What Happens During Teacher–Student Interaction in the First Year of Primary School? A New Explanation

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Abstract

The present research aims to develop a theory on teacher–student interaction in the first year of primary school period. The present research was designed in grounded theory research which is one of the qualitative research traditions. A total of 18 primary school children started the first year of primary school. Data were collected through participant observation. Participant observation was launched after all necessary ethical permissions were taken from local education authority, the participant children, their teacher, and parents. Data were analyzed through constant comparison within three stages as open coding, axial coding, and selective coding. It was reported that the teacher and the first graders mutually developed strategies and there were several circumstances in the interaction that nested behavioral problems.

Keywords

primary school children, teacher–children interaction, adjustment, classroom environment

Introduction

Humans are such social beings that they seek out interaction with each other rather than remaining isolated. Therefore, they try to establish interpersonal interactions. Interpersonal interactions are a headlong process in which people interact with each other and receive a response in return. On the contrary, interpersonal interactions require common and shared values. They, in turn, entail adjustment. It is described as the normal, flexible, balanced, appropriate, and accurate interpersonal behavior in accordance with cultural and social norms (Leary, 1957; VandenBos, 2015).

School and classroom settings are a place where interpersonal interactions occur. Therefore, adjustment plays a key role in healthy interpersonal interactions, success, and well-being within school and classroom settings. The teacher–child interaction is a kind of interpersonal interaction. However, the teacher–child interaction does not occur between two equals and there is a remarkable difference between the two sides in the interpersonal interaction. The teacher is an adult who has to make children adjust to school and classroom settings and develop their academic, social, affective, and motor skills. However, the child is a student who needs adjustment and learning to cope with academic, social, affective, and motor demands in school and classroom settings. In the context of teacher–child interaction, adjustment can be viewed as a dynamic process in which teacher and children respond to changes in the other's behavior. The teacher–child interaction is the process in which a behavioral pattern is established. In this interaction, behavioral patterns between teacher and child depend on contingency. Contingency elicits certain behaviors (Kiesler, 1996; Košir & Tement, 2014; Pennings et al., 2018).

Healthy teacher–child interaction results in social engagement and connectedness. Social connectedness is closely related to academic engagement and psychological well-being (Dang, 2014; Goodenow & Grady, 1993; Jose & Lim, 2014; Wentzel, 1994). Consequently, interpersonal teacher–child interaction is crucial because of the fact that positive behavioral interaction prevents alienation and contributes to social-affective development and academic attainment. Interaction with the teacher makes children more resilient and competent. Furthermore, social connectedness enables insights about how to behave to be instilled. Children learn and internalize attitudes and beliefs regarding how they should behave. This learning emerges in interactions with the teacher (Baker, 1999; Masten, 1994).

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Teacher–child interaction has different forms. While some teachers consider the child as an autonomous agent who is aware of their roles and responsibilities, others think the child needs strict teacher control to adjust the school and classroom setting (Englehart, 2009). This stems from variations in human relations. There are two classes of interpersonal interaction. Adjustment can be viewed as the space between the self and others. Adjustment of space occurs in two ways: upward and downward. Downward relations emphasize relative strength, whereas upward relations emerge from a position of relative weakness (Britchnell, 2001). The teacher–child interaction can be addressed in terms of adjustment of space. In the teacher–child interaction, the child needs the teacher to lead, help, and consult with, whereas the teacher teaches and manages the interaction. In other words, the teacher's position is above just as the child is on the lower side of the interaction. Moreover, in teacher–child interaction, there are four elements of closeness, distance, upperness, and lowerness. Closeness enables the teacher and child to bond together, and distance allows both of them to adjust the space between them. The space helps children to be aware of the fact that they are separate individuals. Being above helps the teacher control and influence children, whereas being below allows children to benefit from leadership and consultation with the teacher (Britchnell, 2001).

Rationale of the Study

The present study aims to develop a theory about how teacher–child interactions occur in classroom settings in the context of adjustment. It is known that positive teacher interactions provide remarkable contributions to motivation, self-efficacy, and academic achievement and learning in cognitive, social, and affective domains (Baker, 1999, 2006; Brok et al., 2010; Cadima et al., 2016; Fraser & Walberg, 1991; Mainhard et al., 2012; Martin & Rimm-Kaufman, 2015; Masten, 1994; Roorda et al., 2011; Thijs et al., 2011; von Suchodoletz et al., 2014).

The transition from kindergarten to primary school is one of the most crucial milestones for children. Children encounter new and different social, academic, and behavioral challenges, which they have never experienced before. Therefore, adjustment is highly crucial for them. They enter new social and physical settings and have to interact with a new teacher whose expectations are different from former teachers' expectations. Their parents' anticipations from the teacher are different from those from former teachers. Consequently, the first graders experience comprehensive changes in both school and home settings (Giallo et al., 2010). While some children undergo better adjustment, other children are not able to adjust well and have difficulty with adjustment in the classroom environment.

In the relevant literature, very few studies sought to qualitatively address teacher–student interaction. Through correlational research, Thijs et al. (2011) reported that interaction between teachers and kindergartners depends on complementarity. Baker (1999) found that caring and supportive interaction between primary school children and teachers is related closely to a decrease in school alienation and better satisfaction with school and classroom experiences among primary school children. Hall and Walsh (2002) concluded that qualified teacher–student interaction makes language learning easier. Pennings et al. (2018) investigated interpersonal interactions between students and teachers moment to moment and found underlying elements of teacher and student interpersonal interactions in the long term and teacher student interaction have different contexts such as teacher-whole class, teacher-small group, and teacher-individual. Rubie-Davies (2007) concluded that teachers with high expectations related to their students are more responsive than those who have low expectations about their students. Mainhard et al. (2018) reached the conclusion that the more the teacher immerses in interpersonal interaction with students, the more students have positive emotions related to the learning environment. Longobardi et al. (2018) discovered that if the students perceive any conflict in their interactions with teachers, they are more inclined to bullying. Gasser et al. (2018) reported that emotional support from teacher–student interactions prevents students from disengagement. Pielmeier et al. (2018) discovered that teacher–student interaction is considerably crucial for the self-concept of students. Perry et al. (2002) found better teacher–student interactions foster self-regulated learning from kindergarteners through Grade 3. Although teacher–student interaction is a key concept which has positive outcomes in cognitive, affective, and social domains, no study deals with explaining teacher–first graders interaction in the context of adjustment. Consequently, the purpose of the present study is to develop a theory which produces an explanation of the adjustment process among first graders.

