Scientific Research

Inspection of Kindergarten Teacher-Children Interactions

—A Case Study in China

Jing Li*, Wei Wang

Department of Preschool Education, Faculty of Education, Southwest University, Chongqing, China
Email: *lijing68253285@163.com, wangwei200303@163.com

Abstract

With the purpose of improving the efficiency of teacher-children interactions and enhancing the quality of pre-school education, the writer uses 20 kindergartens in urban areas of Chongqing as samples to study the teacher-children interactions through observation. The findings show that: 1) The teacher-children interaction is unbalanced, mainly presenting as the teacher-centered "asymmetrical interdependent interactions". Interactions initiated by the teacher and positive emotions of the children during these interactions are obviously more than those initiated by the children. 2) Interactions between the teacher and the children lack emotional depth. In the interactions, the children response less although they participate more; major methods of initiating and responding to the interactions are non-verbal actions, short or perfunctory replies; and most contents of the interactions are events without touching upon emotions.

Keywords

Relationship between the Teacher and Children, Interaction, Pre-School Education

1. Introduction

The teacher-children interaction is a process of mental interactions or mutual behavioral influence between the teacher and children. It is a necessary condition for children to shape and develop the personality and the individuality [1]. Research has shown that: The teacher-children relationship which the children experience is significant to develop social adaptability. It even decides children's adaptability and behavior in the first three years at primary school in advance. The social techniques and acquisition of confidence which decide the academic

---
*Corresponding author.

performance of children also relate closely with teacher-children interactions and the teacher's discernment of the relationship with children [2]. Aiming at improving the efficiency of teacher-children interactions and enhancing the quality of preschool education, the writer studies the realistic situation of the teacher-children interactions in kindergarten with 20 kindergartens in urban areas of Chongqing as samples.

2. Research Methods

The research mainly uses non-participating observation to study teacher-children interactions in kindergartens.

2.1. Object of Observation

As the object of the research, 20 master teachers and the children who interact with these teachers are selected randomly from intermediate classes in 20 kindergartens of Chongqing's main urban zone in China.

2.2. Research Tools

The research tool refers to *Handbook for Quality Evaluation in Kindergarten Education* (Tool 6: Observation of Teacher-Children Interactions) [3], which classifies the teacher-children interactions into five dimensions of initiator, ways to initiate and respond to interactions, contents, children's mood in the interaction, and response times, totally nineteen secondary variables and thirty tertiary variables (see **Table 1** for details).

2.3. Time and Method of Observation

With the sampling method to observe, the research selects 10 minutes of daily life activities and transition activities respectively, 15 minutes of indoor and outdoor games and collective or group educational activities respectively, totally 65 minutes to record the communications between the teacher and the children in two days successively.

2.4. Data Processing

With spss11.5 database, the research performed percentile ranking for the distributions of observation variables, and T-test on differences of initiators of continuous variables.

3. Research Findings

3.1. Fundamental State of Teacher-Children Interactions

3.1.1. More Children Participating in the Interaction
Table 2 shows that: Numbers of children participants of various interactive activities rank from less to more as life activities (57.8%), (indoor games), (outdoor games) (64.4%), transition activities (67.3%), and collective educational activities (71.5%). It can be seen that 60% to 70% of the children can participate in the interactions.

3.1.2. More Interactions Initiated by the Teacher than Those by Children
In such interactions as life activities, indoor games, outdoor games, collective educational activities, and transition activities, numbers of interactions initiated by urban teachers are respectively 9.6, 9.6, 13.6, 14.7, and 8.0, while those by children are respectively 3.1, 4.8, 3.2, 3.5, and 1.4. With t-test, there are extremely significant differences, and the teacher initiates more interactions than the children (see **Table 2**).

3.1.3. Fewer Response Times of Interactions
Table 3 shows that: among the interactions initiated by the teacher, frequencies of causing one response of the children are respectively 60% - 70% (in life and transition activities), 30% - 40% (in indoor and outdoor games), and 20.7% (in collective and group educational activities); frequencies of causing three responses of the children are respectively 40% - 45% (in indoor and outdoor activities), 25% - 35% (in transition and life activities); and the frequency of causing five responses of children is 20% or so (indoor games, and collective and group activities).

In the interactions initiated by the children, the frequency of causing the teacher to respond once is 50% -

Table 1. Observation scale of teacher-children interactions.

