparkes, 1988).

Many studies have shown that positive feelings towards PE decline with age for both boys and girls, but this decline is most pronounced for girls (van Wersch et al, 1992; Dickinson and Sparkes, 1988). Various explanations for these findings have been suggested, including that the onset of adolescence can cause embarrassment regarding their physical development which can in turn influence enthusiasm and interest in the subject (Earl and Stennett, 1987), and that as they grow older, boys and girls are influenced by the low status of PE (van Wersch et al, 1992).

Studies in both England and Japan generally reflect findings from international research. Laws (1997) found that the most commonly recurring expressions of 11-16 English students to describe PE were ‘fun’ and ‘enjoyment’. This location of fun and enjoyment as important parts of the frame of reference for pupils in PE was also found by Fisher (1996) and Goudas and Biddle (1993), although there is evidence that girls enjoy the subject less than boys (Carroll and Loumidis, 2001). Studies in Japan also reveal generally positive attitudes of pupils towards PE (Benesse Educational Research Center, 1994 and 2000), with nearly 70% of primary school children reporting that they enjoyed PE lessons. Students reported that, as a result of these positive feelings towards the subject, they were keen to engage in physical activity (Benesse Educational Research Center, 2000). Moreover, 73.4% (Boy=75.8%, Girl=70.6%) of junior high school children believed that they could become healthy as a result of participation in PE lessons (Benesse Educational Research Center, 1994).

Research into the views of children and young people regarding PE has succeeded in highlighting areas for concern, such as age, gender and curriculum content. Despite this, more research is needed to examine students’ views of the subject itself, especially the views of younger students. Most striking is that there is still little comparative international research in this area.

3. Method

All data were collected by means of a questionnaire, which sought basic demographic details and data locating each student in each of the four aspects of student understanding. The questionnaire covered two sides of one A4 sheet of paper and was designed to take no longer than 20 minutes to complete. Gatekeepers such as Headteachers and/or Heads of Department were contacted via the telephone and asked to participate in the study. Selected schools were asked to administer the questionnaire to whole classes.

3.1. Pilot

The questionnaires were piloted with 695 students attending elementary and high school schools in three
educational authorities in England, whilst 371 were completed by students attending elementary and junior high schools in a region of Japan. Feedback forms were administered to teachers and researchers. The aim of the pilot study was to expose any problematic questions to the novel measure and to draw attention to any alterations that should be made to the survey procedure. As a result of the pilot study, a question that asked students to rank PE against other school subjects in terms of enjoyment was omitted, as analysis suggested that the repetitive nature of its format meant that some students disengaged from the questionnaire. It was also decided that two slightly differentiated questionnaires would be administered to students in Japan to allow for the distinct written codes taught to for children of different ages.

3.2. Sample

Questionnaires were distributed by teams within each of the countries. 20 English schools participated in the questionnaire study (9 Elementary and 11 High Schools), located within a large, geographically diverse region in the south of England. A more geographically dispersed sample was achieved in Japan, where 24 participating Japanese schools (12 Elementary and 12 High Schools) were located in Northern Island (Hokkaido), and the northern part of Main Island (Miyagi), Tokyo, the middle part of Main Island (Toyama) and Southern Island (Fukuoka). All schools and areas in which they were located were chosen to represent a broad socio-economic spread. Schools were asked to target students in three age groups (7-10, 11-14 and 15-18) and to administer the questionnaire to two complete classes in each relevant year group. This classification of ages was selected as meaningful following discussions with teachers in both countries. The schools were asked to ensure that the questionnaire was completed by a minimum of 300 students for each of the three age ranges, to ensure that there was enough comparative data from each respondent per subcategory. The characteristics of the achieved samples are provided in Tables 1 and 2.

3.3. The Questionnaire

The items in the questionnaire were grouped according to visual appearance rather than to theme, following the suggestions made during the pilot procedure. The final questionnaire contained questions that sought to:

- provide basic demographic information to form the foundation for investigating factors that might affect the pattern of responses to later questions;
- obtain information pertaining to their feelings about the subject;
- determine students’ self-perceptions of their ability;
- establish how students ranked the importance of other subjects in relation to PE;
- invite respondents to agree or disagree to statements relating to a number of different outcomes, namely physical, social, affective and intellectual outcomes (statements were based on themes suggested in a recent international study (Bailey and Dismore, 2005).