Method

Paradigm of the Research

The paradigm is a set of fundamental assumptions that underpin research in social sciences. Paradigm involves inquiry about ontological, epistemological, and methodological implications. Ontological implications are related to the nature and form of reality. In the present research, it was assumed that social reality is socially constructed (Guba & Lincoln, 1994; G. Morgan & Smircich, 1980). Epistemological implications deal with nature of the relationship between object and knower. The epistemological implication of the present research considers that social reality is dependent on the mind of the knower. Methodological implications are about how social reality is elicited. The methodological implication of the present research is that social reality can be captured by collecting situational

information in more natural settings and reintroducing discovery to determine meanings and purposes that humans ascribe to their actions (Glaser & Strauss, 1967; Strauss & Corbin, 1998). The paradigm of the present research entailed a qualitative research design.

Design of the Research

The present research aims to develop an explanatory theory because it seeks to understand how the first graders adjust to classroom settings when they start primary school. Therefore, it was designed with grounded theory research which is one of the qualitative research traditions. Grounded theory is a systematic and flexible framework in which qualitative data are collected and analyzed (Charmaz, 2014). Grounded theory enables development of conceptual density and helps to reveal relationships between concepts from data analysis. To reach theoretical density, patterns of actions-interactions were identified among the data (Strauss & Corbin, 1994). Furthermore, grounded theory allows a focus on actions-interactions within classroom settings (Starks & Trinidad, 2007). The researchers started with singular events and developed concepts, categories, and borders of the concept, by clustering singular events and making constant comparisons (Charmaz, 2014; Strauss & Corbin, 1994).

Recruitment of Participating Children

The purpose of the present research is development of a theory which explores how child–teacher interactions occur in the process of adjustment of first graders, rather than generalization of findings so convenience sampling was used to recruit participants. Primary school children who were 6 years old and had already started Year 1 were included in the research sample through convenience sampling which is one of the nonrandom sampling methods. Convenience sampling was chosen because ethical considerations, the nature of the study, and data collection process required construction of a research sample that was available (Fraenkel & Wallen, 2009).

After official permission was obtained from the local authority to collect data, primary schools were visited and Year 1 primary school teachers were met. One Year 1 primary school teacher accepted participation in the research. They were asked to be present in the classroom together twice a week and all of them accepted. Afterward, a detailed information letter including the purpose of the research was sent to the parents and their written consent was obtained. Consequently, the research sample consisted of 18 primary school children who studied Year 1.

Classroom Setting

The classroom was decorated and embellished with charts about numbers, and symbols of the letters by the teacher before school started. One quarter of the classroom was allocated as a playground. The playground was covered with a carpet. There were toys, blocks, dolls, and games in the playground. The playground was separated from the rest of the classroom by a separator whose height was about 35 or 40 cm. The teacher warned the participant children that walking on the playground with shoes was not allowed. In addition to that there were 18 desks in the classroom. Often those desks were arranged in sequence but sometimes the teacher combined three desks and made groups.

Ethical Considerations

Before the research commenced, official permission was obtained from local authorities, and approval was obtained from the participant children, their teacher, and parents. To conceal information about the identity of the participant children, pseudonyms such as "Child 1, Child 2" were assigned to each child. Moreover, written field notes were shared with their teacher at the end of each observation session and all of the field notes were sent to their parents after data collection ended.

Sampling of Events

The concept of sampling in the qualitative research tradition is very different from the quantitative research tradition. While sampling refers to the number of participants in the quantitative research tradition, qualitative sampling focuses on events. Qualitative sampling is theory-driven because qualitative research is constructed upon events. In turn, events entail data saturation. Data saturation is described as the fact that similar events or statements are repeated (Huberman & Miles, 2002; Strauss & Corbin, 1998).

The present research was designed in grounded theory, so theoretical sampling is crucial. Theoretical sampling is described as the fact that sampling evolves within the research process. Sampling depends on concepts that were found to form during data analysis. The purpose of theoretical sampling is to describe many events so as to compare events. Sampling is dependent on data collection in grounded theory because of the fact that eventually no new concepts and category are revealed when similar events and actions-interactions are observed. Therefore, data collection through participant observation is ended. As a result, it was concluded that theoretically saturated sampling was reached (Marshall, 1996; Strauss & Corbin, 1998).

Data Collection

Data were collected through participant observation. Researchers stayed in the classroom setting for about 3 months with the permission of the participant Year 1 students, their teacher, and parents. The classroom was observed twice a week. During the observations, field notes were

written up. Each observation session lasted for one lesson hour which has the exact duration of 40 min. When similar events and actions-interactions were observed, observation was ended. In total, the researchers stayed in the classroom for 26 lesson hours during 26 weeks.

Data Analysis

Data analysis was conducted in three sequential steps of open coding, axial coding, and selective coding. In grounded theory, data collection and data analysis are interrelated processes. After the first portion of data was collected, data analysis began. Written-up field notes were iteratively read line by line. Data analysis was conducted after each observation. Constant comparison is the main method of data analysis in grounded theory. Moreover, iterative reading is another method to handle qualitative data in grounded theory (Charmaz, 2014; Strauss & Corbin, 1998). Data were constantly compared with previously gathered data.

Findings

Open Coding

In open coding, data were reduced to more manageable size (Huberman & Miles, 2002). Data analysis was carried out through concepts because of the fact that the foundations of theories cannot be based on actual events or incidents. Moreover, concepts function as the building blocks of a theory. Events and incidents are addressed as indicators or symbols of phenomena. In turn, it is possible to give a conceptual label to events or incidents to depict one aspect of phenomena. In open coding, concepts and their dimensions were identified and labeled with the constant comparison method and iterative reading. Consequently, data were abstracted and fragmented into discrete units. Open coding also entails relating concepts to categories. Concepts that pertain to the same phenomenon were related to categories, which are broader and more abstract terms than concepts. In addition, science operates from singular events to regular events through inductive logic (Russell, 2001). To develop inductive logic, concepts were identified and those concepts were clustered into categories, which is a broader term. Categorization of concepts was carried out along with the dimensions and properties of the concepts:

> On the third day of school the teacher was making a huge effort to establish and instil classroom rules for the participant children. At the same time, she was trying to conduct instructional activities. She planned to teach how to draw straight lines and designed a worksheet. The teacher asked if there was anybody who liked ice-cream. The majority of the participant children wanted to respond to the question. While the Teacher ignored the participant children who were not obeying speech rules, she permitted those who held up their hands in order to request to

speak. Although she was ignoring the participant children speaking without permission, they continued talking to each other.