First variables	Secondary variables	Tertiary variables
Initiator of interactions	Teacher	
	Child	
	Unified verbal requirements or replies	Call the name or the appellation
		Short or perfunctory answers
		Simple verbal YES
		Simple verbal NO
		Teacher's short instructions or requirements
		Brief answers according to the requirements
		Teacher's oral demonstration
	Question posing	Directly definitive-answer-oriented questions
		Questions for information inquiry, advices or help
		Heuristic questioning
		Questions oppugning against the expression or performance of the other party
	Active learning or individualized expression	Children actively expressing what they are thinking and doing, or the individualized requirements
Ways to initiate and respond		Children's complaints
		The teacher requires, suggests or gives options in form of consultation
		Describing knowledge, truth, ideas, stories and reason
	Expressing and communicating feelings	The teacher encourages children to explore further, reattempt, and practice.
		Positive, gentle and comforting languages
		Bullies, satirization, and blame
	Language evaluation	Positive evaluative language
		Negative evaluative language
		Joint activities of the teacher and children
		Listening or watching
		With actions to giving instructions or making requests
		Following or according to instructions or suggestions to act, simulating actions
	Non-verbal actions	The teacher inspires with actions.
		The teacher demonstrates, corrects and helps with actions.
		Positive, gentle and comforting expression and actions.
		Children's negative emotional expression of
		Expressions and actions of positive evaluation
		Expressions and actions of negative evaluation or determent
	Disciplinary rules	
	Meeting life needs and tidying up	
	Games and teaching activities	
Interactive contents	Games and seeking help for learning difficulties	
	Presentation of games and learning methods, process and results	
	Assessment	
	Expressing and communicating feelings	
Children's mood during the interaction	Happy (3 marks)	
	Unable to tell (2 marks)	
	Unhappy (1 marks)	
Response Times		

Table 2. The number of teacher-children interactions and the number of children participants of these interactions in kindergartens of Chongqing.

Activity type	Initiator	Number of teacher/children-initiated interactions			Number of children participants (%)
		$\overline{x}$	S	t	
Life activity	Teacher	9.6	4.1	9.1**	57.8
	Children	3.1	1.8		
Indoor games	Teacher	9.6	5.4	5.0**	64.4
	Children	4.8	3.0		
Outdoor games	Teacher	13.6	7.3	8.4**	67.3
	Children	3.2	2.6		
Collective education	Teacher	14.7	5.9	10.5**	71.5
	Children	3.5	3.3		
Transition activity	Teacher	8.0	3.1	12.5**	68.9
	Children	1.4	1.4		

Table 3. Responses to interactions initiated by the teacher and by the children in kindergartens of Chongqing (>10%).

Initiator	Life activities		Indoor games		Outdoor games		Collective & group education		Transition activities	
	Times	Frequency	Times	Frequency	Times	Frequency	Times	Frequency	Times	Frequency
Teacher	1	62.1	3	40.4	3	42.4	3	43.8	1	69.0
	3	33.6	1	29.8	1	41.0	5	23.7	3	24.5
	/	/	5	19.7	5	/	1	20.7	/	/
Children	1	72.0	1	54.9	1	64.1	1	74.3	1	75.0
	3	25.0	3	35.2	3	32.0	3	23.8	3	19.2

Note: The initiation of and response to interactions exchange back and forth, thus times of both initiating of and responding to an interaction are even numbers. Therefore, times of responses could only be odd numbers except one time for initiating the interaction (every interaction can only have one initiation).

75%; and the frequency of causing three responses is 20% - 35% or so.

3.2. Methods of Initiating and Responding to Interactions

3.2.1. The Teacher's Major Initiating Methods of Interactions: Short Instructions and Questions

Table 4 shows that: in the interactions of life activities, outdoor games, and transition activities which are initiated by the teacher, the method of unified verbal requirements ranks first, about 45% - 65% of all initiating methods; in the interaction methods of indoor games and collective educational activities which are initiated by the teacher, questions rank the first, accounting 49.4% and 61.9% respectively of all initiating methods of the two types of activities. While it is lower than 10% for interactions initiated by the teacher with individualized representation, in addition to indoor games and collective educational activities.

Among the interactions initiated by the teacher with unified verbal requirements, over 90% have presented as short instructions of the teacher (see **Table 5**).

3.2.2. Major Methods for Children to Initiate Interactions: Active and Individualized Representations

Table 3 shows that: among the initiating methods of interactive activities that are initiated by children, active and individualized representations rank the first with a ratio of 65% - 80%; and it is followed by non-verbal actions and question posing, respectively accounting for 10% - 15%.

3.2.3. Major Method of Responding to Interactions for the Teacher: Non-Verbal Actions

In addition to collective educational activities, among such interactions as life activities, indoor and outdoor

Table 4. Methods of initiating and responding to teacher-children interactions in kindergartens of Chongqing (>10%).