3.4. Analysis

The results of the questionnaires were analysed quantitatively using SPSS Version 13.0 for Windows and this paper reports straightforward descriptive and estimative statistics.

4. Findings

4.1. Feelings Towards PE

The statistical relationship between country and
feelings appeared to be highly significant ($\chi^2=28.6$, $p=.00$). The majority of participants in England and Japan (86% in England and 78% in Japan) reported that they loved or liked PE. A slightly higher number of participants in Japan were not sure, did not like or hated the subject compared to the English participants (Table 3).

The results differed according to country. For Japan, the significance value was low (Japan, $\chi^2=38.5$, $p=.00$) whereas in the case of England, it was slightly higher (England, $\chi^2=8.4$, $p=.40$), indicating that there is a less significant relationship between feelings and age in this country. Most striking were the results obtained from participants between 15-18 year olds. In both countries these participants were more likely to have negative feelings about PE, but this was particularly the case in England. Furthermore, a higher number of 15-18 year olds in Japan than in England expressed the strongest positive feelings towards PE. These results suggest that in general the older students in Japan had more positive feelings towards the subject than those in England. A large proportion of participants in the 7-10 age range from both countries claimed to love and like PE, indicating that it is students from this age group that are most likely to form the group which has positive feelings about the subject.

The results according to gender are also displayed in Figures 3 and 4. The relationship between the two variables was highly significant in the case of
Table 4 Perceptions of competence in Japan and England

<table>
<thead>
<tr>
<th></th>
<th>(a) Japan</th>
<th></th>
<th>(b) England</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Excellent</td>
<td>197</td>
<td>16</td>
<td>227</td>
</tr>
<tr>
<td>Good</td>
<td>399</td>
<td>32</td>
<td>539</td>
</tr>
<tr>
<td>Not sure</td>
<td>460</td>
<td>36</td>
<td>173</td>
</tr>
<tr>
<td>Not so good</td>
<td>154</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>Poor</td>
<td>43</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Missing</td>
<td>13</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1266</td>
<td>100</td>
<td>1034</td>
</tr>
</tbody>
</table>

Figures 5 and 6 show the ability according to age in Japan and England, respectively.

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4.2. Perceived Competence

We asked the students to rate their competence in PE, and overall, the low significance value indicates that there was a relationship between country and competence ($\chi^2=177.9$, $p=.00$). Responses from English and Japanese samples to this question did differ considerably. The results presented in (Table 4 (a) and (b)) indicate that students in Japan were less likely to describe their competence as good or excellent, and more likely to state that they were unsure. The opposite was true for those in England who were less likely to state that their physical self-competence was not so good or poor.

These results were then analysed according to age presented in Figures 5 and 6. Significance tests revealed that, like in the case of feelings, there were different patterns according to country. The results from Japan ($\chi^2=83.3$, $p=.00$) appeared to be highly significant compared to the results collected in England ($\chi^2=8.4$, $p=.40$). These slight differences in pattern indicate that other variables as well as age may be related to the students’ feelings. Responses from students in the 7-10 age group in both countries were more likely to form the category of excellent. Finally, girls were most likely to report negative feelings towards PE, especially in Japan.
more likely they were to state that they are good or
not so good at PE. Indeed, 62% of those who stated
that they were good at PE in England were in the 15+
age range. In contrast, the results from Japan showed
a much greater number who were not sure about how
they felt about their ability, especially in the older
age groups. In general, significantly more students
in Japan recorded that they were of low ability in
the subject, but these figures tended to increase in
relation to the students’ age in both countries.

There were significant results pertaining to gender
and ability for both Japan ($\chi^2=85.4$, $p=.00$) and
England ($\chi^2=54.4$, $p=.00$). As displayed in Figures
7 and 8, a significantly higher proportion of males
than females in both countries thought that they
were ‘excellent’. However, as was the case with
reported feelings, more English girls than boys
rated themselves moderately positively. Uncertain
or moderately negative ratings of ability were more
common amongst girls in both countries, with the
Japanese girls most likely to judge themselves as
either ‘not so good’ or ‘poor’.