The teacher aimed to instill classroom rules to establish classroom order. Therefore, she used behavior shaping strategies. While conducting instructional activities, she gave feedback about their behavior by ignoring them. However, her effort was useless because she did not manage to make them obey speech rules. These data were coded as "behavior shaping":

> After Child 1 played with her four colours of dough, the teacher began to walk around the classroom. The teacher realized that Child 1 violated the rule by taking out four colours of dough. The teacher interrupted Child 1 and reminded her about the rule about the number of colours. Child 1 put two colours of dough into her cabinet.

The teacher was very careful and tried to closely monitor the participant children by walking around the classroom. The teacher's existence influenced Child 1's behavior. Child 1 was aware of her wrongdoing so she did not oppose the teacher. As a result, this was conceptualized as "teacher control":

> The teacher gave dough, blocks and other instructional toys to the children and released them. The children began to play with each other. While they were playing, the teacher sat down in her chair and was preparing homework for them. In the meantime, several children were playing dough at their desks, while the rest of children were playing with the toys on the carpet which had been allocated for them to spend their free time in the classroom. Child 5 and Child 4 began to play with each other. While Child 5 was trying with Child 4, Child 2 collapsed the tower which Child 5 had built of the blocks. Child 2 violated the classroom rules. The teacher realized and warned Child 2. The teacher came to Child 2 and asked what if Child 5 destroyed your tower? The teacher explained why his behaviour was wrong. Child 2 seemed to understand the teacher. Then, the teacher gave a puzzle and asked Child 2 and Child 6 to complete it. Child 2 and Child 6 appeared to agree to play together, so they played in cooperation.

The teacher's effort to make Child 2 realize his wrong behavior worked well because the teacher also established a close relationship to explain why his behavior was wrong. Close cooperation of Child 2 with Child 6 on completion of the puzzle is a sign of beneficial and useful efforts to make Child 2 obey the classroom rules. Therefore, close communication helped Child 2 adjust to the classroom environment. These data were coded and conceptualized as "close communication by the teacher":

> All of the children were playing together and they appeared to enjoy free time activities. However, the aggressive behaviour of Child 8 toward Child 4 ruined this positive climate in the

classroom. Child 8 wanted be leader of the group, but Child 4 opposed Child 8. The teacher warned Child 8 and said she would be keeping her eyes on him. Child 8 seemed to regret his aggressive behaviour. The classroom returned to a positive climate. The teacher called Child 8 and asked him to come to her table. When Child 8 came to the teacher, the teacher began to explain why his behaviour had been wrong. The teacher assigned a job to help her tidying her table. Child 8 accepted the job offer. Child 8 joined the teacher and cooperated with the teacher.

Child 8's demand to become the group leader could have been viewed as his need to obtain approval. When his demand was not accepted by other group members, Child 8 tried to get others to accept. When he failed, he employed aggressive behavior as an instrument in achieving his aim. The teacher established constructive communication. This constructive communication met his need for approval. On the contrary, the teacher acted as an authority figure which helped Child 8 adjust his behavior. As a result, the demands of the teacher set a reference point for Child 8 in getting approval from an adult. It was coded as "close interaction to provide approval":

> At lunchtime some students had taken soft chairs' filling out and scattered it around the classroom. The teacher came into the classroom and saw the chairs had been damaged. The teacher turned to them and explained how they were good and cute children so all of them were members of this nice classroom. Then the teacher asked them if the soft chairs were in good condition, and if this behaviour befitted such good and cute classroom members. All of them responded no.

The teacher tried teach moral behavior by emphasizing their good characteristics. First, the teacher explained how good the children were, then made them query whether the action of damaging the soft chairs befitted them. Praising their good characteristics and instilling a sense of belonging to the classroom, they reasoned the action along with their good characteristics. As result of the analysis, these data were conceptualized as "developing sense of belonging":

> Child 10 took 6 or 7 hoops. Different children from other classrooms came to the playground. Child 10 took 6 or 7 hoops and began to collect other hoops from her classroom friends' hands. A child from another classroom asked for a hoop from Child 10. Child 10 refused to give any hoop. However, Child 9 was holding 3 or 4 hoops and shared the hoops with the children from the other classroom. Therefore, Child 10 and Child 9 quarrelled with each other. The teacher noticed the quarrel between Child 9 and Child 10. The teacher approached them and explained sharing belongings with other was very good behaviour, and asked Child 10 to share the hoops with other children. Child 10 was very reluctant because her face musculature and stance disclosed her thoughts. Child 10 involuntarily obeyed the request from her teacher and shared the hoops.

The teacher was influential because even though Child 10 was very reluctant to share, she obeyed the request and shared the hoops. Although the teacher established constructive communication and behaved very kindly to persuade Child 10, Child 10 perceived the teacher as an authority and obeyed. Child 10 was very upset and reluctant. Even if close interaction and communication of the teacher with Child 10 did not change Child 10's state of mind, the interaction worked. As a result, it was coded as "verbal influence on behavior":

> The teacher stated that they would work on the board with a board marker. The teacher distributed board markers to them. The participant children seemed to have enjoyed working with the board and board marker. Therefore, they solely focused on the writing task, and did not violate the classroom rules. The teacher said that she would give a surprise to those who completed the task. The teacher left the classroom for 15-20 seconds to bring the surprises for them. Although the teacher was absent from the classroom and there was a physical distance between the teacher and the children, they went on working at the task.

Interesting instructional tasks helped the children work on the task. Interesting instructional activity increased their keenness to work. As a result, they did not violate the classroom rules but obeyed by working. Although the teacher was absent from the classroom for a short while, their motivation was not influenced by the teacher's absence. This was conceptualized as "interesting instructional activity":

> "Behaviour shaping," "teacher control," "close communication by the teacher," "close interaction to provide approval," "developing sense of belonging," "interesting instructional activity" and "verbal influence on behaviour" were clustered into the broader concept of the "Adjustment Strategies Used by The Teacher" category.