Interaction Background	Method category	Results of initiating methods		Results of response methods	
		By the teacher	By the children	By the teacher	By the children
Life activities	Unified verbal requirements/replies	59.3	/	14.1	40.9
	Posing questions	24.3	/	/	/
	Active and individualized representation	/	71.0	/	10.6
	Non-verbal actions	/	12.0	73.2	22.0
Indoor games	Unified verbal requirements/replies	32.0	/	34.7	31.1
	Posing questions	49.4	11.3	/	17.5
	Active and individualized representation	/	73.2	10.1	18.9
	Non-verbal actions	/	12.0	53.9	16.2
Outdoor games	Active and individualized representation	45.6	/	23.0	32.4
	Posing questions	27.7	10.7	/	14.5
	Active and individualized representation	17.5	68.0	/	15.2
	Non-verbal actions	/	18.5	68.4	23.5
Collective education	Active and individualized representation	21.1	/	45.0	30.0
	Posing questions	61.9	15.8	/	13.1
	Active and individualized representation	11.4	67.3	18.5	17.7
	Non-verbal actions	/	15.8	35.5	22.6
Transition activities	Active and individualized representation	65.2	/	22.7	36.2
	Posing questions	12.0	/	/	13.0
	Active and individualized representation	/	76.9	/	15.9
	Non-verbal actions	14.1	/	70.3	27.5

Table 5. Concrete methods of initiating interactions with unified verbal requirements (%).

Methods	Life activities	Outdoor games	Transition activities
Appellation	3.6	2.0	2.5
Short instructions	96.4	93.9	90.8
Oral demonstrations	0	4.0	6.7

games, and transition activities that are initiated by the teacher, non-verbal actions by the children as responses rank the first, which is 55% - 75% or so; verbal replies account for 14% - 35%, ranking the second. In the interaction of collective educational activities that are initiated by the teacher, verbal replies head the list of responses by the children, accounting for about 45.0%; and it is followed by non-verbal actions, which is 35.5% (see **Table 4**).

Responses by children with non-verbal actions are mainly represented as action submission, accounting for 70% - 85%; in joint activities of both the teacher and the children, it is not more than 2.8%; while responses with positive and gentle expressions and actions are not more than 5.5% (see **Table 6**).

3.2.4. The Teacher's Methods of Responding to Interactions Initiated by Children: Brief Instructions, Brief Answers, and Perfunctory Replies

In various interactive activities started by the children, unified verbal replies by the teacher rank the first in all the responding methods, which is 30% - 40%; responses with non-verbal actions rank the second (excluding indoor games), accounting for 20% - 30% (see **Table 4**).

Table 5 shows that: among verbal methods of responding, about 30% - 55% is short instructions or requirements by the teacher, and 13% - 40% is responding with short answers; with transition activities excluded, 19% - 27% is simple or perfunctory replies by the teacher. Thus it can be seen that among the interactions initiated by

Table 6. Concrete verbal response modes of the teacher in children-initiated interactions (%).

Response mode terms	Life activities	Indoor games	Outdoor games	Collective education	Transition activities
Simple or perfunctory replies	19.6	26.8	21.3	20.5	0
Simple oral YES	3.6	11.3	8.5	5.1	8.0
Simple oral NO	0	1.4	10.6	0	0
Short instructions or requirements	48.2	29.6	36.2	43.6	52.0
Short answers	25.0	26.8	12.8	18.0	40.0
Oral demonstration	0	4.2	10.6	12.8	0

the children, major verbal responding modes for the teacher are presented as brief instructions, brief answers, and perfunctory replies.

3.3. Contents of Teacher-Children Interactions

3.3.1. Major Contents of Life Activities: Meeting Life Needs and Tidying up
In life activities, interactive contents include meeting life needs and tidying up (63.3%), disciplinary rules (18.3%), and expressing and communicating feelings (7.1%) (see **Table 7**).

3.3.2. Major Interactive Contents of Indoor & Outdoor Games and Collective and Group Education: Games and Teaching Activities
In the contents of indoor games, 52.2% is play activities, 18.1% is game demonstrations, 13.1% is seeking help for difficulties, and 2.5% and 1.6% are assessing, expressing and communicating feelings respectively (see **Table 7**).

In the contents of outdoor activities, 60.6% is play activities, and only 2.2% is expressing and communicating feelings (see **Table 7**).

In the contents of collective and group educational activities, 82% is teaching activities; only 5.8% is seeking help for difficulties by the children, and 0.2% is expressing and communicating feelings between the teacher and the children (see **Table 7**).