In general, the results from both countries show that age and gender are significant factors in
determining perceived competence and that this
varies according to country. In England, students
were more likely to state that they were good at PE
rather than excellent, and this pattern seems to get
amplified as the child grows older. In Japan the
results showed that the older age groups tended to
state that they were not sure about how they felt
about their ability, whilst in general, students in Japan
were also more inclined to record that they were not
good or poor at the subject. In both countries males
were most likely to report positive ratings of their
own competence.

4.3. Comparison of Physical Education and School
Sport to other Subjects

Participants were invited to rate the relative
importance of PE against a number of other curriculum
subjects. The National Curriculum operating in all
English state schools meant that the same list of
subjects could be presented to all schools and age
groups. The greater diversity of curricular provision
in Japanese schools necessitated the use of slightly
different lists of subjects, according to age and school.

The results can be observed in Figures 9 and 10. In
general, students from England tended to vary more in
their opinions on the importance of subjects in relation
to PE. Students in Japan were more likely to state that
other subjects were just as important as PE.

Whilst one might expect students from different
countries to assign similar value to the importance of
their first language, this did not prove to be the case.
A considerable number of students in England stated
that they thought English to be more important than
PE. In contrast, a high number of students in Japan
recorded that Japanese was just as important and not as
important as PE. Interestingly, students in Japan were
more likely to state that English was more important
than PE, just as students in England had for English.

The data from England also revealed that students
tended to rate mathematics and science as more
important than PE, although this was not the case in
Japan. Like Japanese, mathematics was regarded by
most students as important as PE. Science in Japan
is only taught to older students in junior high school,
whilst it is taught to all ages in England. Perhaps
because of this fact, the majority of students in Japan regarded science as important as PE, with far fewer students in Japan than in England rating the subject as more important than PE.

Both countries’ curricula included music, art, technology and foreign languages. Whereas students from Japan tended to regard these subjects as important as PE, a greater percentage of students in England rated music and art as not as important. Agreement was reached by the majority of students from both countries on the subject of technology, who considered it to be as important as PE. Most students from both countries agreed that foreign languages were just as important as PE and more students from Japan recorded this rating than students in England. Most students in England were unsure of the relative importance of citizenship and PE, and this might reflect the relative novelty of this subject in the National Curriculum. Similar uncertain ratings were reported by the Japanese students for Life and Foreign Languages, although it is less apparent why this would be the case.

The results were also analysed according to age. In general, as students in England got older, they were more likely to claim that mathematics, English and science were more important than PE. Similarly, the older students in Japan were more inclined to distinguish between the more important subjects and other subjects. An even spread of ratings was recorded from students aged 7-10 in England, with
the exception that more claimed music to be not as important. The results for the 11-14 age group in England were similar to that of the 7-10 age range, except that religious education as well as music was deemed less important than PE. The highest number of over 15 year olds in England also regarded art, citizenship and technology to be not as important as PE. Citizenship was the subject most likely to draw an uncertain response from all age groups. Even though most subjects were deemed by students in Japan to be as important as PE, there were a few exceptions. For instance, a surprisingly high number of 7-10 year olds in Japan claimed that art and technology were more important subjects in comparison to PE. Mathematics was rated by 45% of students in Japan to be as important as PE, there were a few exceptions. For instance, a surprisingly high number of 7-10 year olds in Japan claimed that art and technology were more important subjects in comparison to PE. Mathematics was rated by 45% of students in Japan aged 11-14 years as more important than PE, and 50% of those over 15 years old agreed that English, mathematics and Japanese were more important than PE. Of those subjects that 7-10 year olds in Japan were unsure about, housekeeping was the most frequently indicated. Technology was the subject of which older students claimed to be unsure.

There were some significant gender differences in the findings from both countries. In general, girls in Japan were more inclined to rate other subjects as more important than PE, whilst boys in Japan were more likely to rate PE more favourably in relation to other subjects. In both countries, girls tended to express their uncertainty about the importance of the subjects. The data from England also revealed general trends, such as that more girls were inclined to state that subjects were more important or as important as PE. Despite these trends, it was of interest to note that more boys than girls appeared to consider music and technology to be more important than PE.