> Child 5 realized that his pencil was not good for drawing, and asked permission from his desk mate to use her pencil sharpener. His desk mate gave her pencil sharpener. Child 5 stood up from his desk, went to the rubbish bin, and used the pencil sharpener to make his pencil sharp. However, Child 5 did not succeed in sharpening his pencil and asked for help from the teacher. The teacher took the pencil and the pencil sharpener and went to the rubbish bin. The teacher sharpened the pencil. While the teacher was working on Child 5's pencil, Child 4, Child 8, and Child 15 came to the teacher, and asked her to sharpen their pencils."

Child 4, Child 15, and Child 8 observed that Child 5's behavior did not cause a response by the teacher and his behavior was approved by the teacher because she helped Child 5. They repeated Child 5's behavior. Child 5's behavior functioned as a sample behavior for Child 4, Child 15, and Child 8, who had been doing the task. Therefore, these data were conceptualized as "repetition of sample behavior":

While the teacher was walking around the classroom, she realized that Child 8 did not take out his dough and he was doing something else. The teacher asked him why he had not taken out his dough. Child 8 responded that he had not have dough. Also Child 8 stated that his father did not buy dough for him although they had gone shopping the previous day.

Child 8 defended himself against the teacher's question by producing a pretext. Child 8 did not want to clash with the classroom rules and environment and produced a pretext to cope with disobedience. It was coded as "producing pretext in the case of disobedience":

Before the course started, Child 4 and Child 5 were playing as if they had been fighting due to the fact that the teacher was not in the classroom. The researchers asked why they were struggling dangerously. Child 5 responded that they pretended to fight, but did not really fight. Child 4 agreed with Child 5.

The absence of the teacher led Child 4 and Child 5 to think that violation would not be punished by the teacher and they would encounter no problem. They were aware of the fact that their behavior was not appropriate. However, they legalized their wrong behavior by rationalizing. This was coded as "legalization of the classroom rule violation":

Child 5, Child 15, Child 10, and Child 9 were playing with toy blocks and trying to build something. Child 5 wanted to be leader of the group and told Child 15, Child 10, and Child 9 what they needed to do but they did not pay attention to Child 5 and they behaved as they wanted. Child 5 got angry and left the group. Although Child 5 tried joining other groups, there were no children who accepted his leadership. Child 5 seemed to realize that his= behaviour was not yielding the desired results, and then changed his behaviour. As a consequence, he gave up imposing his leadership on his friends. Child 5 came back, and joined Child 15, Child 10, and Child 9. Child 5 played with them till the end of the lesson.

Child 5 observed that his leadership expectation did not succeed and his expectation led to maladjustment and isolation from his peers. He changed his behavior, accepted the group norms and cooperation, and then he adjusted to the social setting. This was conceptualized as "behavior change as result of peer isolation":

The teacher told Child 5, and Child 12 to stand up. The teacher asked Child 5 to pronounce the "top" word. Then, she appealed Child 12 to listen to Child 5 and identify whether the "top" word contained an "e" sound. Child 5 pronounced, Child 12 listened and responded that the word did not contain "e" sound. Thereupon the teacher asked Child 5 whether Child 12's response was right or wrong. Child 5 did not seem to be sure, then said that he agreed with Child 12.

Child 5 and Child 12 were on the spot in the classroom. Child 5 was not sure about what the correct response was but he preferred to agree with Child 12, because agreement with Child 12's response would remove the burden from him. This was coded as "agreement with others to cope with external demands":

Then the teacher gave out blank papers. After she had given out the blank papers, she asked them to draw a propeller. The participant children found the task very interesting and began to draw. The teacher was walking around the classroom, checking their performance. The teacher checked Child 6's drawing and told Child 6 that he had done well. Then, Child 9, Child 14, and Child 4 went to Child 6 and wanted to see how Child 6 had drawn. They imitated Child 6's drawing.

Child 9, Child 14, and Child 4 may have needed a tangible pattern. Child 6's drawing served as a reference point for them about how to draw. This was coded as "conformity through peer reference":

At the break, Child 12 and Child 11 were doing homework which was given on the previous day. They were painting apple trees on the sheet. Child 11 finished painting and offered to hang their paintings on the classroom board. Child 12 opposed Child 11 and said that they can't hang their sheets on the classroom board without getting permission from the teacher. Child 11 agreed with Child 12.

Child 11 and Child 12 did their homework together and negotiated what to do after finishing the task. They made a mutual decision by negotiating. The absence of the teacher did not influence them and they felt the necessity to obtain permission from their teacher. These data were coded as "social conformity through negotiation":

After the teacher had given the erasable board and pen to the children, she demonstrated on the classroom board how to write "e" and "l" and integrate both of the letters. The teacher warned and appealed to them to carefully watch her, then she demonstrated again. While she was demonstrating, she warned them not to speak without getting permission. After the demonstration was ended, the participant children tried to write and integrate both of the letters. All of them were working on the task. The teacher was walking around the classroom, checking them, and giving feedback about their performances. Child 14, Child 13, and Child 10 were following the teacher and wanted her to check their writing performance. Child 14, Child 13, and Child 10 also held up their hands to get speech permission. The teacher did not warn them but gave feedback about their writing performances because they completed the task and asked her to check by obeying the speech rule.

Child 14, Child 13, and Child 10 finished the task and obeyed the speech rules so the teacher did not warn them. Obeying the speech rule allowed the teacher to behave in a constructive way. This was coded as "obedience to the classroom rule for adjustment":

The teacher said that she would give out another worksheet to those who had completed the task. The participant children seemed to be stimulated to complete the previously given task.

Those who completed the task, stood up and went to the teacher. They waited in a queue and did not clash about the sequence. The teacher gave the worksheet to the children who were standing in the queue. The participant children who had taken the worksheet, came back to their own desks, sat down, and began to do the worksheet.

The participant students appeared to have adopted the rule about queuing. Nobody violated the rules because their interest in the task helped them behave appropriately according to the classroom rules. All of them behaved in similar sequence. They seemed to adopt the classroom rules and the behavior sequence. These data were conceptualized as "adoption to adjust":

Child 3, Child 4, and Child 15 were playing with toy blocks and throwing them at each other dangerously. Child 4 knelt and said that the teacher could see them. They suddenly stopped throwing toy blocks and started to behave appropriately by combining toy blocks.