3.3.3. Major Interactive Contents of Transition Activities: Disciplinary Rules
In the contents of transition activities, disciplinary rules rank the first, accounting for 62.7%; meeting of life needs and tidying up account for 14.4, ranking the second; games and teaching activities account for 5.9%; and expressing and communicating feelings account for 4.7% (see **Table 7**).

3.4. Children's Mood in Interactions

3.4.1. Basically Happy Mood of Children in Interactions
Table 8 shows that: mean values of children's mood in interactions of life activities, indoor and outdoor activities, collective education and transition activities that are initiated by the teacher are respectively 2.4, 2.7, 2.7, 2.7, and 2.6, while those in interactions initiated by children are respectively 2.4, 2.5, 2.4, 2.4, and 2.3. Thus it can be seen that the mean value of the children's mood is between 2.4 - 2.7 in various interactions, with the value more than one to be unhappy and slightly less than three to be happy.

3.4.2. Children's Mood Being More Positive in Interactions Initiated by Teacher than Those by Themselves
After t-test, except life activities, children's mood presents evident differences in the interactions initiated by the teacher and by the children, and is more positive in interactions initiated by the teacher than those by themselves (see **Table 8**).

4. Discussions and Analysis

It can be seen from the above research results that there are following problems in current teacher-children interactions:

Table 7. Interactive contents of various activities in kindergartens of Chongqing (%).

Interactive activity terms	Life activity	Indoor games	Outdoor games	Collective and group education	Transition activity
Disciplinary rules	18.3	5.3	10.0	3.5	62.7
Meeting of life needs and tidying up	63.3	2.8	5.3	0.3	14.4
Games and teaching activities	0.4	52.2	60.6	82.0	5.9
Seeking help for difficulties	0.8	13.1	6.3	5.8	3.8
Games and learning presentation	0.4	18.1	9.4	3.8	1.7
Assessment	2.9	2.5	2.5	2.3	3.0
Interpersonal disputes	4.6	4.4	3.4	2.0	3.8
Expressing and communicating feelings	7.1	1.6	2.2	0.2	4.7
Others	2.1	0	0.3	0.2	0

Table 8. Mean values of children's mood and initiators' differences in interactions in kindergartens of Chongqing.

Activity type	Initiator	Children's mood	
		$\bar{x}$	t
Life activities	Teacher	2.4	0.8
	Children	2.4	
Indoor games	Teacher	2.7	2.8**
	Children	2.5	
Outdoor games	Teacher	2.7	5.1**
	Children	2.4	
Collective education	Teacher	2.7	6.1**
	Children	2.4	
Transition activities	Teacher	2.6	3.3**
	Children	2.3	

4.1. Unbalanced Interactions, Subjectivity of Children Has Not Been Brought into Play

Interaction is such a process that one person's behavior causes the changes of behavior or values of the other person [4]. The essential characteristics of interaction are mainly manifested as both sides of the communication influencing each other through exchanging thoughts and emotions. Therefore, the efficiency of the teacher-children interaction depends on its interactivity in the first instance. American social psychologists Jones and J. W. Whibaut have classified interpersonal interactions into pseudo-interdependent type, asymmetrical interdependent type, responsive interdependent type, and mutual interdependent type. But only an interactive process of mutual interdependent type can fully demonstrate the subjective control ability of both sides and the capacity of mutual coordination [5].

Currently, the teacher-children interaction in kindergartens of Chongqing mainly manifests as asymmetrical interdependent type, presenting an unbalanced state with the teacher as the center. The teacher initiates more interactions than the children, and the children are in higher spirits in the interactions initiated by the teacher than in those by themselves. In the interactions, the teacher becomes the dominator and the leading role, while children become the followers and the supporting roles. The teacher starts and responds to the interaction with the purpose of finishing teaching tasks and expressing his/her intentions according to the set purpose. The interactive process is to carry out the teaching plan and finish the teaching tasks for teachers; while it is to cooperate and help the teacher to finish teaching tasks for the children. However, in the interactions, the teacher has hardly taken the ideas and emotions of the children into consideration but devoted him/herself to the teaching program and the schedule wholeheartedly. If the children's responses and questions are not consistent with the teaching plan, they would be neglected or diverted to the expected answers by the teacher. In the interactions highlighting the teacher's intention, the children's confusion, willingness, and thoughts and emotions are neglected and de-

pressed.

In such unbalanced interactions, the initiatives of the children have not been brought into play, and the thoughts and emotions have not been expressed, hence difficult to develop in a real sense for the children.

4.2. Interactions Lack Depth and Emotional Investment from the Teacher

The teacher-children interaction should conduce to the healthy development of children and improvement of the education quality. It is not only a "balanced" communication between the teacher and the children with both sides to be the subjects and influence each other, but also a communication of emotional depth at the same time. In essence, educational activities are emotional communications between the teacher and the students.