### 4.4. Perceptions of Outcome

The students were asked to agree or disagree to a series of statements relating to the outcomes of PE. These included whether they thought that the subject helped to keep them fit and healthy, to do well in school, to make new friends, to encourage them to go to school, to respect others more, to respect themselves more, to prepare for competitions, to do better at other subjects, to be part of a group, to be proud to be part of the school and to carry on being physically active. Statistical testing carried out and presented in Table 5 showed that in all outcomes \( p = 0.005 \) there does appear to be an association with the country.

The frequency results are also presented in Figures 11 and 12.

By far the most agreed upon statement was that PE keeps them fit and healthy, with 93% of participants in England and 86% in Japan agreeing with this statement. Participants from both countries had similar opinions about PE encouraging them to go to school and making new friends, although slightly more students from England agreed with these statements. There was a much greater disparity between agreements in relation to PE helping students to be part of a group. Whereas a large number of students from England (86%) agreed that being part of a group was an outcome, only 46% of students from Japan agreed that this was the case. The statement with which the greatest number of participants from both countries disagreed was that PE helped them to do better at other subjects (53% England and 43% from Japan). The statement about which the sample were uncertain was whether PE helped them to do well in school in England (28%) and whether the subject helped them to be proud of their school in Japan (31%).

When analysed according to age ranges, the results suggested that the 7-10 age range tended to be more positive about the benefits that PE can provide, and this was especially the case in Japan. Whereas the majority of 7-10 year olds in Japan agreed on all the statements, more students in England disagreed than agreed that PE helped them make new friends (44%), and do better at other subjects (53%). A relatively high number of students in the 11-14 age range from

<table>
<thead>
<tr>
<th>Outcome</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fit and Healthy</td>
<td>85.7</td>
</tr>
<tr>
<td>Do well in school</td>
<td>180.9</td>
</tr>
<tr>
<td>Make new friends</td>
<td>347.1</td>
</tr>
<tr>
<td>Encourages to go to school</td>
<td>277.5</td>
</tr>
<tr>
<td>Respect others more</td>
<td>246.2</td>
</tr>
<tr>
<td>Respect myself more</td>
<td>275.9</td>
</tr>
<tr>
<td>Prepare for sports competitions</td>
<td>129.3</td>
</tr>
<tr>
<td>Do better at other subjects</td>
<td>390.8</td>
</tr>
<tr>
<td>Be part of a group</td>
<td>727.0</td>
</tr>
<tr>
<td>Proud to be a part of the school</td>
<td>644.5</td>
</tr>
<tr>
<td>Carry on being physically active</td>
<td>157.8</td>
</tr>
</tbody>
</table>

Table 5 Pearson Chi-Square Tests on Perceptions of Outcome and Country
both countries disagreed that PE could help them in other subjects (49% in Japan and 54% in England). Slightly more of this age group in Japan also disagreed that PE helped them to be proud of their school. Those students over 15 years old tended to disagree more in general to the statements, especially in response to the statement that PE could help them do better at other subjects (60% in Japan and 51% in England). The older students in Japan also tended to disagree that PE helped them be proud to be part of the school (42%) and that it encouraged them to go to school (43%).

Similar analysis was undertaken in terms of gender. In both countries, more girls than boys claimed to be uncertain about the outcomes. Despite this trend, more boys than girls in England were unsure whether PE helped them to be part of a group, or become fit and healthy. Moreover, slightly more girls in Japan disagreed that PE encouraged them to go to school, respect themselves more and to be more physically active. In addition, more girls than boys in Japan agreed that PE helped them to be part of a group and respect others more.

5. LIMITATIONS OF THE STUDY

Due to distance and time constraints, there was no control over selection or administration of the questionnaires. Although the research teams were provided with suggested instructions, schools and classes may have conducted the administration of the questionnaires in different ways.

