

A STUDY OF PLAY IN PRESCHOOL CHILDREN: An Examination of Changes in Children's Play Behaviour during their First Year in a Kindergarten — Comparison between the First Term and the Second Term —

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Abstract

Research was done to clarify the changes of three-year-old children's play behaviour in the first year of the kindergarten. The present report discusses the changes of play behaviour between the first term and the second term. The play was videotaped and analysed under three main headings; type of play, interpersonal behaviour and other behaviour.

1) Type of play

1. 'Solitary play' and 'parallel play' decreased from the first term to the second term.
2. 'Group play' (including 'mixed sex group' and 'same sex group' play) increased from the first term to the second term both for children alone and for a group involving a teacher, and for both sexes.

2) Interpersonal Behaviour

1. 'Imitating another child', 'looking at a child', 'body contact' (both with children alone and with a teacher and/or an adult) and 'seeking contact with children' decreased from the first term to second term.
2. 'Proximity to other children' and 'seeking attention' (both with children alone and with a teacher and/or an adult) increased from the first term to the second term.

3) Other Behaviour:

1. 'Wandering' decreased greatly from the first term to the second term.
2. 'Object conflict' increased from the first term to the second term.
3. 'Rough and tumble play' and 'aggressive behaviour' were observed in boys more often than girls during the two terms.

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Introduction

It is natural that the newcomers to a kindergarten will change greatly in their first year. Shinno(1990) reported the play behaviour of three-year-old children in a Japanese kindergarten during the first term. Hold-Cavell, Attili and Schleidt(1986) reported the change during the first year in a cross-sectional study. They analysed eight children in West Germany and eight in Italy with regard to certain play and behaviour categories; but there were host children in their classes. In Japan, children enter kindergarten from the age of three. Iijima(1986, 1989) studied the change of the three year-old preschooler's behaviour longitudinally for three years, i. e. nine terms. Children were observed only once a term, for 20 minutes at the beginning of the term, not continuously through the term.

Thus, the present research was intended to clarify the change of play behaviour, in the first year, in three-year-old children, in the absence of host children. Observation was done twice a week for nine of the sixteen weeks, during each term. The collected data were analysed under the same categories as employed in Shinno(1990) .

Method

1) Subjects:

The subjects were the same children whose behaviour during the first term of kindergarten was studied in Shinno(1990) . The average age of the children was 42.8 months at the beginning of the study.

2) Setting:

The setting was the same as in Shinno(1990) .

3) Data collection:

The method employed was the same as in Shinno(1990). The observation of the second term took place from 12 September to 14 December. The children's attendance level was between 88 per cent and 100 per cent.

The same two teachers were still involved in the youngest class during the second term as in the first term but the other adults, such as parents, were rarely involved. Even though the children still spoke to the observer, the frequency decreased.

The behaviour of the children was classified in the same way as in Shinno(1990).

Results

1. Type of Play

Table 1 shows the frequency of each type of play in the first term and the second term. Loglinear analysis was done to compare the types of play. 'Solitary play' decreased significantly ($\hat{U} = -6.104$, $SE = 0.033$) at the one per cent level of significance from the first term to the second term. Interaction between gender and term was shown at the one

per cent level of significance ($\hat{U}=3.295$, $SE=0.033$); boys did 'solitary play' more in the first term and girls did it more in the second term, and the degree of the change was bigger in boys than in girls.

Table 1. The Frequency of the Type of Play in Term I and Term II

| categories | term gender | I | | II | |
|---------------------------|----------------|------|-------|-------|-------|
| | | boys | girls | boys | girls |
| solitary play | | 276 | 306 | 148 | 254 |
| parallel play | | 339 | 295 | 152 | 140 |
| social play mixed pair | | 99 | 91 | 36 | 25 |
| same-sex pair | | 373 | 321 | 324 | 387 |
| <pair play> | | 472 | 412 | 360 | 412 |
| mixed sex group | | 190 | 156 | 370 | 399 |
| same-sex group | | 87 | 219 | 574 | 308 |
| <group play with C alone> | | 277 | 375 | 944 | 707 |
| mixed group play with T | | 69 | 111 | 217 | 230 |
| same-sex group with T | | 30 | 133 | 38 | 200 |
| <group play with T> | | 99 | 244 | 255 | 430 |
| <group play with C or T> | | 376 | 619 | 1,199 | 1,137 |

'Parallel play' decreased at the one per cent level of significance from the first term to the second term ($\hat{U}=10.925$, $SE=0.035$).