However, the results show that the teacher-children interaction covers more children, but has fewer responses. And in the interactions started by the children, the teacher has barely one response in general. It indicates that the teacher-children interaction lacks depth although it has a certain range of width. The underlying cause of lacking depth is the emotional absence.

The teacher is the key to an emotional communication of education. Only the teacher's emotional investment can arouse the children's emotion; only from the bottom of the teacher's heart can the education permeate through the hearts of the children. It requires the teacher to have life presence during education, viewing the education as a part of his/her life instead of a means of making a living barely to meet the material needs. But it is found that through observation: many teachers in reality have no emotional input; more of them treat the education and the teaching as tasks to finish. In interactions, these teachers hardly have emotional connections and echoes with the children. They initiate the interactions with brief instructions and questions, and the children mainly respond with actions. Although the children wish to express personal feelings and ideas and initiate the interactions mostly with individualized representation, the teacher responds with short answers or perfunctory replies. In this way, the children won't continue and deepen their willingness to express personal feelings and communicate with the teacher, finally concluding the interaction with behavioral submission, listening to or looking at the teacher sulkily, which explains the proportion of 60% - 100% of "behavioral submissions" and "listening to or looking at" in both interactions initiated by the children and responses from the children; thus most of the interactive contents are unemotional events.

The above problems can be explained by the following reasons. Firstly, it could lie in the low ratio of teachers and children (the research found that the average ratio of the teachers and the children was 1:18); the teacher is overloaded, and causes the phenomenon of occupational burnout generally [6], hence having inadequate energy to pay attention to the willingness and emotions of the children. Secondly, the relatively low social and economic status of the kindergarten teachers leads to the absence of professional dedication spirit. The teachers view the job as a means of making a livelihood, and it is difficult for them to "take the cultivation and education of the children as their own duty and demonstrate a sense of responsibility and enthusiasm at work" [7]. They are reluctant to take effort to know and understand the children. Thirdly, the teacher lacks professional competence, unable to understand the willingness and feelings of the children.

5. Conclusions

Based on the above analysis and discussion, we think that the social and economic status of the teacher should be improved substantially to enable the teacher to respect and dive into the work, hence germinating the professional dedication spirit. Meanwhile, the sense of professional responsibility of the teacher can be reinforced through emphasizing on the professional ethics and the enlightenment of professional spirits. In this way, the teacher's devotion to the pre-school education will be aroused, able to communicate with the children with the heart.

Secondly, relevant administrative departments should increase the authorized posts for pre-school teachers, lower the teacher-children ratio effectively, and relieve the occupational burnout to enable the teacher to have adequate "willingness" and strong "flesh" in interactions with the children.

Finally, professional spirits, professional knowledge and capability education should be strengthened in the pre- and post-employment education of pre-school teachers; and professional development of the teacher should be attended in educational trainings to arouse the "silent" educational knowledge in the teacher's mind and inspire the teacher to learn theoretical knowledge, thus enhancing the efficiency of the education of professional theoretical knowledge as well as the professional competence of the teacher [8]. In this way, the teacher will be

able to read and understand the children with a childlike heart, hence interacting and communicating with the children effectively.

Acknowledgements

References

[1]   Gao, Y. and Sun, Q.A. (2004) Introduction to Sociology. Haihe University Press, Nanjing, 75.

[2]   Liu, J.B. (2002) Research on Teacher-Children Interactive Behavior. Nanjing Normal University Press, Nanjing, 25-26.

[3]   Pre-School Education Lab of National Institute of Education Sciences (2009) Handbook for Quality Evaluation in Kindergarten Education. Educational Science Publishing House, Beijing, 121-142.

[4]   Zhang, R.Y. (1992) Social Psychology Dictionary. Shanghai Lexicographic Publishing House, Shanghai, 151.

[5]   Liu, J.B. (2002) Research on Teacher-Children Interactive Behavior. Nanjing Normal University Press, Nanjing, 234-235.

[6]   Zhao, N., and Qin, J.L. (2007) Research on Job Burnout of Preschool Teachers' Career Cycle. *Teacher Education Research*, **19**, 76.

[7]   Pang, L.J. (2003) Teacher and Child Development. Beijing Normal University Publishing House, Beijing, 217.

[8]   Zhu, Z.J. (2005) Brief Analysis of Two Categories of Knowledge for Professional Development of Preschool Teachers. *Studies in Preschool Education*, **3**, 53.

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

Other selected journals from SCIRP are listed as below. Submit your manuscript to us via either submit@scirp.org or Online Submission Portal.