Teacher-Students´ Interaction in Comparison of Teacher´s Self-perception and Students´ Point of View

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Abstract: Building a teacher-student relationship is important for creating trust, mutual understanding and respect. The interaction of teacher and students can be found using the 48-item Questionnaire on Teacher Interaction. The result is the Model for Interpersonal Teacher Behavior, consisting of four dimensions, which are further divided into eight sectors to evaluate the teacher. The main goal of our study was to show how the teacher and students perceive the environment of the class, whether their views match, and whether it is a statistical significant dependence among different sectors of the model teacher-students interaction. The sample size consisted of 63 Slovak students of 12th grade and their teacher of biology. Our results have shown that the teacher has evaluated herself similarly to the students, but without a statistical significant difference. In monitoring of the relationship of scales in the whole group of respondents, in the group of male and female respondents we showed statistically significant differences between the sectors. Using of Questionnaire on Teacher Interaction can help mutual knowing of students and teachers and the creation of positive relationships.

Keywords: *Interaction of teacher and students, questionnaire on teacher interaction, Slovak students, teacher of Biology.*

Introduction

The connection among students and teachers is an essential component of teaching and learning. How students perceive the effects of their teachers the course of the lesson, the degree of student´s interest in the subject, and their academic achievements. In teaching process communication plays an important role. It is the primary tool through which education and upbringing are implemented (Assilkhanova, Tazhbayeva & Ilimkhanova, 2014). The relationship between teacher and student is built through communication that is through the transfer of knowledge and cultural content (Suciu, 2014). Interpersonal relationships can be defined as "a deliberate, direct, psychic connection based on complex interrelationships among two and more people." The term interpersonal relationship refers to the interconnection of people who share the same goals and interests (Babonea & Munteanu, 2012). Studies show that a natural teacher–student (T-S) relationship has a positive impact on student learning outcomes (Frymier & Houser, 2000). It follows that the social environment can be a very important factor affecting the development of children and adolescents. At present, adolescents spend 34% of their daytime with friends, 19% with classmates and up to 26% of time alone. Consequently, current adolescents spend very little time with adults during the day. Research has shown that American adolescents spend only 5 minutes of their daytime with adults. This time is not sufficient to bring life experiences and values from the older generation to the younger. That is why the teachers are the adults who spend the most time with the adolescents. For that is the necessity of good T-S connections, their constant study and refinement (Csikszentmihalyi, 2000). The quality of the T-S relationship has proven to be an important factor in student achievement. Positive T-S connection has been created as an essential contributor to student´s social, behavioral, and academic adjustment (Toste, 2010). Many studies have confirmed that positive relationships among teachers and students are associated with good student achievement and good results in social life. It has been found that student´s perceptions of teacher interest are related to student´s assessment of teachers and their affective education (Teven and McCroskey, 1997). The studies show development of T-S relationship and classroom insertion from first to fourth grade, with the exception effect of factors such as cognitive skills, gender or education of parents. Though they were stable during time, classroom engagement in class showed more stability than close student relations with their teachers (Archambault, Pagani & Fitzpatrick, 2013). The connection among students and teachers based on trust is crucial to the raising tendency of forming educational associations. Strengthening students in T-S relationship does not

