This study examined the development of empathy and role-taking skills in 194 Finnish students in Grades 6 and 9. Students wrote a story about a moral conflict in their school involving themselves or their friends. Story content and theme were analyzed and compared across age groups. Findings indicated that the themes of conflicts could be categorized as follows: (1) harassing; (2) peer relations; (3) teacher behavior; (4) adult behavior; and (5) common rules. Harassing was a more common theme for sixth graders (about 55 percent of stories) than for ninth graders (30 percent). The most common conflict theme identified by ninth graders was unjust teacher behavior (almost 50 percent). Conflicts over friendships and interpersonal social behavior were typical of sixth grade girls. Sixth graders' stories presented more themes related to adult than to teacher behavior. Sixth graders most often wrote about conflict between two students, whereas ninth graders wrote about conflicts between teachers and students. Sixth grade boys were clearly justice-oriented in their solutions to conflicts. About half the sixth grade girls expressed care-oriented moral judgments in their stories, with 38 percent expressing a justice-orientation. About half the ninth grade boys were justice-oriented, 14 percent were care-oriented, and 26 percent expressed no type of moral judgment. Ninth grade girls were more justice-oriented than sixth grade girls, with about 40 percent favoring justice-oriented solutions and 38 percent favoring care-oriented solutions. (Findings are discussed within a framework of emotional intelligence. (Contains 16 references.) (KB)
The development of empathy and role-taking skills in pupils from grades six to nine

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1. Introduction

The purpose of this study is to investigate the development of empathy and role-taking skills of Finnish pupils. The data used in the study is gathered from sixth grade pupils (N=100) and ninth grade pupils (N=94). The pupils come from four different schools. The method used in the study is an essay writing in which the pupils are asked to write a story about a moral conflict in their school involving themselves or their friends. The stories written by adolescents are analyzed by their contents with special emphases on the interpersonal relationships presented in the stories. The developments of empathy and role-taking skills as reflected in the stories are investigated in the theoretical framework by Hoffman (1991) and Selman (1976). The differences in empathy and role-taking skills of sixth and ninth grade pupils and girls and boys are explored. The results of the study add knowledge to the new concept of emotional intelligence presented by Goleman (1995). In the context of school, empathy and role-taking skills are considered important aspects of emotional intelligence. The results of the study highlight pupils' point of view to approach interpersonal conflicts in the school community.

In each student's story the theme most central to the moral problem was identified. The themes of the stories generated by pupils in different grade-levels were then compared in order to identify the possible differences between these two groups of adolescents. Another interest in the study was to investigate the social relationships between the protagonist and the subsidiary characters in the stories. This study also aimed at complementing the earlier American (Yussen 1977, Colangelo 1982) and Canadian (Binfet 1995) research on the same topic by validating the findings with a study using a Finnish sample. The stories written by students are analyzed using qualitative content analysis methodology. The categories found in the earlier studies (Yussen 1977, Colangelo 1982, Tirri 1996) are used where applicable. The main tendencies and differences in the data are discussed with examples and percentages of the main trends. In addition to this qualitative description of the data, the ANOVA statistic is used to test the statistical significance of the differences found.
2. Theoretical Framework

2.1 Justice oriented moral reasoning

Most of the studies in the area of moral development have based their theory on the cognitive-developmental theory originally identified by Lawrence Kohlberg (e.g., 1969). In a classical interview, the subject is presented with hypothetical moral dilemmas together with a series of questions. Responses to these questions are analyzed to determine the stage of moral reasoning of the subject. According to Kohlberg, moral reasoning is deductive in nature and applies general principles to individual cases. One area, which has been criticized in Kohlberg's procedures, is the lack of diversity in the moral dilemmas that have been used in the interviews (Yussen 1977). The hypothetical dilemmas can also be seen as too abstract and removed from the daily experiences of most people (Straughan 1975). In addition, they do not highlight conflicts between individuals (Colangelo 1982, 231). Recognition of these aspects of hypothetical dilemmas has led educational researchers to study real-life moral problems that people identify (Walker et al. 1987).