'Pair play' (including mixed pairs and same sex pairs) decreased at the one per cent level of significance from the first term to the second term ($\hat{U}=2.74$ $SE=0.025$). There was interaction at the one per cent level of significance ($\hat{U}=2.743$ $SE=0.025$) between gender and term; boys did 'pair play' more frequently in the first term and girls did so in the second term. 'Mixed pair' play decreased at the one per cent level of significance ($\hat{U}=7.727$ $SE=0.0757$). 'Same sex pair', play showed a significant difference in interaction between gender and term ($\hat{U}=3.061$, $SE=0.027$); boys played in a 'same sex pair' in the first term more frequently and girls did so more frequently in the second term.

Group play (both children alone and involving a teacher and/or an adult) increased from the first term to the second term at the one per cent level of significance ($\hat{U}=23.720$, $SE=0.020$). Interaction between gender and term was also shown; boys did 'group play' more frequently at the one per cent level of significance ($\hat{U}=8.427$, $SE=0.020$) in the second term, girls did so in the first term.

As for 'group play' with children alone, the total of the categories 'mixed sex' and

* In the tables, T=teacher and/or an adult and C=child or children.

'same sex' group play increased from the first term to the second term at the one per cent level of significance ($\hat{U}=19.886$, $SE=0.148$). There was interaction at the one per cent level of significance between gender and term ($\hat{U}=6.329$, $SE=0.023$); boys did 'group play' more frequently with children alone in the second term than in the first term, and girls did so more frequently in the first term than in the second term.

'Same sex group' (with children alone), increased at the one per cent level of significance from the first term to the second term ($\hat{U}=15.355$, $SE=0.036$). There was also interaction between gender and term at the one per cent level of significance ($\hat{U}=10.654$, $SE=0.036$); boys played in a 'same-sex group' more frequently in the second term than in the first term, while girls did so more frequently in the first term than in the second term.

'Mixed sex group' play increased from the first term to the second term at the one per cent level of significance ($\hat{U}=12.357$, $SE=0.032$). Interaction between gender and term at the five per cent level of significance ($\hat{U}=2.098$, $SE=0.032$) was also shown; boys played in a 'mixed sex group' more often in the first term than in the second term while the girls played in a 'mixed sex group' more in the second term than in the first term.

'Group play with a teacher' increased at the one per cent level of significance ($\hat{U}=10.579$, $SE=0.036$). There was interaction between gender and term at the one per cent level of significance ($\hat{U}=2.654$, $SE=0.036$); boys did 'group play with a teacher' more often in the second term than in the first term, while girls did so more in the first term than in the second term.

'Same sex group play with a teacher' increased at the five per cent level of significance from the first term to the second term ($\hat{U}=2.399$, $SE=0.067$).

'Mixed sex group play with a teacher' increased at the one per cent level of significance from the first term to the second term ($\hat{U}=10.404$, $SE=0.045$). Interaction between gender and term was shown; boys played in a 'mixed sex group with a teacher' more often in the second term than in the first term, while girls did so more frequently in the first term than in the second term.

2. Interpersonal Behaviour

Table 2 shows the frequencies of the categories of interpersonal behaviour of the children during the two terms. 'Imitating teacher', 'proximity to a teacher', 'looking at a teacher', 'looking at children', 'body contact teacher', 'body contact with children' and 'seeking contact to teacher' decreased in frequency significantly from the first term to the second term ($\hat{U}=4.840$, $SE=0.359$; $\hat{U}=3.461$, $SE=0.046$; $\hat{U}=3.461$, $SE=0.046$; $\hat{U}=10.982$, $SE=0.027$; $\hat{U}=8.592$, $SE=0.014$; $\hat{U}=7.675$, $SE=0.072$; $\hat{U}=4.538$, $SE=0.069$; $\hat{U}=3.524$, $SE=0.0369$ respectively).

Significant interactions between gender and term at the one per cent level were shown for the categories, 'looking at teacher' ($\hat{U}=3.055$, $SE=0.027$), 'looking at

Table 2. The Frequency of Interpersonal Behaviour in Term I and Term II

| categories | term | | I | | II | |
|----------------------|--------|--------|------|-------|------|-------|
| | T or C | gender | boys | girls | boys | girls |
| | | | | | | |
| imitating | T | | 28 | 35 | 0 | 0 |
| | C | | 24 | 15 | 29 | 4 |
| proximity to | T | | 148 | 136 | 92 | 116 |
| | C | | 409 | 409 | 543 | 461 |
| looking at | T | | 518 | 462 | 244 | 302 |
| | C | | 1309 | 1792 | 1123 | 1307 |
| body contact | T | | 88 | 127 | 22 | 56 |
| | C | | 55 | 109 | 41 | 42 |
| talking to | T | | 258 | 187 | 163 | 277 |
| | C | | 603 | 664 | 880 | 873 |
| seeking attention to | T | | 2 | 23 | 26 | 14 |
| | C | | 2 | 22 | 50 | 26 |
| seeking contact to | T | | 6 | 25 | 0 | 0 |
| | C | | 0 | 26 | 0 | 0 |