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agree with the traditional behavior of teacher in class that they have brought from the past. Teachers showed a strong model of defiance to sharing the authorization with their students to decide which methods teacher should use in teaching. Often, it was difficult for them to leave control to the students. Mutual trust mitigates several of these emotions deficiency of control. It allows the simpler modification to the joint management of the students and teachers in the class (Short & Greer, 2002). Teachers also helps in student´s socialization by creating powerful and positive relations among students and improving the positive socialization abilities of students (Yoon, 2002). Student wellbeing can be considered as one of the main marker of quality of teaching. A positive environment in the classroom can support a higher sense of well-being. An essential aspect of climate in the classroom is interpersonal relation between teacher and student (Van Petegem et al., 2008). The relationship among teacher and student is constantly evolving, engaging in negotiation and maintaining social interconnection. This often leads to the struggle for control over class and domination in the T-S relationship. Class management and teaching management by teachers is one of the areas in which relationships develop and are critical to class success. Effective T-S connection in the class can be defined by some specific factors: teacher provides powerful leadership in school achievements or behaviors, control of teacher against tolerance of class, and his ability to work with students as one team. This leads to the ability to understand the different needs of every single student and to have the understanding for these needs (Aultman, Williams-Johnson & Schultz, 2009). T-S relations which are accompanied by contradictions can lead to controlling student´s behavior by the teacher, thereby teachers prevent the creation of a positive environment for students. This can be one of the reasons why negative relations in the classroom are associated with trying to exclude students from the class (Pianta, Steinberg & Rollins, 1995). This conflict may be related to truancy, negative attitudes towards school, trust and team -work among students in the classroom. The T-S relations with a high degree of contradictions have been found to lead to a decrease in prosocial behavior of children, an increase problem behavior of children and in aggressive behavior (Pianta, Steinberg & Rollins, 1995; Birch & Ladd, 1998).

Methodology and Methods

In our study, we decided to observe a T-S relationship using a 48-item T-S interaction questionnaire.

Participants

The participants were 63 students (44 female, 19 male) of three classes and their biology teacher from a secondary school located in Slovak republic. The students were up 16 to 18 years old. Their teacher had more than 10 years of teaching experience. The teacher and all children agreed to participate in the study and they were well-informed how to work with questionnaire.

Instruments

Questionnaire on Teacher Interaction (QTI).

The relationship among school-teacher and students were determined by the Questionnaire on Teacher Interaction (QTI). The questionaire were evolved from Model for Interpersonal Teacher Behavior (MITB). The first variant of the QTI was desiged in the Netherlands and had 77 statements (Wubbels, Creton & Hooymayers, 1985). American variant the QTI was shortened to 64 (Wubbels & Levy, 1991) and Australian variant to 48 statements (Fisher, Henderson & Fraser, 1995). Official approval for its use was obtained by Nugent (2009).

This pattern was created on Leary's model of the interpersonal relations of personality and it maps behaviour of teachers by a dimension of proximity (Cooperation, C - Opposition, 0) and a dimension of influence (Dominance, 0, - Submission, S). The four dimensions are further splited in eight scales: Leadership, Helping/Friendly, Understanding, Student Responsibility or Freedom, Uncertain, Dissatisfied, Admonishing and Strict (Lourdusamy & Khine, 2001). Each of the eight types of teachers and the class environment were characterized by Wubbels et al. (2006) through their observation investigation.

Wubbels and Levy (1991) by the Cronbach alpha coefficient determined the inner consistence reliabilities of QTI in the ranges from 0.76 to 0.84 in the student´s answers and from 0.74 to 0.84 in the teacher´s answers. Our measurement of the reliability of QTI showed the Cronbach's α coefficient 0.91, which we consider to be agreeable.

In our study we used 48-items QTI. Each of the 48 statements is relevant to the particular scale of the MITB. Both questionnaires, for the teacher and for the students were identical. However, the teacher's questionnaire was formulated as "I" or "My", while the questionnaire for children was formulated as "this teacher". Each answer could be answered on the numerical scale 1-5 (5-point Likert scale) following: 1 = "never", 2 = "almost never", 3 = "neutral", 4 = "almost always" and 5 = "always". Some items have been created with positive expressions for example "This teacher talks enthusiastically about her / his subject", and another have been designed with negative expressions "This teacher lets us boss her / him around." Some expressions for example "We can influence this teacher", we can consider positive from student´s view, but negatively from the teacher's point of view. The questionnaire was filled in by 12th grade, in each class one lesson. At the beginning of the lesson, we provided information to the respondents, how to fill in the questionnaire and which one of teachers should be evaluated. We assured them that the questionnaire is completely anonymous. The respondents filled in the questionnaire for 20-30 minutes. The backflow of the questionnaires was

100%. The teacher´s variant of the questionnaire was filled in by the school-teacher of biology, who evaluated yourself. For analytical purposes, a total score was generated by summarizing responses from all 48 items: minimum score = 48 points / test, maximum score = 240 / test. Eight variable groups were created by dividing the values of individual items to the scale and their average. Each group could have at least 6 points and the most 30 points for each student and the teacher. For measurement the difference of perception, we used a parametric method a pair-t-test.