The research conducted in this area shows that adolescents formulate very different dilemmas from the hypothetical dilemmas used by Kohlberg and his colleagues to assess moral reasoning (Tirri 1996). Most of the dilemmas formulated by Kohlberg focus on issues of ownership, public welfare and questions of life and death. The most common social relationships in these dilemmas involve authority and family relations. As opposed to this tendency in Kohlberg's dilemmas, friends do not appear. Colangelo found the same tendency in gifted adolescents that Yussen had found earlier in the general population. More of gifted students stories focused on interpersonal relationships (28% of all issues) than on other themes. The main trends in Colangelo's study were similar to Yussen's earlier study. In a Canadian study, sixth- and seventh-grade students attending public school received teacher-directed instruction on how to write moral dilemmas. Each student generated three dilemmas from which 20 dilemmas were randomly selected for analysis. The themes identified as most prevalent in these stories dealt with issues of honesty (26%) and peer pressure (16%). Moral dilemmas concerning friendship were the third most common theme in the moral dilemmas written by these students. An interesting observation in that study was that the theme of theft/vandalism was more frequently contained in the moral dilemmas written by girls than in those by boys (Binfet 1995).

2.2 Care oriented moral reasoning

In addition to justice-oriented reasoning, moral sensitivity in the human relations requires empathy and care (Gilligan & Attanucci 1988, Noddings 1992). Furthermore, moral action needs more than cognitive and affective components of moral reasoning. We need to be motivated to act morally in order to practice justice and care in our behavior. Hoffman argues that the motivation to act morally is based on our ability to empathize. On the most advanced level of empathy, we should be able to take the role of another person and understand his/her feelings and the whole life-situation in which she/he lives (Hoffman 1991, 275-276).

Selman has argued that children become progressively more aware of the subtleties of interpersonal relationships as they move through the elementary grades. During the
adolescence years children become capable of taking somewhat detached and analytical view of their behavior as well as the behavior of others. According to Selman, children's ability to comprehend how others feel not only contributes to skills getting along with peers but to related aspects of moral development. Children, who understand the subtleties of the behavior and feelings of their peers, are able to empathize more deeply with them. Those pupils who can take a third-person view are also more likely to be able to evaluate their own behavior and that of others when they engage in interactions based on mutually agreed-upon rules. Furthermore, the ability to take a sensitive and comprehensive view of situations is also likely to lead to more mature analysis of moral dilemmas (Selman 1976).

3. Methods

One hundred sixth-grade pupils (12- to 13-year-olds) and ninety-four ninth-grade pupils (14-15 year-olds) from four different schools in Finland were asked to write a story about a moral conflict in their school involving themselves or their friends. The students were given 30 minutes to write a story that presented a realistic moral problem. The instructions given to the students were a slightly modified version of those used by Yussen and Colangelo. In addition to written instructions, oral directions were given by the researcher in order to increase the validity of the study. In all schools, the students understood the instructions and were motivated to write the story.

For all the schools, the gender distribution was approximately equal. Descriptive content analysis was used to analyze the stories, which were analyzed by both their themes and their social relations. In each story only one theme was identified. A total of five main categories of themes were formed. The earlier categories of social relations as identified by Yussen and Colangelo were used to study the main characters in the stories and their relation to each other. These categories included the protagonist and subsidiary character(s) in the story and the main social relationship between them. Five main interpersonal categories were identified: teacher-pupil, pupil-pupil, pupil-adult, and pupil-somebody else.

The interrater reliability was .90, based on the independent scoring of 20 stories by two raters and an index calculated by the formula (number of rater agreement)/(number of stories). The themes and the social relations identified by the sixth-grade pupils were contrasted to the ones identified by the ninth-grade pupils. The differences between boys and girls were also examined. Descriptive trends were discussed with the help of the percentage of each category of themes identified. The ANOVA statistic was used to test the significance of differences found.