The students assumed that an authority could observe them and stopped violating the classroom rules. The teacher influenced the children's behavior as an authority figure in the classroom, even if the teacher did not see their classroom rule violation. Child 3, Child 4, and Child 15 realized that the teacher could have observed them and this realization led to an adjustment in their behavior. Their adjustment was normative rather than internalized behavior, thereby it was conceptualized as "normative conformity through assumption."

As result of open coding, 10 concepts emerged from the data. Those concepts are "repetition of sample behavior," "legalization of classroom rule violation," "producing pretext in the case of disobedience," behavior change as a result of peer isolation," "agreement with others to cope with external demands," "conformity through peer reference," social conformity through negotiation," obedience to the classroom rule for adjustment," "adoption to adjust," and "normative conformity through assumption." All of these conceptualizations emphasize methods of coping with maladjustment. Therefore, those concepts were categorized as "coping with maladjustment":

Child 2 stood up from his desk and went to have a look at his jacket while the teacher was looking after other children. Child 2 went across the carpet playground where stepping with shoes was prohibited instead of walking around the carpet. The teacher did not realize that Child 2 had violated the classroom rules about keeping the carpet playground clean. While Child 2 was coming back to his desk, he looked at the teacher to check whether the teacher saw him or not.

Child 2 seemed to be aware of the fact that his behavior was wrong but he violated the classroom rule because the teacher was looking after other participant children and was distant from him. This distance made him feel free to behave even if his behavior was not suitable. These data were conceptualized as "classroom rule violation as a result of loose teacher control":

The teacher told the participant children that those who completed painting the germs could take out their two colours of play dough and play with them. Child 5 asked permission to take out four colours of play dough. The teacher did not give permission to Child 5 and said two colours only. Child 5 seemed to be motivated because he wanted to play with the dough. Child 1 obeyed the teacher and communicated to the teacher to display her painting and praise her work. Child 1 was trying to get approval from the teacher and establish a good relationship with the teacher. Child 1 completed the task. Child 1 was sitting down at her desk and the desk was away from the teacher so it was difficult for the teacher to see what Child 1 was doing. Child 1 checked whether the teacher could see her, made sure, and took out four colours of dough.

Child 1 did not obey the rule about the number of colors of dough. She relied on her previous approval and positive relationship with the teacher. Child 5 first wanted to take out four colors of dough but the teacher did not agree to his request. Child 5 obeyed the rule. Child 1 also was sure that the teacher could not see her. Therefore, this was coded as "classroom rule violation due to position of the teacher," because the context related to the teacher's physical situation influenced whether Child 1 obeyed the rule or not:

The teacher asked the participant children to take the listening position and recline. The teacher started a video about the letter "u" from the smart board. Most of them obeyed the instruction from the teacher and watched the video. After the video had ended, the teacher asked them to give examples about words containing the letter u. However, Child 8, sitting most distant from the teacher, was not listening to the teacher and went on playing with his toy.

Child 8's position in relation to the teacher led him to play with his toy rather than to listen the teacher. Distance of the teacher reduced the teacher's influence on Child 8. Child 8's violation was determined by the teacher's distance. Consequently, these data were conceptualized as "classroom rule violation due to the teacher distance":

The teacher called Child 13 to the front of the whiteboard. Child 13 stood up and came to the whiteboard. The teacher was trying to get Child 13 to read basic syllables and sound-letters. However, Child 13 was reading silently and Child 13 and the teacher turned to the whiteboard. The teacher stopped face-to-face interaction with the other children and the teacher seemed to focus only on Child 13. As a result, the other children started to talk to each other so noise developed in the classroom. The teacher realized and warned them not to talk to each other. After the teacher had finished getting Child 13 to read the teacher gave away a worksheet. The teacher asked the children to individually complete the worksheet. The children started to work on the

worksheet. They found the worksheet so interesting that they focused on the worksheet. All of them were working on the worksheet. They finished working on the worksheet.

The teacher and Child 13 turned their back to the other participant children. The teacher's stance was wrong for face-to-face interaction. This kind of stance impaired communication with other children. Lack of face-to-face communication led to the participant children violating the classroom rule by talking to each other and doing something rather than completing the worksheet. These data were coded as "classroom rule violation due to position of the teacher":

At the end of the lesson, the instructional activities became routine and the participant children got bored and lost their motivation. Therefore, Child 5 was speaking with friends, and walking around the classroom without permission of the teacher. The teacher warned Child 5 and Child 5 came to his desk and sat down. However, Child 5 did not stop talking with other children even if he was warned by the teacher.

At the end of the lesson, the instructional activities were perceived as routine by the participant children. As a result of routine activities, Child 5 was inclined to behave as he desired. This was coded as "disobedience owing to routine instruction":

The teacher was late due to her teacher board meeting, so the teacher was absent from the classroom. The teacher had assigned instructional tasks for each of the children and strictly warned them not to cause a disturbance. However, Child 5 had taken off his shoes and was playing on the carpet playground which was prohibited to walk on with shoes.

Child 5 behaved as he wanted to do because the teacher was physically absent. Therefore, Child 5 disobeyed the teacher's rule. Physical absence of the teacher resulted in disobedience of the rule. Therefore, these data were coded as "disobedience due to absence of the teacher":

Child 3, who did not receive preschool education, completed the worksheet, went to the teacher and showed his worksheet. The teacher was disappointed because Child 3 performed the tasks on the worksheet poorly. The teacher began to demonstrate and explain what Child 3 did wrong so the teacher was trying to establish constructive communication with Child 3. The teacher was explaining and demonstrating. At the same time, the teacher was trying to motivate Child 3. However, Child 3 focused on erasers and pencils on the teacher's desk and was playing with them so he was not listening to the teacher.

Child 3 did not receive preschool education. This drawback impeded him in communication and interaction with others, and in listening to others. This lack led to disobedience. However, this kind of disobedience stemmed from the participant child's disposition. This was conceptualized as "disobedience due to lack of socialization":

Child 5 and Child 4 took a red basketball and went to the basketball hoop. Child 6 joined them. The basket was too far away from the teacher. Child 5 first threw the ball into the basket. Child 6 caught the rebound but Child 5 took the ball from Child 6. Child 5 succeeded in dominating Child 6 and Child 4 and they seemed to accept Child 5's leadership. While Child 5 was throwing the ball into the basket, Child 6 and Child 5 were watching Child 5.