children' ($\hat{U}=2.975$, $SE=0.014$), 'seeking attention to teacher' ($\hat{U}=3.787$, $SE=0.202$) and 'seeking attention to children' ($\hat{U}=3.927$, $SE=0.194$); and at the five per cent level for 'imitating children'. 'Seeking attention to teacher' ($\hat{U}=3.787$, $SE=0.202$) and 'seeking attention to children' ($\hat{U}=3.927$, $SE=0.194$) increased in frequency from the first term to the second term at the one per cent level of significance.

Table 3. The Frequency of the Other Categories in Term I and Term II

| categories | term | | I | | II | |
|----------------------|--------|--------|------|-------|------|-------|
| | T or C | gender | boys | girls | boys | girls |
| | | | | | | |
| object conflict | | | 5 | 8 | 7 | 36 |
| rough & tumble play | | | 30 | 2 | 26 | 1 |
| aggressive behaviour | | | 12 | 15 | 17 | 6 |
| automanipulation | | | 13 | 47 | 6 | 23 |
| wandering | | | 668 | 525 | 18 | 13 |

3. Other Categories

Table 3 shows the frequencies of other categories. 'Object conflict' increased significantly at the one per cent level from the first term to the second term ($\hat{U}=2.614$, $SE=0.176$); this category was shown in girls significantly more often than in boys at the one per cent level during both terms ($\hat{U}=2.994$, $SE=0.176$). 'Rough and tumble play' was shown in boys significantly more often than in girls at the one per cent level during the two terms ($\hat{U}=4.759$, $SE=0.313$). 'Aggressive behaviour' showed a significant interaction at the five per cent level ($\hat{U}=2.064$, $SE=0.153$) between gender and term. 'Auto-manipulation' decreased significantly at the one per cent level ($\hat{U}=2.679$, $SE=0.139$) from the first term to the second term. 'Wandering' decreased significantly from the first term to the second term at the one percent level ($\hat{U}=19.837$, $SE=0.092$).

Consideration

The aim of the research was to clarify the changes of children's play behaviour in their first year at kindergarten. In the present study, the differences between the first term and the second term were compared. The changes of the children's play behaviour were examined under these headings: the 'type of play', 'interpersonal relations', and 'other behaviour'. A more detailed range of categories than had been used in previous work on the subject was employed.

1. Type of Play

'Solitary play' and 'parallel play' decreased from the first term to the second term. This fact coincides with Parten (1932), but it is interesting that 'solitary play' was still observed during the second term; it does not disappear completely. When a child played solitarily in the second term, it was observed that the degree of concentration of the child was greatly increased compared with the first term. As Moore et al (1974) insists, 'solitary play' occurs among older children, and it might seem that 'solitary play' needs to be broken down into sub-categories in order to describe the development of the child's play adequately. This would differ from Parten's insistence that play changes from solitary play to group play via parallel play. Smith (1978) and Roper and Hinde (1978) thought that the difference between Moore's results and Parten's results arose from the use of a longitudinal method or a cross-sectional method. The present study, which used a longitudinal method, and which agrees with Moore's results, supports this idea.

Corresponding to the decrease of the categories of 'solitary play', 'parallel play' and 'same sex pair', 'group play' (including 'group play' of children alone and 'group play' with a teacher) increased from the first term to the second term. This means the children adapted to the class to which they belonged and had a good relationship with their

classmates.

'Group play' with a teacher (including 'mixed sex play with a teacher' and 'same-sex play with a teacher') increased in frequency from the first term to the second term, as did category of 'group play' with children alone. Gershner and Moore (1985) discuss the powerful teacher influence and imply that teacher acceptance and approval of opposite sex cooperative play allows children a broader choice of friends and play mates.

2. Interpersonal Behaviour

It is very interesting that the categories relating to a teacher belonging to this heading except for 'seeking attention to a teacher' decrease at the one percent level of significance from the first to the second term. This fact coincides with the results for German children in Hold-cavell et al (1986). It seems that children show interpersonal behaviour to another child more often than to a teacher, as they adjust to the kindergarten.

3. Other categories

'Aggressive behaviour' increased in boys from the first term to the second term, and vice versa in girls, although the frequency of this category itself was not observed for this study. 'Wandering' decreased greatly from the first term to the second term, and 'automanipulation' also decreased from the first term to the second term. It seems that the behaviour of the children changes to intentional behaviour over the course of the first two terms.

Comparison of the third term with the first and second terms will be published in the future.

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