4. Empirical findings

4.1 The themes of conflicts in schools

The themes of conflicts in schools as identified by the pupils focused on the following main categories:
Harassing was a very common theme in the conflicts identified by both sixth graders and ninth graders. However, for the sixth-grade pupils this theme covered more than 50% of the written themes (see Figure 1). In a previous study by Yussen (1977), American students of the same age wrote stories about physical safety second only to the topics related to peer relations. In our study, Yussen’s category of physical safety has been expanded to include all kinds of teasing and psychological violence. This category included stories about all types of tormenting behavior at school. Another subcategory of stories consisted of harassing cases outside the school. Furthermore, all types of prejudice toward one's nationality or race were coded into this category. The factors that provoked harassing in the stories were usually related to the physical appearance of the victim. In some of the stories, the reason for harassing somebody was racism. An interesting observation is that girls wrote all these stories. Girls may have a more developed role-taking ability than boys, and it seems that it is easier for them to take the role of somebody else, even a member of a different ethnic group. Research results show that it is easiest to show empathy towards somebody who is like oneself. In the development of empathy, the highest stage is reached when a person is able to empathize with all kinds of people (Hoffman 1991, 278-279). The following quote illustrates the capacity of girls to empathize with a person who is very different from them:

"We had a Roman boy in our class whose name was Hate. He was quite fat but very nice. The boys always harassed him but he was still very happy all the time. He gave free stickers to the other boys and hoped to make friends with them. He couldn't help it that he was Roman and a little bit fat. The girls were friendly to him and much nicer than the boys were. I think the girls were able to take his role and understood it is not nice to be harassed" (sixth-grade girl)

Teacher behavior

Conflicts related to teachers' behavior were the most common moral dilemmas in schools as identified by ninth-grade pupils. More than 50% of their stories dealt with some kind of unjust behavior of a teacher (see Figure 1.). Teachers had punished pupils in unfair way, they had been biased towards gifted pupils or used impolite language in their communication with pupils. A following quote illustrates well the nature of moral dilemmas concerning teacher behavior:

"One boy from our class had been absent from school, and he had forgotten to bring a note from his home to school in which his parents would explain the reason for his absence. The teacher was very angry with the boy because he had left his note at
home. She shouted: "You're a jerk!" The boy tried to defend himself but the teacher continued her lecture and asked the other students’ opinion of this boy: "Don’t you think that I can call a person a jerk if he forgets the same thing again and again?" The other students took the side of the boy, but they didn’t say anything. The episode closed like that, and I think the teacher went too far. She could have admonished the boy a little but not this way!” (Ninth-grade boy)

As the case described by ninth-grade boy illustrates, the teacher had used impolite language to control the behavior of a particular student who had forgotten his note home. The author of the story viewed the teacher’s behavior as cruel and unjust. An interesting observation is that sixth-grade pupils had identified more dilemmas concerning other adult behavior than teacher behavior. Peer relations and teacher behavior were as common moral dilemmas in the stories written by sixth-grade pupils.

Peer relations referred to conflicts over friendships and interpersonal social behavior. This theme was a typical concern of sixth-grade girls. In our previous study, peer relations were shown to be the most dominant moral dilemma in sixth grade as identified by both average and academically gifted student populations (Tirri 1996). In this study, eleven sixth-graders dealt with interpersonal moral dilemmas and they were all girls. In the ninth-grade data, only six stories dealt with peer relations. In our study, peer relations included three main subcategories: choosing a friend, protecting the weak and peer pressure. A common factor in all these subcategories was the concern by the protagonist about the possible effect of the solution on his/her peer relations. In the girls’ stories, the moral dilemma most often dealt with choosing a friend. The dilemmas arose from the conflict between a previous agreement to “be friends” and a new friendship. In the girls’ writings, one can see a need for a best friend and at the same time a desire to have other social relations. In the following quote, one can identify a typical situation dealing with such conflicts with a best friend.