One potential limitation of this study is the use of ‘PE’ as a generic descriptor, and its failure to discriminate between students’ views of specific
types of activities, such as games, gymnastics and dance. As previous research has illustrated, students do not approach all features of the PE curriculum with the same attitudes; for example, a number of studies have reported many girls’ negative perceptions of competitive team games (Kay, 1995) and many boys’ resistance to dance (Tannehill, et al, 1994). As stated above, this study is part of a much larger, multi-national, comparative project, and it was felt that the diversity of activities potentially included in PE programmes around the world would have led to a questionnaire that was so large as to be unworkable. Nevertheless, this reliance upon ‘PE’ as an overarching label for what is, in fact, a complex of diverse activities may be viewed in hindsight as a weakness of this smaller study.

6. DISCUSSION

Overall, the findings revealed some interesting trends in students’ perceptions of PE, not only in relation to different ages and genders, but also by showing how such results can differ within and between England and Japan.

The data collected with regards to students’ feelings about PE should be ultimately encouraging for practitioners in both countries, since the overall majority of participants recorded positive feelings. As was found in previous studies (van Wersch et al, 1992; Dickenson and Sparkes, 1988), the youngest students in our sample were most likely to express such feelings. The two groups most likely to express negative feelings towards PE were Japanese girls and students over 15 years of age. However, these points should not obscure the generally favourable responses to the subject from the whole group.

This study revealed a wide diversity of responses within the sample with regard to self-perceptions of ability in PE. The groups with the highest perceived ability ratings were boys and the youngest students in both counties. In both cases, these findings reflect earlier research into perceived self-competence (van Wersch et al, 1990; Nicholls and Miller, 1984). There were some noticeable differences in perceived ability between the two national cohorts, which we might be attributable to previously acknowledged cultural differences. English students were much more likely than their Japanese equivalents to describe their competence in PE as good or excellent. At the least, such findings suggest that we ought to accept such self-reported ratings of ability with caution, since they are as likely to represent culturally acceptable responses as accurate perceptions of competence. This hypothesis would seem to be offered support by the related finding that girls were significantly less likely to rate their abilities in PE in either positive or negative terms.

In terms of importance, PE was rated some way behind literacy, mathematics and science, with a comparable position to most other subjects. The apparent state of English students’ views of PE’s importance might be explained by the existence of a National Curriculum, with an explicit hierarchical distinction between ‘core’ subjects (English, mathematics and science) and other ‘foundation’ subjects. This hypothesis supported by the less unified ratings of subjects by the Japanese students, whose schooling is not divided in such an explicitly value-laden curriculum. Furthermore, as Birtwistle and Brodie (1991) found, differentiated ratings of importance of subjects did increase for both groups as they moved towards the end of their compulsory schooling, which might suggest that their perceptions of importance became weighted by career concerns.

To the best of our knowledge, there has been no comparative study of students’ views of outcomes of PE. We might presume that the different curricular foci of English and Japanese PE would be expressed in different perceptions of outcome between the two countries. In fact, there was a great deal of agreement between English and Japanese students. Both groups of students identified PE’s contribution to health and fitness, preparation for sports competitions and lifelong activity as outcomes. Interesting differences did appear, though, with regard to other, non-physical outcomes. Japanese students were more likely to talk of the contribution that PE can make to developing respect, both for oneself and others, and doing well in school, whilst their English counterparts emphasised ‘community’ factors, such as learning to be part of a group, feeling part of one’s school and making new friends. Also, despite recent claims on behalf of PE’s cross-curricular benefits (Shephard, 1997), few students from either country credited PE with contributing to achieving in other school subjects.

In conclusion, this paper addresses key areas of students’ perceptions of PE. The extremely positive responses indicate that most students do enjoy and value the subject. Similar to earlier studies, younger students in both countries were most likely
to have positive feelings towards PE and to be more confident in their ability. Students in England were much more likely than their Japanese peers to rate their competence as good or excellent, which may be related to culturally acceptable responses. The importance that students attached to PE in relation to other subjects also differed according to country and this result appears to reflect the hierarchical distinction of subjects within the curriculum. The association between perceived importance of a subject and the curriculum is an area worthy of further investigation. The area of PE upon which the greatest majority of students in both countries agreed was the claim that PE helped to keep them healthy and fit. Questioning students about the outcomes of PE is important if we want to encourage them to remain physically active beyond their formal education. It was especially interesting in this study to find that despite living in a different country and attending different schools with different curricula, there was a great deal of agreement about the benefits and values of PE.

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