The teacher was too far away from the basketball hoop; therefore, the teacher did not manage to see the interaction between Child 4, Child 6, and Child 5. Therefore, physical stance and location of the teacher influenced the interaction between them. Consequently, this was coded as "dominance over peers due to distance of the teacher":

The teacher came into the classroom and told the children to sit down at their desks. However, one of them whistled. The teacher said that she felt disturbed due to the whistle and politely warned the children. The whistle never was repeated during the lesson. The teacher was instructing the activities about phonological awareness of "e" sound. While the teacher was demonstrating how to write "e" letter, they seemed to be listening to the teacher. After the teacher finished the demonstration, she said that she would select a student who would do an exercise related to writing the letter "e" on the smart board. The majority of them insisted they wanted to do the exercise. The teacher emphasized that she would select those who obeyed the speech rules. Then the teacher observed all of them to identify who obeyed the speech rules, and selected Child 6. Then they complied with the speech rules, and the teacher strictly checked whether they complied or not. About ten minutes later, the teacher's control over speech rules became loose, and Child 5 started to speak without getting permission from the teacher, came to the smart board and demonstrated the answer. Child 5's behaviour made the teacher more aware, she began to check them again.

The teacher tried to shape the participant children's behavior to establish order in the classroom. She demonstrated and checked the speech rules. When the teacher demonstrated strict control over the participant children, they abided by the classroom rule. On the contrary, when her control loosened, they did not obey the rules. Fluctuation in teacher control resulted in violation of the speech rule. Therefore, this was conceptualized as "fluctuation in teacher control."

In open coding, eight concepts were identified. Those concepts are "classroom rule violation as result of loose teacher control," "classroom rule violation due to position of the teacher," "classroom rule violation due to the teacher distance," "disobedience due to routine instruction," "disobedience due to absence of the teacher," "disobedience due to lack of socialization," "dominance over peers due to distance of the teacher," and "fluctuation in teacher control." All of the concepts are related to reasons leading to behavioral problems. Therefore, they were clustered into the "contexts leading to behavioral problems" category.

Table 1. Findings of Open Coding.

Category	Concept
Adjustment strategies used by the teacher	Behavior shaping
	Teacher control
	Close communication by the teacher
	Close communication to provide approval
	Developing sense of belonging
	Verbal influence on behavior
	Interesting instructional activity
Coping with maladjustment	Repetition of sample behavior
	Producing pretext in the case of disobedience
	Legalization of the classroom rule violation
	Behavior change as result of peer isolation
	Agreement with others to cope with external demands
	Conformity through peer reference
	Social conformity through negotiation
	Obedience to the classroom rule for adjustment
	Adoption to adjust
	Normative conformity through assumption
Contexts leading to behavioral problems	Classroom rule violation as a result of loose teacher control
	Classroom rule violation due to position of the teacher
	Classroom rule violation due to the teacher distance
	Disobedience owing to routine instruction
	Disobedience due to absence of the teacher
	Disobedience due to lack of socialization
	Dominance over peers due to distance of the teacher
	Fluctuation in teacher control

As a result of the open coding, three categories of "adjustment strategy used by the teacher," "coping with maladjustment," and "contexts leading to behavioral problems" emerged. Findings of open coding are displayed in Table 1.

Axial Coding

In axial coding, the second step of the data analysis, categories were related to their subcategories according to their properties and dimensions. Coding occurred around axis of categories that had been identified in open coding. In axial coding, categories were laid out along with their properties and dimensions. Patterns related to actions-interactions, conditions, contexts, and consequences were identified. This identification allowed the correlation of categories to their subcategories (Corbin & Strauss, 1990; Strauss & Corbin, 1998).

For the category of adjustment strategies used by the teacher, findings of open coding revealed that the teacher uses a wide range of adjustment strategies. Behavior shaping is one of those strategies. When the teacher ignores the disobedience of participant children, the behavior shaping strategy is useless. On the contrary, if the teacher is decisive in monitoring and caring about them, the behavior shaping strategy produces the desired outcome. As a result, success of the behavior shaping strategy depends on the

teacher's decisiveness. Behavior shaping has two dimensions of useless behavior shaping and successful behavior shaping. Close communication by the teacher results in suitable behaviors among the children. Moreover, close communication by the teacher helps them accept and obey the classroom rules and adjust to the classroom environment. Close interaction offers an opportunity for the participant children to gain approval. However, verbal influence causes reluctance among them even though they obey and behave as the teacher demands. Developing a sense of belonging is another strategy. This strategy instills group identity and coherence among them. When the participant children find an instructional activity interesting, they obey and behave in accordance with what their teacher asks. Finally, the teacher uses behavior shaping.

The coping with maladjustment category consists of 10 concepts of repetition of sample behavior, producing pretext in the case of disobedience, legalization of the classroom rule violation, behavior change as result of peer isolation, agreement with others to cope with external demands, conformity through peer reference, social conformity through negotiation, adoption to adjust, normative conformity through assumption, and obedience to the classroom rule for adjustment. Findings of axial coding revealed that when the participant children realize that their behavior is unsuitable for the classroom rules, they produce pretext or legalize

their behaviors. When they encounter an external demand or ambiguity, they repeat a sample set of behavior that is performed by another child and agree with each other. When the participant children don't need to make an instant decision, they negotiate and reach mutual decisions to cope with maladjustment and avoid disobedience. Furthermore, they realize that their behavior does not abide by the classroom rules, and if they can be observed by the teacher, they use normative conformity through assumption. Their conformity is normative because there is no teacher control, they may violate the classroom rules. The assumption that the teacher can monitor them is the main driver of normative conformity. Obedience is another strategy for adjustment. Obedience occurs when the participant children want to get feedback about their performance, because obedience enables the teacher to pay attention to them. Behavior change is the strategy that the participant children use when their attempts at behavior lead to lack of adjustment. Adoption is a coping strategy that the participant children use. In the classroom setting, interesting activities and nice objects are sometimes present. They adapt to the classroom rule or tradition to obtain nice objects or join to interesting activities. Adoption results in classroom order and helps the participant children adjust.