Research Questions

Based on the previous findings of T-S relationship, we have established the following research questions:

How does a teacher perceive class environment by QTI?

Does the teacher's impression of the classroom environment agree with the impression of the classroom environment of the students?

Does exist a statistically significant relationship between the different scales of the model interaction teacher and her students?

Results

The T-S interaction sourced using the QTI was evaluated by a pair t-test. Sixty-three students answered 48 items about their teacher. The teacher also filled in her version of questionnaire. Each statement belonged to one of the eight scales of the MITB. In the first part of our research, we observed:

• self-reflection of the teacher

• how the teacher perceives students, who were taught by her.

The teacher achieved the highest values in the sectors of Understanding, Helping/Friendly and Leadership. The lowest values were observed in categories Uncertain, Dissatisfied and Admonishing (Figure 1). The students achieved the same results in the same sectors (Figure 1). In both cases we did not show statistically significant difference in the results ($p > 0.05$). Even in other sectors, we did not observed the statistically significant differences in results among the teacher and children. According to Wubbels, Opdenakker & den Brok (2011), this teacher, based on the achieved points, corresponds to the profile of the Authoritative or Directive teacher.
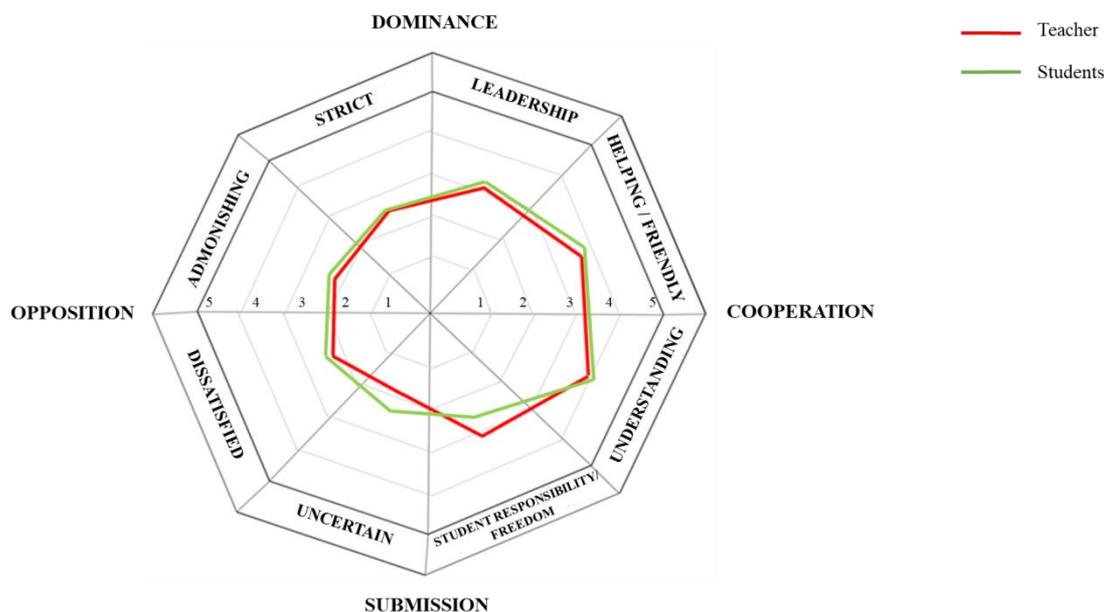

Figure 1. Model of T-S interaction showing values obtained from teacher and students.

In the second part of our research, we identified the interdependence of individual scales in a group of 63 students, group of female respondents and group of male respondents, using the pair t-test.