“I was alone at recess. I am in sixth grade and I have blond hair. Yesterday I was with Liisa, but today Liisa was with Katri. Liisa had said in an unfriendly way that she cannot always be with me. Fortunately, the day ended soon. The next day Liisa came to me and asked me to be her friend. I was not sure what I should do—she had been so unfriendly yesterday. Finally I said that I’d rather be alone. Liisa was angry and turned away from me, and I was not sure if I did the right thing. It was too late to take my words back and later on I was satisfied with my decision, because I didn’t want to be with her only when she wanted to, but also when I asked her.” (sixth-grade girl)

Adult behavior

Conflicts concerning adult behavior other than teacher behavior included dilemmas with football coaches and other adults in the neighborhood. Sixth-grade pupils identified more dilemmas related to adult behavior than to teacher behavior. The following quote is a typical story in this category written by a sixth-grade boy:

“The coach treated me and my friend very unjust. He didn’t let us play more than a half game from three. He argued it was a critical situation all the time. We felt very
bad. It was so wrong to use the same players all the time. After the game we asked the coach why he had asked us to play if he only let us play for a half a game. I think he should have been more just and let everybody play equally.” (sixth-grade boy)

Common rules

Common rules dealt with the rules in sport games and forbidden things at school. According to ninth-grade pupils, smoking was one of the things in schools lacking common practices. Pupils complained that every teacher acts differently and practices different rules concerning smoking. A following quote is a good example of the stories dealing with common rules:

“The system in our school is very unfair. Last year, if you were caught smoking at school, you had to stay after school for two hours. This year one of the teachers came after us to the forest where a group of pupils were smoking. Some of the pupils run away and the teacher identified them but did not take their names down. However, my name was taken down even I told the teacher that my parents knew about my smoking. She did not call my parents. The others were called home and had to face terrible conflicts with their parents” (ninth-grade girl)

We can identify a statistically significant change in the themes of conflicts written by sixth-grade pupils and ninth grade pupils (F=7.87, p=.006). In the sixth grade, the main theme is related to harassing and in the ninth grade to teacher behavior. Sixth-grade pupils reflect on peer relations and conflicts concerning adult behavior. These themes are no longer the main concerns of ninth-grade pupils.

4.2. The social relationships in the conflicts at school

The social relationships in the conflicts at school were categorized according to the relations identified by pupils in the stories. In the social relations, the following categories were found:

1. Teacher-pupil
2. Pupil-pupil
3. Pupil-adult
4. Pupil-somebody else

The sixth-grade pupils wrote about conflicts between two pupils. 60% of the relations involved conflicts between friends or acquaintances (see Figure 2.). This trend was the same with both sixth-grade boys and girls. Sixth-graders wrote more about dilemmas involving conflicts between pupil and other adult (18%) than a teacher. These adults were coaches, parents and other grownups that volunteered to co-operate with school. The conflicts between a teacher and a pupil were not very common in the stories. Only 15% of the stories described a moral dilemma between a teacher and a pupil. Seven percent of the stories included a conflict with a pupil and somebody else who did not match the other categories. The protagonist who performed an unjust act was a pupil who was an acquaintance in 45% of the stories. The second most common protagonist was an adult (18%) followed by a teacher (14%) and a friend (13%). The sex of a protagonist was not identified in 30% of the stories. However,
more than half of the pupils wrote about a male protagonist and 19% of them identified a female protagonist in their stories.

Insert Figure 2. Approximately here

The victim in the conflicts was either the author him/herself or a friend. The sixth-grade pupils wrote more about themselves as a victim (55%) than about their friends as victims (45%). In the girls’ stories the victim was almost always a female (99%) and in boys’ stories the victim was a male (99%).

We can identify a change in the social relationships in the conflicts in the ninth-grade. This change is statistically significant (F=22.32, p=.000). Now the conflicts were mainly in the relationships between a teacher and a pupil. More than 50% of the stories described conflicts with teachers and pupils (see Figure 2). Pupil-pupil relationships formed 35% of the social relations and a very few conflicts involved relations between a pupil and other adults or pupil and somebody else. The protagonist who performed an unjust act was a teacher in 50% of the stories. The second most common protagonist was an acquaintance (29%). Ninth-grade pupils identified very few other adults or friends as protagonists in their stories. The sex of a protagonist was not identified in 70% of the stories. However, we can assume that the sex of a teacher was in most cases a female because the majority of the teachers were females in the schools that were involved in our study. Furthermore, the cases that identified the protagonist, females were mentioned more frequently than males.