Contexts leading to behavioral problems is the third category which emerged from the data. Reasons leading to behavioral problems can be ascribed to three factors as the teacher, nature of instructional activity, and distance of the teacher, stance of the teacher, instructional factors, dispositional factors, and teacher control over the participant children. Stance, distance, and absence of the teacher play crucial roles in the occurrence of classroom rule violation, maladaptive behavior, and disobedience. Maladjusted behavior and disobedience depend on instructional characteristics. If the instruction lasts a long time and is routine, the participant children display maladjusted and disobedience behavior. Teacher control is influential on the participant children in terms of whether they adjust.

Selective Coding

Selective coding, the third step of data analysis, is the process in which a theory emerging from data is refined and categories are integrated with a central category, which is broader and more abstract than categories. In selective coding, the core and central category was determined by writing a conceptualization (Corbin & Strauss, 1990; Strauss & Corbin, 1998).

From description to conceptualization. As a result of open coding and axial coding, three categories emerged. These categories are "adjustment strategies used by the teacher," "coping with maladjustment," and "reasons leading to problems." When the children first came into the classroom, the teacher employed a wide range of strategies to make them adjust to the new setting through close communication and interaction, behavior shaping, development of sense of belonging, designing interesting

instructional activities, verbal influence, and teacher control. All of the strategies aim to instill an insight into how the participant children should behave. On the contrary, the participant children tried using coping strategies to adjust. These strategies involve social conformity, normative conformity, producing pretext, legalization of unsuitable behavior, behavior change, obedience, peer reference, agreement, repetition of sample behavior, and adoption. Even if the teacher made remarkable efforts to make the participant children adjust, and they employed a wide range of coping strategies, there were several contexts in which maladjusted behaviors occurred. Distance and inappropriate stance of the teacher, fluctuation in teacher control, routine, and long-lasting instructional activities triggered inappropriate behavior among the participant children. As result of the conceptualization, "adjustment strategy used by the teacher," "coping with maladjustment," and "reasons leading to problems" categories were clustered and refined into "student–teacher interaction." Consequently, "student–teacher interaction" was found to be the central category.

While the teacher used a wide range of adjustment strategies, the participant children developed coping strategies to adjust in response to the teacher. Several problems of disobedience, dominance over peers, maladjusted behavior in the context of the participant children's personal disposition, and distance, stance, and absence of the teacher in the classroom occurred.

Discussion

The theory developed in the present research is a response to the question: What happens during teacher–student interaction when the first graders start primary school? Findings of the study revealed that the teacher used several strategies to make the first graders adjust to the classroom setting once they entered and the first graders employed a wide range of coping strategies in response to adjust. However, there were several contexts in which maladjusted behavior emerged.

Behavior shaping is one of the strategies used by the teacher. Behavior shaping depends on conditioning. Behavior shaping occurred in interactions between the teacher and the participant children. The teacher employed behavior shaping through conditioning to elicit appropriate behaviors from the participant children. Conditioning depends on contingency and entails strict monitoring of their behavior. When the teacher's monitoring relaxed, contingency did not work and behavior shaping did not generate the desired behavior. When the teacher strictly monitored the participant children's behavior, the contingency worked well and the behavior shaping strategy became successful. Humans are always inclined to behave in the light of outcomes of previous behavior trials. Humans repeat behavioral patterns which yield positive outcomes, just they give up the behavioral patterns which produce negative results (Skinner, 2013). The teacher gave activity sheets as stimulus and defined the rules about how to respond, but if the teacher did not manage to

monitor their behavior and ignored appropriate behavior, the contingency principle did not work and inappropriate behavior was not shaped or received any feedback. Therefore, when the behavior shaping strategy through conditioning is used to manage teacher–child interactions, child behavior needs strict monitoring. It was concluded that close communication and interaction contributed to adjustment of the participant children. In interpersonal interactions, there are four elements of closeness, distance, upperness, and lowerness. Closeness functions to hold teacher and children together, whereas distance allows them to set the distance among them. Upperness emphasizes the teacher's influence on children, just as lowerness helps children utilize help and consultation with the teacher (Britchnell, 2001). Close interaction and communication enabled the four elements to emerge from interaction between the participant children and the teacher. However, there is a context in which the teacher used verbal influence with close communication but it led to conflict between the participant child's desire and the teacher's demand because verbal influence functioned as a compelling instrument rather than as method of adjustment. Furthermore, the teacher used a sense of belonging in the classroom interactions because the teacher tried to build sense of group identity among the children because a sense of belonging offers a referral framework about how to behave.

In the present study, it was observed that the participant children developed and used coping strategies to adjust to the classroom settings. The participant children repeated another's behaviors which had been approved or ignored by the teacher. In the classroom, the participant children experienced vagueness and had to cope with external demands. They perceived each other's behaviors or thoughts which were approved or ignored by the teacher as a sample and framework about how to behave. They repeated or imitated each other's behavior. There may be several underlying factors. This result can be explained through vicarious learning emerging from the social-cognitive learning theory by Bandura (1986). Vicarious learning refers to learning as result of observing a model. Vicarious sources enable learning to occur. Vicarious sources provide the outcomes of specific actions without direct experience. In addition to that vicarious sources prevent time loss and negative results of specific actions (Schunk, 2009). In the classroom setting, the participant children observed each other and acted on their observations of each other. If the teacher did not react or warn them due to their inappropriate behavior, some of them repeated the sample set of behavior. Moreover, successful performance at writing, math, and drawing was evaluated as criteria about how to perform. Behavior change is another strategy used by the participant children to cope with maladjustment. Skinner (2013) stated that behavior producing positive outcomes tends to be repeated, whereas behavior leading to negative results is subject to change. In the classroom context, the participant children changed behavior until