By examining sectorial dependencies on the basis of all student´s statements, we obtained statistically significant differences in the results. We have found that the sector of leadership is dependent on sectors of uncertain, dissatisfaction and admonishing. The more leaderly teacher is, the less uncertain ($p \leq 0.001$), dissatisfied ($p \leq 0.05$) and admonishing ($p \leq 0.01$) she is. Strictness is dependent on help/friendship and understanding. The less strict the teacher is, the more helpful/friendly ($p \leq 0.01$) and understanding ($p \leq 0.01$) she is. Lesser certainty leads to greater student

responsibility or freedom (p ≤ 0.01), help/friendship (p ≤ 0.001) and understanding (p ≤ 0.001). The more helpful the teacher is, the less she leads the students to responsibility or freedom (p ≤ 0.05), she is less dissatisfied (p ≤ 0.001) and admonished (p ≤ 0.001). The sector of understanding is dependent on students´ responsibility or freedom, dissatisfaction and admonish. The more understanding the teacher is, the lower the students responsibility or freedom (p ≤ 0.05), the less dissatisfied (p ≤ 0.001), and the admonished (p ≤ 0.001) she is (Figure 2).
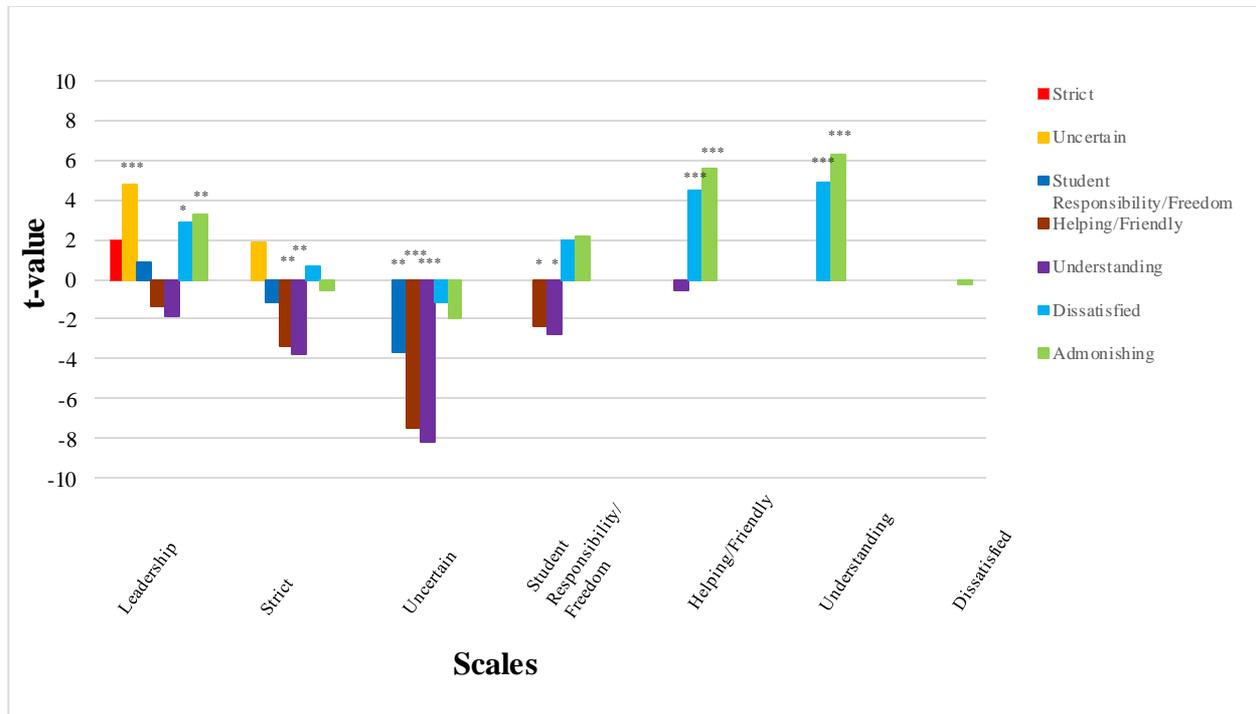
* p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001
Figure 2. Scale´s comparison of statements 63 students using a paired t-test.