The victim in the conflicts was either the author him/herself or a friend. The ninth-grade boys wrote twice as many stories about themselves as a victim (70%) than about their friends as victims (30%). The ninth-grade girls differed from the boys in this trend. In the girls’ stories, an equal number of stories involved victims that were friends than victims that were themselves.

4.3 The solutions to the conflicts at school

Pupils’ solutions to the conflicts at school were coded according to the main orientation of moral judgment presented in the stories. These two qualitatively different ways of considering moral issues were a morality of rights and justice (Colby & Kohlberg 1987) and a morality of response and care (Gilligan & Attanucci 1988). A justice perspective draws attention to problems of inequality and oppression and holds up an ideal of reciprocity and equal respect. A care perspective draws attention to problems of detachment or abandonment and holds up an ideal of attention and response to need. A care perspective concerns how to act responsively and protect vulnerability in a particular situation (Gilligan & Attanucci 1988). Pupils’ solutions to the conflicts were coded to three possible categories:

1. Justice-oriented
2. Care-oriented
3. Both justice- and care-oriented
Sixth-grade boys were clearly justice-oriented in their solutions to the conflicts at school (see Figure 3.). Only 14% of the boys expressed care-oriented solutions. Twelve percent of the boys were able to use both justice- and care-oriented solutions to the conflicts at school. The majority of the boys (64%) expressed only justice-oriented solutions with an emphasis on rules and equal treatment of everybody. Sixth-grade girls showed a different orientation in their moral judgment by advocating care-oriented solutions. 48% of the girls expressed care-oriented moral judgements in their stories by emphasizing the needs and feelings of those involved. However, 38% of the girls were justice-oriented and only 14% of the girls were able to combine both orientations in their solutions. The difference between boys and girls was statistically significant (F=7.46, p= 007). This finding is very much in accord with earlier research on moral judgement. In most studies, males are shown to favor justice orientation in their moral reasoning. Furthermore, females are shown to favor care orientation (Gilligan, Ward & Taylor 1988).

Ninth-grade boys showed the same tendency than sixth-grade boys in their moral orientation (see Figure 4.). Only 14% of the boys advocated care-oriented solutions and 4% of the boys identified both justice- and care-oriented solutions to the conflicts (see Figure 6). 26% of the boys did not express any kind of moral judgement. The majority of the boys (48%) were justice oriented in their moral orientation. The ninth-grade girls expressed more moral judgements in their stories than the boys did. Only 4% of the girls missed to identify any kind of solution to the conflicts in their school. However, ninth-grade girls were more justice-oriented than the sixth-grade girls were. 18% of the girls were able to combine both orientations in their solutions. More girls (40%) favor justice oriented solutions than care oriented solutions (38%). The differences between boys and girls were statistically significant (F=17.21, p=. 000). Our findings indicate that there are no big changes in the moral orientation from grades six to nine (see Figures 5 and 6). The boys tend to remain more justice than care oriented and the girls are more prone to adapt care oriented solutions to moral dilemmas than boys are. There were no statistically significant differences in the orientations between sixth-grade boys and ninth-grade boys. The differences between sixth-grade girls and ninth-grade girls were not significant as well.

4.4 A search of meaning in the conflicts at school

Daniel Goleman has suggested a new kind of intelligence – emotional intelligence that gives us awareness of our own and other people's feelings. It gives us empathy,
compassion, motivation and the ability to respond appropriately to pain or pleasures. Goleman has pointed out, that EQ is a basic requirement for the effective use of IQ. If the brain areas with which we feel are damaged, we think less effectively (Goleman 1995). Empathy and role-taking skills are very important aspects of EQ and all these abilities are needed for adapting a care-oriented moral judgement. Zohar and Marshall (2000) have introduced a third kind of intelligence- spiritual intelligence. According to them, SQ helps us to assess the most meaningful course of action. With SQ we address and solve problems of meaning and value. The authors claim that SQ is the necessary foundation for the effective functioning of both IQ and EQ. SQ is our ultimate intelligence (Zohar & Marshall 2000). The difference between EQ and SQ deals with the concrete situation they are used. Emotional intelligence allows us to judge what situation we are in and then to behave appropriately within it. This is working within the boundaries of the situation, allowing the situation to guide us. Spiritual intelligence allows us to ask if we want to be in this particular situation in the first place. Would we rather change the situation and create a better one? This is working with the boundaries of our situation and allowing us to guide the situation.