they found that they had performed behavior leading to desired outcomes. Problematic behavior caused isolation from the classroom and reactions from other children and the teacher. They adjusted their behavior so as to generate the desired results such as acceptance and approval from their peers and the teacher. Besides, repetition or avoidance of a behavior can be explained by the ripple effect. The ripple effect means a spreading effect triggered by a single action of the teacher. The impact of vicarious punishing or rewarding a child spreads to the other children (Kounin & Gump, 1958). Approval or ignorance of the teacher in relation to a participant child affects other participant children in the classroom. The teacher's ignorance of a participant child's behavior helps other children avoid the same behavior, whereas approval of the teacher encourages the other participant children to repeat the same behavior. On the contrary, repetition or avoidance of a behavioral pattern based on the teacher's approval and ignorance includes a remarkable psychological process because knowing what to do and what to avoid requires self-regulation and self-monitoring. Acquiring these skills can be explained by visible learning which was conceptualized by Hattie (2009). Visible learning can be described as the process in which students turn into their own teachers. Teachers should aim to convert their students into their own teachers. Therefore, teachers are the most powerful initiator to convert their students into their own teachers. This conversion requires student–teacher interactions. According to the theory of visible learning, learning occurs when the explicit goal of teaching, intentional actions of teachers, feedback provided by teachers, and active, eager, and engaging teachers and students are present in classroom settings (Hattie, 2009, 2012). Not only do deliberate actions of teachers, teachers' feedback to their students, and active, passionate, and engaging teachers in classroom make the student learner within the teaching practice but these features also make the student his own teachers. As a result, becoming their own teacher fosters development of self-regulation and self-monitoring among students. In the classroom setting, the appropriate behavior functioned as an explicit goal of learning for the participant children, behavior shaping strategies of the teacher initiated the interaction between the participant children and the teacher, and approval or ignorance of the teacher provided feedback for the participant children. As a result, the explicit goal through appropriate behavior, the interaction between children and the teacher with behavior shaping strategies, and feedback via ignorance or approval of the teacher could have instilled self-regulation and self-monitoring into the minds of the participant children and they became their own teachers.

It was also found that the participant children produced pretext and legalized their unsuitable behaviors to cope with disobedience. Producing pretext and legalization of inappropriate behaviors can be regarded as cognitive and both of them may be based on cognitive dissonance according to Festinger (1957). In cognitive dissonance theory, cognition

is described as knowledge related to any object, action, and event. Festinger (1957) defined cognitive dissonance as an inconsistency between actions and beliefs or attitudes. In the present study, it was observed that the participant children developed cognition about not injuring others and harmonizing with others as result of the teacher's instructions. When disobedience occurred, they experienced inconsistency between their cognition which they had been taught and their actions. They produced pretext and justification of their inappropriate behavior to cope with the discomfort which emerged from cognitive dissonance.

One of the coping strategies used by the participant children is conformity. There were two kinds of conformity of normative and social negotiation. Social norms are products of social interactions and socialization. Social norms determine the rules for individuals about how to act. During the socialization process, the individual needs to internalize and is forced to behave in a way taken for granted. In this socialization process, the individual is influenced by an authority such as parents or teachers (Milgram, 1974). In the present study, it was observed the participant children were influenced by the teacher's presence in the classroom because the teacher determined the rules about how to behave and checked obedience of the rules. They assumed that they had been observed by the teacher so the teacher's presence functioned as a social influence. As a result, they realized the violation and forced themselves to conform to the rules even if they violated the classroom rules. Their violation and self-control can be interpreted as normative conformity. On the contrary, obedience and adoption are other coping strategies. Obedience behavior arises under social organization. In the classroom setting, the teacher and the participant children compose a social organization. The teacher determined rules of behavior and the participant children obeyed. The participant children used obedience and adoption strategies to achieve external rewards. When the teacher was not present, the participant children negotiated with each other about how to behave. This negotiation allowed them to reach a mutual decision and act together. In this situation, there was no authority, the equals determined the rules together. Consequently, mutual decision without any hierarchical process led them to act without normative influence.

As for the contexts in which behavioral problems such as disobedience, maladjustment, and violation of the classroom rules occurred, three dimensions of teacher stance and position in the classroom, characteristics of the instructional activity, and the participant children's disposition emerged. As for the teacher stance and position in the classroom, when the teacher conducted an activity with the whole class, some of the participant children violated the classroom rules due to the teacher's stance and position. The distance or position led them to think that the teacher would not manage to monitor them, so they behaved inappropriately. The teacher–student interaction has three contexts of whole-class, small-group, and teacher-individual (Pennings et al., 2018). Whole-class

activities posed a difficulty for the teacher in monitoring all of the students and they violated the classroom rules. Moreover, it was revealed that the narrower the context of teacher–children interaction became, the more the teacher succeeded in controlling them and inappropriate behaviors disappeared.

Routine and long-lasting instructional activity is another factor posing problems in the classroom. All instructional activities include external stimulus that triggers motivation and results in learning. Most of the activities conducted by the teacher were teacher-centered activities. There are two kinds of instructional activities: teacher-centered and student-centered. Teacher-centered depends on transmitting skills and knowledge from teacher to student. First, the teacher demonstrates procedures about knowledge and skills, then students practice what is demonstrated through worksheets, routine practice, and drills. Teacher-directed instructional activities demand less working memory, motivation, language, and cognitive skills. Therefore, students can easily get bored (routine and long-lasting instructional activities; P. L. Morgan et al., 2015). As a result of routine and long-lasting instructional activities, the participant children got bored and did not conform to the classroom rules. On the contrary, when the teacher followed student-centered instructional activities, they managed to be motivated and maladjustment, classroom rule violation, and disobedient behaviors disappeared because of the fact that student-centered activities offered opportunities which actively engaged them in generating and gaining knowledge and skills (Clements & Battista, 1990).

The participant children's disposition and their social backgrounds are other factors leading to problems in the classroom. Results can be interpreted as isolation from peers during the preschool period led to several problems with getting in touch with others. The preschool period develops self-regulation skills, academic achievement, and motivation among kindergartners (Burger, 2010; Magnuson et al., 2007; Rimm-Kaufman et al., 2009). The participant children who did not receive any preschool education experienced a lack of skills in social and cognitive domains. Deficiencies in cognitive and affective domains led to behavioral problems in the classroom.

Conclusion

The purpose of the present study is to develop a theory explaining how teachers and children interact during the first month of the primary school period in terms of adjustment to the classroom setting. As result of the study, it was concluded that the teacher used behavior shaping, teacher control, close communication, designing interesting instructional activities, teacher influence, and verbal influence as strategies to make the first graders adjust to classroom settings. The first graders employed repetition of sample behavior, legalization of violation classroom rules, producing pretext, behavior change, agreement with others, conformity, social conformity, obedience, and

adoption as coping strategies to adjust to the classroom setting. Results also revealed that teacher stance, position and absence, nature of instructional activities, and the first graders' personal disposition led to behavioral problems to occur. Finally, it can be stated that the teacher and the first graders developed mutual strategies, but there are several situations in which behavioral problems emerge.

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