On a sample of 44 female respondents, we have found the statistically significant differences in the same scales as in the sample of all students. According to the female students, a higher level of leadership is in a negative relationship with a lower uncertainty (p ≤ 0.01), dissatisfaction (p ≤ 0.05) and admonish (p ≤ 0.05). The stricter the teacher is, female students perceive more help/friendship (p ≤ 0.01) and the understanding (p ≤ 0.01). The more uncertain teacher is, the more helpful/friendship (p ≤ 0.001) and the understanding (p ≤ 0.001) she is. The more helpful/friendship and understanding the teacher is, the less dissatisfied (p ≤ 0.001) and admonishing (p ≤ 0.001) she is (Figure 3).
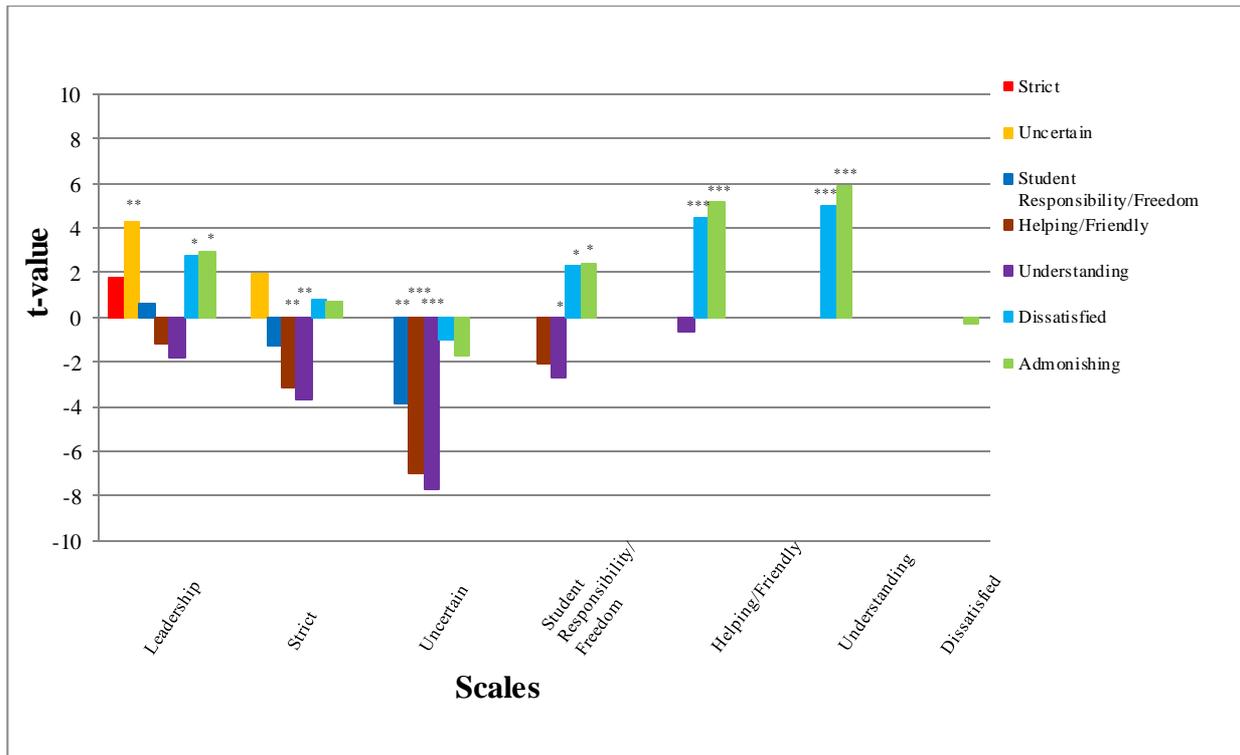
* p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001

Figure 3. Scale´s comparison of statements 44 female students using a paired t-test.