The pupils' stories were analyzed by different perspectives presented in them. In addition to their ability to adopt care-oriented solutions, their interpretation about the whole situation was analyzed. Only 20% of the sixth-grade pupils were able to consider the conflict with the boundaries of the situation and reflect on the possibility to change it. The following example illustrates a story about friendship that considers the meaning of this concrete situation in a broader context of life:

"I am a fat girl and not very liked by my classmates. The only girls who wanted to spend some time with me were those who did not have other friends at that time. Another girl who was lonely approached me and we made friends with each other. After two weeks this other girl started to spend time with another friend and became more popular among other girls as well. I understood that this girl had only used me as a stepping stone to reach a better status in the class. She wrote a letter to somebody who showed it to me saying that she has never been my friend. You can guess how I felt! I had considered her as a true friend. Once again I had to experience the saying: "Don't trust anybody" to be true. This is so unfortunate but I still have not learned my lesson. I keep searching for a friend" (sixth-grade girl).

The ninth-grade pupils expressed less search of broader meaning in the conflicts. Only twelve pupils from ninety-four reflected on the meaning of the conflict and all of them were girls. The following example illustrates a story about harassment that considers different options in dealing with the situation:

"My friend was harassed at school last spring. Harassment was psychological and affected me too. I felt like everybody were against us or ignorant. I still can't understand why they behaved the way they did. It was so wrong to harass one girl with a big gang. It was also wrong that they harassed me because I was a friend with this girl. They stopped harassing us when we told the teacher about the situation. After that we had some discussions but I was not involved in them. I still can't say what would have been the best way to act in that situation. However, I think there must be some better way to deal with these kinds of situations. Our relationship with my friend is not the same anymore. One problem can cause other problems in your life and you don't always understand how they are connected." (Ninth-grade girl)
Discussion

In this paper, we have explored the moral conflicts in schools as identified by sixth-grade and ninth-grade pupils. A special interest of the study was to analyze the development of empathy and role-taking skills of these pupils as reflected in their stories. The empirical findings indicate that the moral conflicts are different in sixth-grade than in ninth-grade. The sixth-grade pupils were mostly concerned about harassing and relationships between a pupil and another pupil. The ninth-grade pupils wrote most stories about moral conflicts related to teacher behavior and relationships between a teacher and a pupil. We could identify some statistically significant differences between boys and girls as well. In both grades the boys were shown to be very justice-oriented in their solutions to moral conflicts in schools. On the other hand, the girls were shown to be care-oriented in their solutions to the moral conflicts in both grades six and nine. Furthermore, the girls expressed more ability to empathize and take the role of a third person than the boys did. The girls showed more tendencies to consider the moral conflicts in a broader context of life. They reflected the meaning of the event for the main characters in the story and for the whole community. Some of the girls judged the situations by using their emotional and spiritual intelligence.

Teachers and educators can use the results of the study in their efforts to nurture empathy and role-taking skills of their pupils. The real-life stories written by pupils can be used as case studies in moral education lessons. The teachers should introduce both justice and care oriented solutions to the problems and discuss the meanings of each situation in a broader context of life. The goal of education should be to promote multiple intelligence in pupils including emotional and spiritual growth.

References


Tirri, K. 1996. The themes of moral dilemmas formulated by preadolescents. Resources in Education. Id number ED 399046, April 1996.


Figure 1. The percentages of the themes by grade level.
Figure 2. The percentages of the social relationships in the conflicts by grade level.
Figure 3. The percentages of the solutions to the conflicts by gender (6th grade).
Figure 4. The percentages of the solutions to the conflicts by gender (9th grade).
Figure 5. The percentages of the solutions to the conflicts by grade level for girls.
Figure 6. The percentages of the solutions to the conflicts by grade level for boys.
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