For nineteen male respondents, we have found fewer relationship between the scales in comparison with female respondents. Leadership is, according to the boys, dependent not only on uncertainty, dissatisfaction, but also on strictness. The more leaderly the teacher is, the less strict (p ≤ 0.05), less uncertain (p ≤ 0.001), less dissatisfied (p ≤ 0.05), and less admonishing (p ≤ 0.01) she is. More uncertainty is demonstrated by greater understanding (p ≤ 0.001), help/friendship (p ≤ 0.05) and responsibility/freedom of students (p ≤ 0.05). The more understanding to the students the teacher is, the less strict (p ≤ 0.01), the dissatisfied (p ≤ 0.01) and the admonishing (p ≤ 0.001) she is (Figure 4).
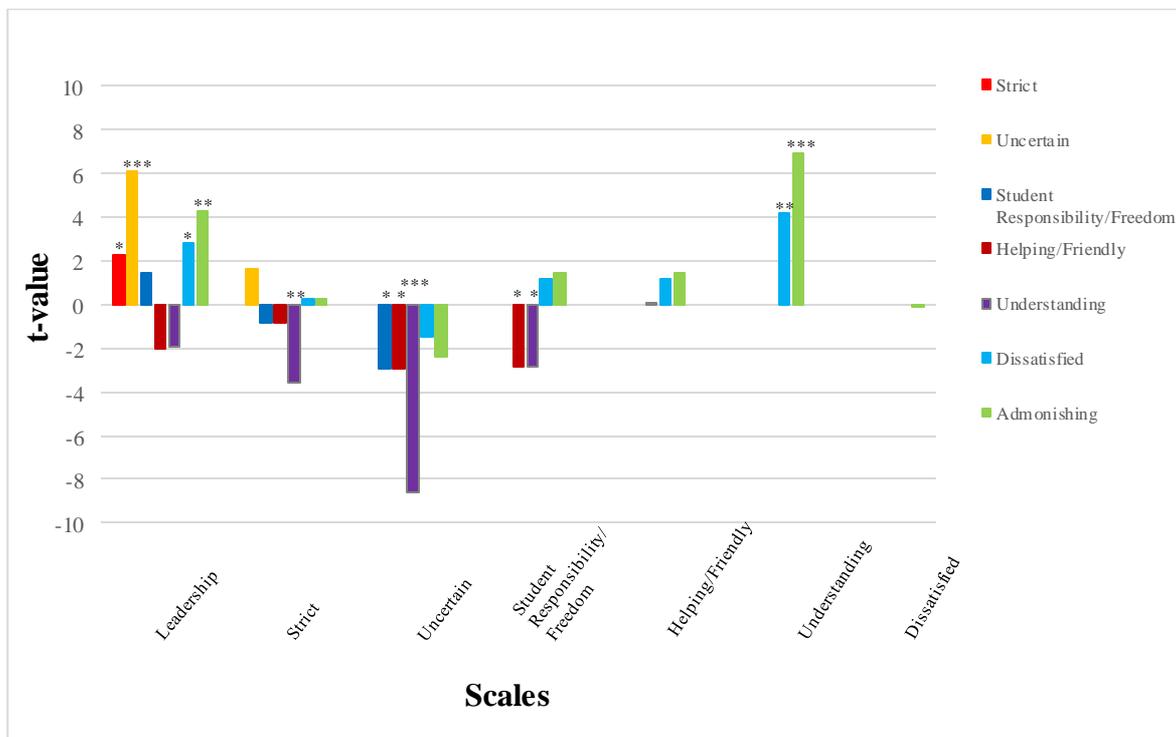
* p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001

Figure 4. Scale´s comparison of statements 19 males students using a paired t-test.

Discussion

The presented study demonstrates a reliable and valid adaptation of the 48-item QTI filled by 63 Slovak students of 12th grade and their teacher of biology.

The results obtained with the QTI showed that the teacher was identified by herself and her students as highly understanding and helping teacher who is a good class leader. Wubbels et al. (2006) in their study classified eight types of teachers according to QTI (Directive, Authoritative, Tolerant and Authoritative, Tolerant, Uncertain/Tolerant, Uncertain/Aggressive, Repressive, Drudging) and described the classroom environment typical of individual types of teachers. Teacher in our sample, according to her points reached and the points awarded by her students, corresponds to the profile of the Authoritative or Directive teacher.

In evaluating the whole set of students, we have shown statistically significant positive associations between sector of leadership and uncertain, dissatisfaction and admonishing, between sector of help/friendship and dissatisfaction and admonishing and between understanding and dissatisfaction and admonishment (Figure 2). Statistically significant negative associations we have found between sector of strictness and help/friendship and understanding, between uncertainty and responsibility, help/friendship and understanding, and between responsibility and uncertainty and understanding. These results coincide with Reeves (2006). Students in a study on the impact of democracy in the class showed behavior, which demonstrates that the more liberal the system in the classroom was, the more children were interested in studying. They believed that enforced discipline would reduce their interest in learning. Teachers who support students in their learning, who demonstrate equity in class, who ensure that students complete their educational activities, they contribute to improving their learning outcomes (Yu & Zhu, 2011). Studies exploring interpersonal T-S relationships have shown that a positive, fun and enjoyable T-S relationship is more effective for educational benefit than indifference or bad relationships. Babonea and Munteanu (2012) have shown that children who perceive their teachers as positive people who support them tend to feel more motivated. Positive relationships are characterized by mutual interactions and contribute to better behavior and academic success, pro-social behavior, or academic motivation and effort (Engel et al., 2016). Henderson, Fisher and Fraser (2000) the 48-item QTI where were used has shown, that children prefer a teacher who is a good leader who helps and understands them and who gives them enough responsibility for freedom. Children have a closer relationship with a teacher who is not uncertain, discontented and who does not warn them. Only in the strict sector student impressions were similar to the teacher´s preferred behavior. These findings are similar to those which published Wubbels and Levy (1993) for a sample of Australian students. Study from Korea, where were used 48-items QTI has shown, that children should be more involved in the process of learning in the future, and should be more promoted by teachers, who would also lead them to collaborate during the lessons. Even the behavior of teachers could change. Teachers could be people who always help children who always understand them and who also care about the activities during the free time of children. According to Mendes (2003), teachers should be interested in the students´ interests and try to understand them. As students and teachers communicate verbally, teachers should also pay attention to nonverbal expressions. Together with the understanding of verbal and non-verbal communication with students, the teacher should discover some personal feelings or experience of students. They could take information about children by listening to their stories and talking about their activities. This also includes life experiences and concerns. Knowing the students interests are able to strengthen the T-S relationship.

The results of female respondents showed statistically significant positive and negative associations between the same sectors as compared to the whole set of students. In male students, we have shown fewer relationships between sectors, compared to all respondents and compared with female respondents. However, in male respondents, we found statistically significant positive associations between sector of leadership and strictness. Our results show that girls perceive this teacher more positively than boys, but without a statistically significant difference. The results coincide with previous studies in which T-S relationship was identified using a 48-point interaction questionnaire. Fisher, Fraser & Rickards (1997) pointed to the difference in the teacher's perceptions depending on the gender of the students. Their results confirm that boys perceive teachers more negative than girls. It was also in a case in Eccles's study (2007), which also showed that girls perceive the teacher more positively than boys.

Conclusion

In our work, we studied the pedagogical communication in the class and we studied interactions among students and teachers. The QTI could be one of the basic methods used in pedagogical practice. Using a questionnaire, the teacher can get feedback on the way teaching. In this way, they can quickly find out how students perceive them and whether their views of the teachers coincide with the teacher's opinion. The teacher can use the questionnaire to see if the students see her uncertainty or dissatisfaction. At the same time he can point to teacher's weaknesses. This will allow him to focus on improving those areas, in which the students' assessed teacher deficiently. There are also some possibilities of further research, for example produce more detailed results from pupil of lower grades, which can help to improve relationship between pupils and their teacher.

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